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ABOUT THE CHANGE IN THE NEW AGE ACTOR AND ACTRESS STRUCTURING IN TURKISH CINEMA, TV SERIALS AND PROGRAMMS THE NEWLY FORMED PERCEPTION AND ITS POSSIBLE RELATIONSHIP WITH DIGITAL MEDIA (1990-2020) DIGI-SLAVES

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Abstract

The objective of this article is to display the relationship between perception of actors and actresses since the Yeşilçam period till present, the new actor and actress structuring and phenomena that have started before the '90s, accelerated during the 2000s and are covering the present and the new actor and actress perception provided with this change with the legal/illegal information that has been obtained from the digital society.

The fact that the sector is illegally taking advantage of digital opportunities and is rearranging this field for reaching bigger masses, in other words, for gaining a lot of customers for earning a bigger amount of money, with nameless, invisible, hidden information obtained illegally from secret sources beyond Big Data is undeniable. This can sometimes mean using legal-looking illegal opportunities.

Keywords: Digital Society, Cinema, Turkish, Actor and Actress Perception. Data, Big data, Digi-Slaves, Digital Media, Content Provider.

Introduction

It is a fact that Turkish cinema is shaped by commercial concerns. It has been told in anecdotes that people used to go to coffeehouses where men from various provinces of Anatolia gathered in Beyoğlu, Istanbul in order to listen to them for compiling stories. Then, in the following years, social films start to be made in the market. Many may recall the disturbing and financially insufficient times, since being an award-winning film or being internationally renowned - though few in number - was not reflected in the ticket sales numbers to the extent desired.

The world of television proceeds in parallel with the cinema in the era where there were no domestic TV series such as The Slave Isaura or Beverly Hills and etc. yet. It was the era of morning programs, low-quality series and prime time TV series like Flamingo Yolu. Even the women programs didn't exist in today's context.

How does an 'apple' suddenly fall on the ground? This article deals with the issue that the falling of this apple on the ground may be merely related to the "apple", and the next article will be based on the possibilities of exemplifying and concretizing it with a legal case.

Indeed, what happened suddenly so that the cinema and TV world producers, scenarists and directors launched different variations of domestic TV programs, they thought of putting very local and popular names to these programs, and many programs were even patented? How did the mind that did not exist until then suddenly emerge? Although the range is wide, as can be seen from the title of the article, the subject is limited to the Turkish cinema. Just for this article and only for now. Does the "Millennium," "Knowledge is power," discourse have any effect on this so-called enlightenment? From the information that can be illegally obtained from the public. The law on the protection of personal data (KVKK) did not exist in the 1990s and the concept of Big Data was far away from this society yet. There is a walk of life that has just started to be aware of the Big Brother concept. This walk of life may have begun to notice the reality of the Truman Show in the 2000s and even started to ask am I Truman or not. There is now a large database to be continuously siphoned off for the forces taking advantage of the new world order and/or the forces that hold the interest-oriented 'knowledge is power' network in their hands. Perhaps, also the Turkish cinema has taken its share from this database. This is not necessarily such a fictional or distant insight.

How did the Turkish Cinema and digital media, commercial profits, and ticket sales records take place? How did it suddenly become popular? Could it be related to the digital media?

If we start from Yeşilçam, average leading men and ladies seem almost certain. Filiz Akın kept saying and writing that she frequently watched Kim Novak movies for getting prepared for her roles and stance. Hülya Koçyiğit runs likewise and even the position of her hand while running does not change much. Usually, they didn't use to know

how to swim, and the actor or actress who swims to the right and left used to shake its head. Movies used to be made in difficult conditions. Nobody used to have a private caravan or a special wardrobe allocated to him. These conditions suddenly changed in the '90s because there started to be a lot of money. A magic key has discovered the subjects that will affect the public, the lyrics as the content of the soundtrack of the film, the scenes that will make the audience laugh or think at the same moment during the movie, the phrases and effective movie titles that paved the way for these scenes. Moreover, it suddenly discovered the way that will catch the public while presenting and popularizing actors and actresses.

Including being a content provider compulsorily in terms of the subject, design, and title of the programs that break the rating records (what is the duty of a digi-slave anyway?) Examples:

Impressive subjects and TV programmers's titles:: Tatlı Sert (Kind But Firm), Tarihin Arka Odası (History's Back Room) (So much so that, TRThaber has reserved a special episode), Teke Tek (One-on-One). One characteristic of the scientific programs such as Tarihin Arka Odası and Teke Tek was being the first of their kind. Consider that they are stolen from your diary. Imagine for once that you are being built for sustainable slavery and your life is taken from your hands... Memleket Meselesi (Crucial Matter) Türkiye'nin Nabızı (Pulse of Turkey), Para Dedektifi (Finance Inspector), Makam Farkı (Difference of Post), Her Şey Bu Masada (Mesajınız var section, too), Yorum Farkı (Difference of Comment), İstanbul Kafası (Istanbul Understanding), Baykuş (Owl), Öteki Gündem, Püf Noktası, Zaman Treni, Nasıl Yani, İşin Aslı (as news programmes's name, Söylemezsem Olmaz, Saffet'in Garajı, An ve Zaman, Hayat Batuhan'a Güzel, Nursel'in Mutfağı,) Vapurda Çay Simit, Meclis Taksi,...even some projects belongs to the Municipalities... etc., and more...

Some Examples of Daytime TV Competition and Comedy Programs/ Impressive subjects and titles and design: Yemekteyiz (We are at Dinner), all marriage programs, Kim Bir Milyon İster? (Who Wants One Million?), Altın Günü, Televole, Saklambaç, Aileler Yarışıyor (Families Compete), Baba Ocağı, Ömür Dediğin, Düriye'nin Güğümleri, Ben Bilmem Kocam Bilir (My Husband is the One to Decide), Kelime Oyunu (Word Game), all competition programs about food such as Yemekteyiz, Programs addressing women: Hayatta Her Şey Var (There is Everything in Life), İyi Fikir (Good Idea), Zahide Yetiş (Zahide, Help), Buzda Dans, Dokun Bana (Winning a Car Program), BBG'ler (All the Serials of BBG -Impressive subjects and titles and design), Ben Burdan Atlarım, İşte Benim Stilim/Tarzım of all variations, Evrim Akın ile Ev Kuşu (also all repeated sentences in each program), o Hayatta Her Şey Var (mode to mode some sentences and also program's design), İşin Aslı, Elifnâme, Komedi Dükkanı (Completely), Çok Güzel Hareketler Bunlar (Completely, Bir Demet Tiyatro, Güldür Güldür Show (Completely), Hande Ataizi, Esral Erol, Seda Sayan, Zuhall Topal's : All Marriage Programs, İnce İnce Yasemince (all popular characters) , MasterCef, Survivor etc. and more...

Some Examples of Impressive subjects/titles(maybe also mode to mode sentences and visual design) and TV serial titles: Atiye, Avrupa Yakası (mode to mode) , Jet Sosyete (lots of characters', too), Yalan Dünya (lots of characters, too) , Türk Mahallesi, Alemin Kralı , Naciye'yi Kim Sevmez, Harem, Pis Yedili, (also some characters' design), Gülbeyaz, Benim İçin Üzülme, Zengin Kız Fakir Oğlan, Seksenler, En Son Babalar Duyar, Gülbeyaz, Revised and modernized variation of Aşk-ı Memnu (Secret Affair) and Yaprak Dökümü (Revised) , Fatmagül'ün Suçu Ne? (What is Fatmagül's Crime?), Yeter Anne (Enough Mom), Sihirli Annem (My Magic Mother), Bir Bulut Olsam (also its characters's names) , Canım Ailem (My Dear Family), Kiralık Aşk (Love for Rent), Erkenci Kuş (Early Bird), Hatırla Gönül, Yeter Anne, Gönülçelen, Kiralık Aşk (with its songs), Sihirli Annem, Melekler Korusun, Aşk Yeniden, Hatırla Gönül, İki Aile, Ekmek Teknesi (even some characters' design), İkinci Bahar, Bir İstanbul Masalı, İstanbul'lu Gelin, Bugünün Saraylısı, Maral, Kadınları Anlama Kılavuzu, Masumlar Apartmanı, Yeşil Deniz, Mühürlü Güller, Naciye'yi Kim Sevmez? Dadı, Yeditepe İstanbul, Leyla ile Mecnun (revised variation), Bir Yusuf Masalı, Kadın İsterse, Fi, Çi, Pi, even their film's songs, etc. and more...

Impressive subjects and movie titles: Kocan Kadar Konuş (Talk as much as Your Husband), Deliha 1, Deliha 2, Yüreğine Sor (Ask Your Heart), Sümela'nın Şifresi Temel (Sumela's Code Temel), İssiz Adam (Desolate Man), Mayıs Sıkıntısı (May Trouble), Kahpe Bizans, Evim Sensin (You Are My Home), Sizi Seviyorum (I Love You), Kutsal Damacana, Kolay Para (Easy Money), Televizyon Çocuğu, Sizi Seviyorum. Kahpe Bizans, Beyaz Melek, Organize İşler, GORA, A.R.O.G., Her Şey Çok Güzel Olacak, İssiz Adam, Hedefim Sensin, Osmanlı Cumhuriyeti, Eyvah Eyvah, Recep İvedik, Neredesin Firuze?, İstanbul Kanatlarımın Altında, Yedi Kocalı Hümmüz (revised), even their film's songs etc. and more...

Interestingly, the number of actresses even actors who can swim increases rapidly with Hülya Avşar. Actresses started to be much smarter in interviews because this smartness had a positive effect on the ticket sales numbers and this has been discovered by then. Most of their discourses were arranged in a way not to contrast much with the public, they are identical to the situations adopted by the public, or they are similar to their lower and upper connotations. Actors and actresses have suddenly begun to show sympathy and reflect this fact on their discourse.

Even comedian Cem Yılmaz says this on one of his stand up shows. "I have thought about that, too." He makes fun of this thought. Seriously, have only the performers thought about the things they are exhibiting? His joke on the economy and business class tickets, and many others like this may be the same as the ones in the diary you keep on your personal computer.

Of course, there are very valuable actresses holding acting skills and stage domination. The content has always been obtained from the public and this is the very nature of this profession. However, suppose that all these can be achieved illegally and that digital media are used for this purpose.

Most actresses such as Fehriye Evcen and Pelin Batu are now happening to pass the most distinguished universities. While some of them are going through natural processes, the others certainly stop by. The acting talent is complemented and supported by their acting coaches. Data taken (!) from digital media must contribute to the development of these actresses. At the end of the day, informing and developing the actress, who is the product of a team that wants to impress the public with the feedback from the public, seems to be the main business of this team.

This may not be limited only to the cinema sector, but also include many profitable industries. The press launch of an award-winning documentary can be written with exact sentences included in the introduction part of an academic's article, and very powerful people can be attracted to the program in this way. The launch of many award-winning documentaries may be the same source.

Let's assume that all these happen thanks to digital media...

Conclusion

From Dante's Divine Comedy: The First Canto (Hell One), article one, page 35: "In the middle of our life path, I found myself in a dark forest because the right way was lost"(Dante, 1998:35).

If a digi-slave loves literature, the hell can suddenly evolve into its own state of mind asking Dante's permission. "At the beginning of my life path, I found myself in a dark forest because all my paths were surrounded."

Again by Dante. This can help for describing the soul which has started to leech off of digital media for long. Hell 1, page 39, articles 94 and 97: "Because this animal, which makes you shout, will not let anyone pass by its path, and sooner or later it will stand against them and savage them; its temperament is so bad and evil that its gluttony is bottomless and the more its gets full the more it will get up an appetite(Dante, 1998:39).

Would it be too cruel to move from here to the advertising world of the capitalist system? As it is known, advertisers and PR professionals who also discovered the concept of Psycho-Semiotic Language Use are masters of these field. Everything is sales oriented and any tricks for that can be permissible? After all, aren't all these TV series, TV shows, movies, songs means and ends at the same time? So many birds with one stone. Warehouses to be filled with money. Who has been ruined or whose lives have been destroyed? Who cares? This is business and there is a humanoid that only cares about the money he earns.

Miracles of your brain. The extraordinary organ we call the brain weighs less than 1.5 kilograms. (Buzan; Israel, 1995: 10). When you turn the first page of the book Brain Sell, the following expression at the top of the blank page next to the page with the authors' name may have other meanings for some: "The authors of this book express their gratitude once again to all of the great sales minds who have contributed to the creation of Brain Sell (the title of the book) with their brilliant ideas and suggestions" (Buzan; Israel, 1995: pp.1)). The reason you purchase this book may be that you have written in the diary you keep it on your computer that you want to design a book with this title and that some minds are sales oriented and that a book with the same title has been on the market soon after you wrote this. This is what digital media mean.

"Seek your muse in the unexpected and difficult." Hegarty explains this thought as follows. "You have to read something about topics beyond your area of expertise, the parts you are familiar with, and that you love. You may have an article about the business world in your hands, catch a creative point of view on it, and find the solution in creativity. (Elden; Bakır, 2014: 371) Or, you can capture a multidisciplinary educated, intelligent, and talented person from digital media, turn them into a digi-slave and grab your ready meal from the computer screen every day. Hegarty could say that today.

This field should be legally reorganized without relying on any group, faction, or interest group with the 'let sleeping dogs lie' understanding. The individual/public has to be protected against the law on the protection of personal data (KVKK) and Big Data with full law and all kinds of legal arrangements must be made to prevent

individual siphoning. The organizations based on such digital theft have to be legally prevented from being in a kind of reciprocal relationship with all kinds of political units through serving illegally accessed data to them.

Otherwise, the people who have purchased smart TVs and white appliances will be both robbed and hunted like a "dairy cow". Since earning a commercial profit from the public, selling a product, TV series or movie in high numbers will proceed over all the indications that will hunt the people, the people will become the slaves of those who are jointed in this kind of organization that pursues fame, glory, even patents, and money. The respect people have for cows in this society is evident from idioms. "Like a cow looking at a new gate, he is a cow (a slang word used for hardworking students)".

Particularly talented academicians, who are taking advantage of scientific data and who get strength from these scientific data while making their analyses, should be legally protected. This legal assistance and full assurance of their data have to be provided by the universities they cooperate with. This service must include all digital media, smart media, and information obtained from audio surveillance. Multi-talented academics have to be protected legally starting from the very beginning.

The data sources that such organizations have deciphered and vacuumed especially can be thought of as in the Turkish proverb "either milk like a cow or drive the plow like an ox" (Çotuksöken, 1994: Ç 163), God forbid.

Imagine that all the contents of the popular, highly watched and blockbuster TV programs, including their ideas, names, subjects, guests, and even lines (as it is known, the sentence stolen from the public makes it easier to adopt the subject), the names, subjects and even sentences of the television series and cinemas, ideas, subjects and movie designs of hit songs and commercials, public service announcements, ideas and new fashion brands creating new fashion areas, inventions, subjects and titles of award-winning novels, slogans of ideas that enliven the dead spaces, and important clues that will bring the vitality are drawn/stolen from the people who are using the digital social media and their personal computers as a keyboard and keep a diary. Moreover, imagine that the beginning of this work started with the digital media era of 30 years ago, where those who think "I do not use the Internet as digital social media anyway" and always received calming answers even if they question the security vulnerabilities. Now this danger is perhaps more understandable. All this can happen, and evil organizations that hold this space can do all kinds of organized work in line with their interests. All consequences by these digital media should be anticipated and precautions should be taken.

It is not fathers or mothers who promote all digital organizations and opportunities with public relations and launch facilities to the individuals of the digital environment and digital future, who popularize them, who make human makeup through the illegally obtained data from such media. Honest parents care and attach importance to universal law and also the law that does not yet exist but should do and who raise their children through real sentiments instead of religion, language, or race discrimination and who put the human at the real center and who do not see money everywhere and in everything and the people raised by them are needed.

Windows scared everyone giving the message in case they didn't purchase Windows10 their system would collapse and files would be erased and in this way, it forced everyone to purchase itself. Once it was installed on your personal computers, it announced its rulership. This should be named as digital usury. If only this setup protected the user, all the opinions written in the office pages by the user are erased and debited forever... If only the poor user is not robbed. If only the individuals whose uniqueness is discovered in the digital media is not turned into digital slaves and their lives are not ruined... Don't forget that digital slavery is a vital 'organization', so much so that these brains can be managed according to their interests after being dragged to an environment where they can suppress them easily in line with the characteristics of these brains. Don't ask how. People must be protect their brains and talents much more than their moneys that's in their pocket.

Digi-Slaves should wait for digital-law like waiting for Godot(Beckett, 1969:5-226).

We should be able to understand that a digital-slave caught by evil organizations can be digitally paralyzed, intimidated, and destroyed in these environments.

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AMIGOS DO ZIKI: EVALUATION OF THE PROGRAM TO PROMOTE SOCIO-EMOTIONAL SKILLS IN PRESCHOOL CHILDREN

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Abstract

Promoting mental health and socioemotional skills is considered in the National School Health Program of Portugal (Portugal, DGS, 2015) as one of the strategic axes and an area of fundamental intervention in training and health promotion at school. The *Amigos do Ziki* program was created to promote the emotional well-being of children aged five to seven, increasing their repertoire in coping and social skills, encouraging varied and flexible ways of dealing with everyday life problems.

The objective is to describe the implementation process and evaluate the training program carried out by kindergarten teachers.

Methodology: Exploratory and descriptive study, based on the content analysis of the trainee's answers, after the implementation of the training program "Amigos do Ziki" to a group of 14 early childhood teachers from a school in the Centre region of Portugal, within the scope of the funded project "Monitoring and evaluation of children and adolescents mental health indicators: from research to practice". The teachers were trained to apply the program to a group of 97 children between 5 and 7 years old, two with special needs. For evaluation, a questionnaire was applied on a 5-point Likert scale, where: don't agree = 1; fully agree = 5 and open-ended questions for critical reflection.

Results: 24 hours of training were held, by two project trainers, who, after the initial four hours of awareness raising for kindergarten teachers and assistants, held 6 follow-up sessions of 4 hours each, close to the program implementation by the teachers, in the classroom. The overall rating was = 4.05. The content analysis of the comments allowed to identify 3 categories: *impact on teacher education*: "it was an asset for my education" or "I felt more sensitive to understand the children emotions", "I realized that working emotions early is fundamental"; *positive impact on the child*: "greater spontaneity in talking about their feelings", "they solved conflicts more easily", "Children more easily recognized their emotions and those of their peers" and *impact on parents*: "Parents gave always positive feedback", "became more participatory in classroom activities", "collaborated with games and songs".

Conclusions: the evaluation allowed to confirm the relevance of the program as a complement to the curricular activities and led to a greater awareness of the educators, regarding the importance of socioemotional learning for the social adjustment of the child. Despite the preliminary characteristics of this evaluation, it provides benefits that support the program's implementation and sustainability in preschool context for educators, children and parents

Keywords: Child, Preschool; Social and emotional Skills; Preschool Teachers

Introduction

The promotion of social and emotional skills has developed from the awareness that these skills are essential for personal success not only at school but also in adulthood.

In this context, the school, despite prioritizing the acquisition of academic knowledge, has a fundamental role in helping to prepare children and young people for the challenges of society, which is intended to be healthier, safer and more sustainable, by promoting positive school contexts.

In Portugal, the National School Health Program was designed taking into account the WHO objectives and strategies for the European Health Region 2020 (WHO, 2013) and the principles of the School for Health in Europe (SHE). Thus, health promotion and in particular mental health promotion, currently constitutes the central core of scholar health interventions, implemented through active methods and by project work, which reinforce the

promotion of social and emotional skills through the construction of networks that improve communication, interpersonal relationships and essential life skills, thus being an important setting for socio-emotional and mental health development (Portugal, DGS, 2015).

The knowledge, behaviours and beliefs established early in life tend to persist into adulthood. Because of this, the long school life cycle, which runs from 3 to 18 years old, is recognized as a milestone for the structuring of physical and mental health.

Promotion of Socioemotional Skills in School

Several researches have reinforced that children who have strong social and emotional skills perform better in school, have more positive relationships with peers and adults and have more positive emotional adjustment and mental health (Guerra & Bradshaw, 2008; Jones & Bouffard, 2012; Greenberg et al., 2017). So, schools are an important context for children's social and emotional development. The effective mastery of social and emotional skills is associated with greater well-being and better school performance, while the inability to achieve competence in these areas can lead to a variety of personal, social and academic difficulties (Greenberg et al., 2017). To build and support these skills, schools have widely adopted social and emotional learning programs (SEL), that constitute an important conceptual framework for the promotion of social, emotional and academic competences of the youngest. The Social component of SEL programs reflect the consideration for interpersonal development, aimed in promoting positive relationships with others, such as peers, teachers and family members, while the Emotional component is associated with the promotion of intrapersonal development, due to the concern for promoting self-knowledge and self-regulation skills (Leite, 2018). Because of that, the school is a privileged context for teaching and practice socioemotional skills (Weissberg, Durlak, Domitrovich & Gullota, 2015), which will result in reducing the risk of developing academic, behavioural and social problems, that often start with school entry, a period in which social and self-regulatory skills are still underdeveloped (Bierman, 2004).

Consequently, community and social interest in this field has increased, leading to the definition of guidelines for the application of SEL early in the school context, based on empirical evidence, which ensures scientifically sustained decision making and which justifies the investment in human and financial resources. It was to achieve this purpose that the Collaborative for Academic, Social, and Emotional Learning (CASEL) emerged in 1994, a consortium with the objective of establishing evidence-based programs to improve the socio-emotional-cognitive development and the academic performance of all students (www.casel.org) (CASEL, 2012).

According to CASEL (2012), the focus of SEL programs would be to promote the development of five main and interrelated domains: Self-knowledge, Self-regulation, Social awareness, Relationships management and responsible decision making. These domains include individual skills, essential for the social and cognitive aspects of school preparation, and for the academic success globally.

In this sense, Zins et al. (2004) clarifies that the domain of Self-knowledge includes the child's ability to recognize their own emotions, interests, values, strengths and limitations. The self-regulation domain includes the constructs of emotional, cognitive and behavioural self-regulation, involved in controlling one's own emotions and impulses, in the management of stress, self-motivation and personal discipline, which materializes in the ability to organize actions in order to achieve the defined objectives. The domain of social awareness involves the ability to relate effectively to others, including the ability to recognize different perspectives and emotions, as well as to appreciate individual and group differences and similarities and involves the development of empathy. The relationship management domain includes the ability to communicate, negotiate, prevent and manage conflict, and provide and receive support to achieve satisfactory interpersonal relationships. Finally, the responsible decision-making domain includes the ability to recognize challenging situations and use effective problem-solving strategies, assessing and reflecting on the various alternatives.

In this context, some programs have stood out, such as the *Incredible Years Teacher Training Program* (IY), *Preschool PATHS* (Promoting Alternative Thinking Strategies), *I Can Problem Solve* (ICPS) and *Al's Pals: Kids Making Healthy Choices*, due to the empirical evidence produced are related to significant gains in emotional and social skills, improvements in teacher-student interaction and the reduction of children's behaviour problems (Webster-Stratton & Herman, 2010, Durlak et al., 2015; Leite, 2018).

Currently, in the scope of the implementation and evaluation of SEL programs in pre-school education in Portugal, stand out the "*Salto de Gigante*" (Correia & Pinto, 2016) and the "*Incredible Years*" programs (Seabra-Santos et al., 2016). The programs proved to be effective in improving emotional knowledge, school functioning and expanding the social network of peers (Correia & Pinto, 2016). A set of interventions intended to parents, educators and children, which implementation point to a positive increase in practical schooling, and in prosocial behaviour as well as a significant decrease in externalizing behaviours (Seabra-Santos et al., 2016). However, the quality of the implementation of these programs is also dependent on the quality of the pedagogical dynamics and practices of each educational establishment, including their suitability and adaptation to the group and the individual characteristics of each child and the educator's interpretation of the concept of educational intentionality. The role of the educator is highlighted as a facilitator of interactions that, through playing, intentionally enables the child to have a stimulating and creative relational environment, creating diverse situations that contribute to the

development of the child's self-esteem, initiative capacity and the feelings of belonging, that allows them to become aware of themselves in relation to the other (Portugal, DGS, 2015).

The “Amigos do Ziki” Program

“Zippy's Friends” emerged as a program that has been applied in more than 35 countries from different continents, recognized as one of the most successful mental health promotion programs (www.partnershipforchildren.org.uk) and which was also translated and being evaluated in Portugal by the Association “Escutar” (www.escutar.pt) a non-profit Portuguese association that promotes mental health. It was created for children between 5 and 8 years old and focuses on reducing risk factors and promoting protective factors. Globally it is an early intervention program that aims to promote the emotional and mental health of all children.

It promotes the development of socio-emotional and coping skills, developing in children the abilities to recognize, identify and verbalize feelings, relationship skills and group communication and to deal with emotionally difficult situations (divorces, mourning, deaths, aggression, bullying, etc.). It also promotes mutual assistance and prepares children, in a structured way, with the skills they will need during their lives, to face the difficulties of day-to-day life and crisis situations. The program is based on the theoretical structure of the coping strategy and on the two approaches to solving problems defined by Lazarus and Folkman (1984): the problem-focused and in the feeling-focused approach (Firme, Sodr , Freitas e Santos, 2009).

The “Amigos do Ziki”, Portuguese version, is implemented after training, by the teachers themselves in the classroom, during the school year, in 24 weekly sessions divided into 6 modules, each with 4 sessions, conducted once a week for about 60 minutes. Three follow-up, twilight support sessions are held after modules two, four, and six which involve teachers from the same area being brought together to discuss experiences, address any questions, and look at the forthcoming modules. Each module focuses on a set of illustrated stories about a group of children, their families, friends and a stick insect called Ziki and focuses on the following themes: Feelings (how to identify and deal with different feelings), Communication (getting better at expressing how you feel and asking for help), Friendship (how to make and keep friends and dealing with rejection), Conflict solving, dealing with Change and loss and Moving forward (Clarke, Bunting and Barry, 2014).

From the various phases of program’s implementation at school, we highlight the evaluation of the implementation and quality of the process, as it allows us to ascertain whether the intervention plan is being complied with, to obtain real-time feedback and, thus, verify that the objectives and expected results are being achieved (CASEL, 2012). Durlak et al. (2011) found that those programs are likely to be effective if they are taught by motivated teachers and involve the school community and are also evaluated during the process and at the end of the program. They also need to follow SAFETY criteria step by step (sequenced, active, focused and explicit): use a sequenced training approach, use active forms of learning, focus enough time on skill development and have explicit learning objectives (Bond and Hauf, 2004).

This was one of the focuses of our intervention and the main objective of this study, that intent to describe the implementation process and evaluate the training program carried out by pre-school teachers.

Methods

Exploratory and descriptive study, based on the content analysis according to Bardin’s perspective of the teacher’s report, after the implementation of the “Amigos do Ziki” program, a Portuguese translation and adaptation of Zippy’s Friends program from the Partnership for Children (www.partnershipforchildren.org.uk).

The program was applied by a group of 14 early childhood teachers, all female, one with training in special needs education, from 13 pre-school classrooms, seven in urban area, that are part of a grouping of public schools from the Centre region of Portugal, within the scope of the funded project “Monitoring and evaluation of children and adolescent’s mental health indicators: from research to practice”.

The “Escutar” association was responsible for translating the material from the original “Zippy’s Friends” program, for planning and disseminating the program's objectives in Portuguese schools and, in this experience, for training and integrate in the program the two researchers who subsequently trained the pre-school teachers. All the preschool teachers were experts, with more than 25 years of experience in pre-school teaching, but they didn’t know the “Amigos do Ziki” program and they didn’t apply intentionally, in their daily practice, any SEL methodology. During the project, they were trained to implement the program to a group of 97 children between 5 and 7 years old, two with special needs, during a total of 24 training hours, 12 hours before the beginning and 12 hours during the implementation, divided in 6 modules of 4 hours each. The program was completely defined and structured, also the time necessary for its execution and all the necessary materials were available to be applied in Portuguese language.

For evaluation, a questionnaire was applied on a 5-point Likert scale, where: Disagree= 1; Somewhat Agree= 2 Fairly Agree= 3; Agree= 4; Strongly Agree= 5 and open-ended questions for critical reflection and global assessment of the training program application were used. The program names the teachers who develop the program “applicators”, so they are identified in their comments as A1 ... to A14.

All ethical requirements have been safeguarded and all ethical consents have been obtained, from the National Commission for Data Protection, General Administration of Portuguese Education and School Grouping Administration. To parents were given a written request to authorize children's participation in the program and an informed consent was filled out after the program was presented by the teachers in each kindergarten during a parents' meeting.

The training program was implemented in the academic year 2018-2019.

Findings

The study included a sample of 14 pre-school teachers, all women, with a mean age of 49.2 years old and with professional experience in the field of more than 25 years (mean = 26.9 years).

The evaluation carried out at the end of all modules revealed, in general, very positive results, highlighting only the feeling of some pressure, due to the requirement to comply with the timings for the fully implementation of the program into the end of the school year, while still maintaining the previously defined projects.

The final evaluation, carried out through the application of the 19 questions scored from 1 to 5, revealed an overall average of 4.05, with a maximum of 4.64 in the question 17 “*Do you feel more aware to issues of mental health promotion, as well - being emotional and coping skills?*” where 64% of teachers scored 5= fully agree, and the minimum score of 3.71 in the question 3. *Did you observe a better expression of the children's emotions and feelings?* where we observed a dispersion of scores (64% of teachers scored 4= agree and 21% scored 3= fairly agree) (Table 1). These results reveal that the majority of teachers (57%) liked to participate in the program, felt more aware to issues of emotional well-being (86%) and the need to work coping strategies early, i.e., they felt abler and motivated to promote children's socio-emotional competences. As Greenberg et al. (2017) argues, schools are an important context for children's social and emotional development and the programs are likely to be more effective if they are taught by motivate and involved teachers (Durlak et al. 2011).

Table 1. Teacher's global evaluation of the program implementation

Questions	Quotation		2 Somewhat agree		3 Fairly agree		4 Agree		5 Strongly agree		Mean
	n	%	n	%	n	%	n	%	n	%	
1. Did you appreciate to participate in <i>Amigos do Ziki</i> program?	0	0,0	2	14,0	4	29,0	8	57,0			4,43
2. Did you notice positive changes in the children's language ?	1	7,0	2	14,0	9	64,0	2	14,0			3,87
3. Did you observe a better expression of the children's emotions and feelings?	1	7,0	3	21,0	9	64,0	1	7,0			3,71
4. Did you notice greater communication skills?	1	7,0	2	14,0	10	71,0	1	7,0			3,79
5. Did you observed greater listening ability?	0	0,0	2	14,0	10	71,0	2	14,0			4,00
6. Did you notice an improvement in the social relationship?	1	7,0	2	14,0	6	43,0	5	36,0			4,07
7. Did you notice less conflict in the group?	0	0,0	3	21,0	9	64,0	2	14,0			3,93
8. Did you notice positive changes in children's behaviour?	0	0,0	3	21,0	9	64,0	2	14,0			3,93
9. Did you observe greater self-control in unpleasant situations?	0	0,0	4	29,0	8	57,0	2	14,0			3,86
10. Did you notice an improvement in the ability to ask for help when needed?	1	8,0	0	0,0	10	77,0	2	14,0			4,00
11. Did you notice an improvement in the capacity to look for solutions together?	1	7,0	2	14,0	8	57,0	3	21,0			3,93
12. Did you notice a better preparation for the transition to the 1st Cycle of Basic Education?	1	7,0	2	14,0	8	57,0	3	21,0			3,93
13. Did <i>Amigos do Ziki</i> help you get to know the children in your classroom better?	1	7,0	4	29,0	3	21,0	6	43,0			4,00
14. Do you feel abler to promote socio-emotional competences among Children?	0	0,0	0	0,0	12	86,0	2	14,0			4,14

15. Do you consider that <i>Amigos do Ziki</i> promotes the inclusion of all Children?	0	0,0	3	21,0	5	36,0	6	43,0	4,21
16. Did you start using strategies promoted by <i>Amigos do Ziki</i> daily in your classroom/school?	0	0,0	1	7,0	8	57,0	5	36,0	4,29
17. Do you feel more aware to issues of mental health promotion, emotional well-being and coping skills?	0	0,0	0	0,0	5	36,0	9	64,0	4,64
18. Do you consider that <i>Amigos do Ziki</i> promotes, in the educational community, the discussion about the promotion of social and coping skills, and their training?	0	0,0	4	29,0	3	21,0	7	50,0	4,21
19. Do you consider that <i>Amigos do Ziki</i> promotes better articulation between Family and School?	0	0,0	2	14,0	10	71,0	2	14,0	4,00

To evaluate the training program, we analyse the meanings pointed by the teacher's experience and transcribed in their final report, that allowed us to identify some sub-categories insert in three general categories: *impact on teacher education*, *impact on the children's skills* and *impact on parents*.

As can be seen in the Table 2, respecting the impact on the *teacher education* category and in the subcategory pedagogical competences development and positive classroom climate, despite the difficulties pointed out in reconciling the program with the other activities already planned for the school activity, it's possible to highlight the fact that the program allowed teachers for changes in attitudes and methods of teaching. Although the program uses direct instruction to teach emotional competences, the meanings attributed to the experience, as we can see below, was very positive and support that the experience was crucial for teachers' emotional training. By the other hand, had awakened teachers to the importance of socio-emotional competences and had an impact on their interaction with children and generate more positive climate in the classroom. Students' social-emotional development is closely linked to the environment in which they develop. A positive school climate and motivated teachers are crucial and gives more opportunities to practice the socials and emotional skills. (Brackett et al., 2010)

"(...) made me more attentive and a more awake professional (...)" (A1, A5) "I felt a greater need to provide children with opportunities to express themselves, to express their feelings (...)" (A14) "allowed me to get to know the children better (...)" (A11) "allowed me to look for ways to approach relationships (...)" (A3, A6); "One of the great advantages of the program is that it is a fully structured and complete product, ready to be applied(...)" (A4, A7) "the program learned me to empower children to deal with violence and bullying (...)" (A8) "allowed me to approach the contents in an in-depth and systematic way (...)" (A5) "the greatest difficulty was the reconciliation of the program with the global School Plan (...)" (A7, A10) "I really enjoyed applying the program and the initial fear was dissipated, and I think it was an asset for my training (...)" (A1, A5, A12, A14); "(...) it happened with a lot of joy, well-being and involvement. Children showed signs of satisfaction / happiness when we did the application. They adopted assertive attitudes and started to express their desires, affections, feelings and needs, in a more appropriate way (...)" (A3, A5).

On the other hand, the experience lived by the teachers allowed them to develop skills at a personal and social level, as we can infer from the meanings presented below.

"(...) helped me to reflect on my self-knowledge (...)" (A2, A3) "(...) made it possible to reflect on emotional competences as a therapeutic purpose at a social and educational level ..." (A3) "The program allowed me to analyse my own coping strategies ..." (A12) "It made me feel more awake for children's mental and emotional health ..." (A2) "I feel much more enriched after participating in the training ..." (A1, A11) "It helped me to understand the relationship between emotion and learning ..." (A4).

The results show that the program had the advantage of making the teacher aware to an educational intentionality in this area. The program allowed them to be more attentive and aware of emotional issues, that is, to show more open and positive attitudes to mental health. The implementation philosophy of "Amigos do Ziki" focuses on the teacher's training, promoting their own social and emotional development and the consequent impact of this development on their classes and on the school environment as a whole. In this domain, Clarke et al. (2010) revealed that in schools where teachers exhibited a more positive view of mental health as an integral part of life, reported positive changes in children's emotional and behavioural well-being, as well as a positive influence on the school relationship and school curriculum.

Table 2. Categories and sub-categories from the impact on the teacher's education

Categories	Sub-categories
Impact on teacher's education	Pedagogical skills development
	Positive classroom climate
	Personal and social skills development

A study carried out in Portugal (Leite, 2018) after the application of the “Amigos do Ziki” Program reported an increase in socioemotional skills, namely in emotional knowledge, prosocial behaviour and in use coping skills and a decrease in difficulties and behaviour problems. Although the current study carried out the evaluation by analysing the meanings indorsed by teachers to the lived experiences, it was also possible to identify effects, perceived by teachers, on children's emotional, social and cognitive competences. The development of social skills mentioned by teachers, may have resulted from the cooperative learning environment that the “Amigos do Ziki” program implies and that, according to Mira-Galvañ and Gilar-Corbi (2020), is “a continuum of learners working together in a small group, so that, everyone can participate in the collective task that has been clearly defined by the teacher”. As Kestilä et al. (2005) says, social skills are being stimulated in the midst of social relationships with peers, which are enhanced in pre-school, the first context beyond the family environment that allows children to expand their social network.

“Some more shy children started to intervene more frequently in the dialogues...” (A2) “they learned to listen and wait to speak ...” (A5) “we noticed the easiest relationships between them...” (A12) “it was easier to solve conflicts...” (A10, A14) “they showed greater solidarity...” (A1, A5) “Significant improvement in the group's environment and interpersonal relationships...” (A3) “Children enjoyed the sessions, especially to express their opinions and report their personal experiences...” (A5). “I noticed a greater complicity between the group and the teacher ...” (A10) “the program trained the children to listen to each other...” (A11) “Attention and concentration skills were reinforced and developed...” (A3, A7).

On the other hand, regarding the children's emotional skills, studies have shown contradictory results, not always finding an increase in these competencies. Leite (2018) justify these findings as being result from the interaction of several factors, namely the school environment, the individual characteristics of the teachers, regarding their own attitudes and motivation and the perceived usefulness of the program, or the manual format of the program in itself, which may not fit the needs and characteristics of all the group.

In our study, by the meanings attributed by the educators, the children revealed a positive emotional skills development during the program, as perceived in the following units of meaning:

“it was easier to identify less positive feelings, talk about them(...)” (A1) “(...) easier for children to express their feelings...” (A1, A2) “Children started to understand their emotions better and trying to deal with them(...)” (A4) “They felt the need to witness situations in which they felt alone or rejected(...)” (A2) “They showed the ability to identify problems(...)” (A2) “I noticed a greater spontaneity of the children in talking about their feelings and about possible ways to deal with unpleasant situations (...)” (A2, A4) “they solved conflicts more easily and with less suffering (...)” (A4) “Children showed facility to talk about conflicts at home(...)” (A11) “The way that some children reported problematic situations in the family environment surprised me a lot(...)” (A1)

In this context, Clarke et al. (2010), found that in schools where teachers exhibited a more positive view of mental health and its importance in the school curriculum, they reported positive changes in children's emotional and behavioural well-being, as well as a positive influence on the school climate generally.

Although the improvement in school performance is referred to as being indirectly associated with SEL competences, it may not manifest itself immediately after the implementation of a program like this (Cano, 2006). The “Amigos do Ziki” program have the great goal to develop in children their own positive strategies to deal with problems through engaging the propose activities: listening to stories, discussion the issues raised, play games and do role-play activities about emotions and coping. Throughout all of the programmes, children follow rules which encourage respectful relationships, e.g. listen to each other, don't say nasty things, and think of nice things to say to each other and also propose that children learn how to find their own solutions to problems. Those activities had positive results in cognitive and behavioural skills as we can see in teachers' references:

“Children have become abler (...)” (A4, A5) “By learning to recognize and named emotions, children began to identify them, not only in themselves, but also in the others (...)” (A12) “The golden rules for choosing a good solution in conflict resolution (helps me feel better; it doesn't hurt me or anyone) were very constructive (...) we use them all the time (...)” (A7, A12) “because of the regular sessions ...it became easier for children to internalize the contents (...)” (A5) “At the end of each session, the children were invited to make their assessment on the feelings sheet, which became a

very important practice (...)” (A7, A14) *“The hardest part was finishing the program, knowing that there wouldn’t be more Ziki. We will miss “teacher Carlos”. (...) I think that the change to the 1st cycle (primary school) will be easier (...)*” (A2, A13) *“they talked about the program with their parents and were excited and willing to change behaviours and attitudes (...)*” (A5, A12).

In programmes such as “Amigos do Ziki”, social and emotional skills are explicitly taught, practised and applied to diverse situations, so students internalise them as part of their repertoire of behaviours (Clark, O’Sullivan & Barry, 2010).

Table 3. Categories and sub-categories from the impact on children’s skills

Categories	Sub-Categories
Impact on children’s skills	Improvement in social skills
	Improvement in emotional skills
	Improvement in cognitive and behavioural skills

The “Amigos do Ziki” program helps children to cope with everyday problems and develop positive mental health. But the impact of the program is even greater if parents can reinforce at home what they are learning. Leite (2018) states that parental involvement at school is one of the most consistent predictors in promoting children’s educational achievement, regardless of parental socioeconomic level, ethnic / racial origin or education level.

Under this assumption, the program includes homework activities and games that children need to perform with parents at home. Obviously, this strategy will only be successful if parents get involved and interested in learning more about the program and continuing it at home. From the teachers’ responses, we realized that not all parents participated properly in these activities *“the fact that parents do not participate in the sessions(...)*” (A1, A5, A12, A13); *“(...) the low participation of parents at home activities (...)*” (A3, A5, A12, A13,), but even so, there was positive results, revealed by the teachers’ appraisals about the program impact on parents, such as at the parent’s school involvement, but also in parent’s/child relationships, as we can see in the following meaning units:

“parents referred to the benefits of the program(...)” (A2) *“It allowed to stimulate the parental participation in school life(...)*” (A4) *“most families joined, collaborated and worked with their children and with school in developing the program(...)*” (A6, A11) *“The interaction with the families also showed commitment to the exercises that went home (...)*” (A4, A7) *“Parents have always given positive feedback on their participation, saying that they understand children’s behaviour better and different ways of dealing with certain situations (...)*” and *“that the programme had helped their children to deal better with problems (...)*” (A11) *“I think it was very important for my son (...)*” (A2, A10);

When educators and parents learn from one to another about how social and emotional skills are visible and promoted in their various contexts (home, school, community), they can coordinate and have a bigger impact on children. Specifically, educators can validate that they are promoting the SEL skills that also matter to parents, and can align with the SEL skills that parents notice and support at home. This SEL partnership also will have a positive impact on parent-child relationship (Miller, Wanless, and Weissberg, 2018). In these experience, the partnership between school and parents revealed a positive impact on parent-child relationships, as documented in the educators’ assessment:

“(...) the mother said that Ziki greatly improved her son’s development. His enthusiasm was remarkable ...” (A4) *“I noticed a big change in my son’s behaviour; I think this project helped a lot in his development (...)*” (A6, A12) *“It allowed me to get to know my children better (...)*” (A2, A10) *“it came to open doors and paths that will contribute in the future to a more awake family and happier children (...)*” (A11, A13); *“Since she started attending the Ziki program, my daughter is more attentive and cooperative at home (...)*” (A2, A10); *“my child know how to better identify feelings (...)*” (A3, A7).

Table 4. Categories and sub-categories from the impact on parent’s involvement at school

Categories	sub-categories
Impact on parents	Positive impact on parent-school involvement
	Positive impact on parent-child relationship
	No effect in parent’s involvement

Conclusion

The findings from the assessment indicate that “Amigos do Ziki” was well received by school and appeared to be implemented with high fidelity. The analyse of the implementation and the quality of the training process reinforce that the program contributed on teachers training and in their pedagogical competences as well as in changes in attitudes and methods of teaching. The school and classroom environment has an important role in shaping students’ emotions and social relationships. So, the evaluation allowed us to confirm the relevance of the program, as a complement to the curricular activities and led to a greater awareness of the educators, regarding the importance of socioemotional learning for the social adjustment of the child. The philosophy of “Amigos do Ziki” focuses on the training of pre-schooler educators, promoting their own emotional development and the consequent impact of the student development and on the school environment as a whole. And so, when developing a new look at the children's emotional needs, the teacher acquires attitudes, which are reflected in both, in their own personal lives as in the professional level. Despite it uses direct instruction to teach socioemotional competences, some elements of the program had been integrated in the routines of the school day, what contributed to a positive classroom climate.

Analysing the meanings reported by teachers allow us to perceived the programme’ benefits for students in relation to their social and emotional skills, that were very positive in all domains of the SEL program. Normally parents and teachers agree that social and emotional learning is essential for children’s growth, but although they agree on these domain, they can run into challenges when attempting to work together to assess and support these skills. In these experience, the partnership between school and parents revealed a positive impact on parent-school involvement and parent-child relationships, who was very important, and we believe, will have a big impact on children’s well-being and emotional development.

The main barriers around the implementation were time constraints, because of the other projects they planned to perform.

Despite the preliminary characteristics of this evaluation, it provides benefits that support the program's implementation and the sustainability in the preschool context for educators, children and parents.

The potential implications of the present research must be tempered analyse in light its limitations, some related to the sample size. An additional limitation is that these analyses relied entirely on information provided by teachers, so future research that captures performance changes in children, teachers and at the organizational level are needed, to understand the real effectiveness of the program on socioemotional skills development.

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AN INVESTIGATION OF LIFE SCIENCE COURSE CURRICULUM WITHIN TURKISH QUALIFICATIONS FRAMEWORK

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Abstract

In this study, the Life Science Course Curriculum was analyzed under the Turkish Qualifications Framework (TQF). In the research, the special aims of the Life Science Course Curriculum, the skills and attainments in the curriculum were discussed. The scope of research involving the use of document analysis method was examined in terms of eight core competencies expressed in the TQF. According to the results, the special goals of the Life Science Courses Curriculum has references to the lifelong learning which was highlighted in the TQF. Again competence emphasized in TQF has been found in the curriculum. When the attainments are examined, it is determined that the most emphasized competence in the achievements is Social and Civic Competence. While Digital Competence is seen to be quite low in the attainments, it has been determined that Cultural Awareness and Expression competence are almost absent in the attainments.

Introduction

In today's world, where knowledge has increased rapidly and is called the "information age", the necessity of changes in the learning skills of individuals has emerged. This situation has led to the expression of "lifelong learning", with an emphasis on the fact that the learning that takes place in every environment should also take place in all situations. Lifelong learning emphasizes the preparation and motivation of children to be lifelong learners from an early age. In addition, it provides opportunities for adults to retrain or improve their skills, whether they are employed or not (OECD, 1996). Lifelong learning is seen as a process that emerges as the needs and desires of the individual at an early age and improves him throughout his life (Oester & Oester, 1997). The aim of lifelong learning is seen as ensuring that individuals do not have difficulty in adapting to society with the change of the society as an information society, to take an active part in their working lives and to be successful in their social lives (Mollaibrahimoğlu, 2016). While lifelong learning is effective on the education system, it is also considered important in terms of contributing to economic development. Kaya (2014) states that in this context, emphasis is also placed on updating qualifications within a vocational education in the context of lifelong learning, potential regional mobility of capital and technological progress. Due to this two-dimensional structure, Aspin and Chapman (2001) emphasize that all countries and governments should take initiatives in lifelong learning practices and thus, the following needs can be met:

- Countries, to feed its citizens and flexible enough to provide them with a reasonable quality of life, adaptable and allows you to have a forward-looking economy.
- People open their rights and duties which are to raise awareness about the most preferred modern management style, to create awareness about these rights and to comply with the duty.
- Cultivate personally satisfying and refreshing and individuals can create their own patterns of life to conscious awareness as a series of continuous activity options they can rebuild for themselves.

In the light of all these advantages, many countries have taken initiatives and introduced different practices to enable individuals to become lifelong learners. Among these practices, qualifications frameworks focusing on the qualifications are the practices that have been on the agenda in recent years. Placement of qualifications at different levels based on learning outcomes through qualifications frameworks provides the employer with information about the potential gains of the workforce. States use their qualification framework preparation and implementation as an official policy tool to support development and become an important actor in the global market. In this context, the European Qualifications Framework (EQF) started to be developed in 2004 and was officially accepted in 2008 and made recommendations to the countries. EQF, as a tool to improve lifelong learning; includes learning that takes place in (formal, non-formal and informal) learning environments. According to the EQF, which divides the competencies into three basic levels, these levels can be summarized as follows (European Parliament Council, 2008):

Knowledge: It is the set of facts, elements, theories and implementations regarding a business or learning field. In the context of the EQF, knowledge is defined as theoretical and/or factual.

Skill: The ability to use and apply knowledge to perform tasks and solve problems. In the context of the EQF, skill is defined as cognitive skills (including logical, intuitive and creative thinking) or practical skills (including manual skills and the use of methods, materials, tools and equipment).

Competence: Proven ability and personal, social and / or methodological abilities to use knowledge and skills in

business or learning environments, professional and personal development. Competence in the context of the EQF; is defined in terms of responsibility and independence (autonomy).

Competencies mentioned here are considered to be higher order. The European Commission collects these competencies under eight main headings. These titles are (Gordon at all., 2009):

“Communication in the mother tongue”

“Communication in foreign languages”

“Mathematical competence and basic competences in science and technology”

“Digital competence”

“Learning to learn”

“Social and civic competences”

“Sense of initiative and entrepreneurship”

“Cultural awareness and expression”

Recommendations including these competencies, 36 countries, including our country, are included in the EQF Advisory Group. In this context, our country Turkish Qualifications Framework, the Ministry of Education by the Vocational Qualifications Authority and Higher public institutions, mainly Council, employers and workers' unions, professional organizations and in cooperation with relevant civil society organizations, has been prepared with contributions from academics with local and international experts. Turkish Qualifications Framework (TQF) has entered into force in 2015. TQF covers all qualifications which are gained in the education and training system of our country and in other learning environments. It is seen that there are updates in the training programs within the scope of TQF. It is stated that knowledge, skills and competencies are emphasized in the curricula, which were updated in 2017 and started to be implemented at all education levels in 2018.

Eight basic qualifications have been determined within the scope of TQF. These competencies are classified as knowledge, skills and competence, as is the EQF. In this classification, the second level shows the primary school level. Indicators for this level are stated as follows (Vocational Qualifications Authority, 2015):

Table 1: Primary school qualifications determined by TQF

Level	Knowledge	Skill	Competence
2 nd Level	Having an introductory factual knowledge of a business or learning field	Basic ability to use the necessary knowledge to perform duties and solve possible basic problems	<ul style="list-style-type: none"> - Performing simple duties with limited self-determination under supervision - Being aware of learning requirements within the content of lifelong learning

In addition, it is seen that the competencies mentioned above are at the top of all curricula. The following information is provided as a description of competencies in the curricula (MEB, 2019): *“Our education system aims to raise individuals who have the knowledge, skills and behaviors which are integrated in competencies. For students at both national and international level; personal, social competency skills that they will need in the range of academic and business life in Turkey Qualifications Framework (TYC) was determined. TQF identifies eight key competencies and defines them as follows.”* These competencies summarized as follows (MEB, 2019); *“Communication in the mother tongue”, “Communication in foreign languages”, “Mathematical competence and basic competences in science and technology”, “Digital competence”, “Learning to learn”, “Social and civic competences”, “Sense of initiative and entrepreneurship” and “Cultural awareness and expression.”*

The Life Science Course Curriculum, which is among the curricula, aims to provide primary school students with basic knowledge, skills and values in the axis of individual, society and nature. The Life Science Course Curriculum with its aims and content is the course that should be given the most place in TQF and can contribute to students in becoming lifelong learners. In this context, the aim of this study is to examine the Life Science Course Curriculum within scope of Turkish Qualifications Framework. In the research, The Life Science Course Curriculum was examined in terms of attainments and within the scope of competencies emphasized in TQF.

The Study

Research Model

In this research, document analysis was used. Document analysis is a method that includes the analysis of written and printed documents related to the subjects to be studied. In content analysis, similar data are brought together within the framework of certain concepts and themes and interpreted in a way that the reader can understand (Yıldırım & Şimşek, 2006). Document review is within the scope of qualitative research. In this respect, the

research is a qualitative study. Within the scope of the research, the Life Science Course Curriculum was reviewed and the attainments in the program were analyzed within the scope of eight basic competencies emphasized in TQF, and it was examined whether these basic competencies were included in each grade level attainment.

Data Analysis

Within the scope of the research, the aims of the Life Science Course Curriculum and the skills in the program were examined. Then, the eight basic competence levels of TQF were reviewed in order to determine if they were included in each grade. Descriptive analyzes were included in the research and support was made with direct quotations where necessary.

Findings

Findings about the Objectives and Skills Which Take Part in Life Science Course Curriculum

Examining the Life Science Course Curriculum, it is seen that it includes “Objectives of Life Science Course” and “Skills of Life Science Course Curriculum”. In the program, the main purpose of the Life Science Course is expressed as “To raise individuals who have basic life skills, who know themselves, who live a healthy and safe life, who absorb the values of the society they live in, who are sensitive to nature and the environment, who research, produce and love their country”. Other objectives of the program are given in Table 2:

Table 2: Objectives of the Life Science Course

Objectives
Knows himself and the environment he lives in.
Has the basic values of family and society.
It brings national, spiritual and human values into life.
Be aware of what it has to do to ensure personal development.
Improves personal care skills.
Gains the awareness of living a healthy and safe life.
Gains social participation skills.
Gains the ability to perceive time and space.
It develops the ability to use resources efficiently.
Gains the skill of learning to learn.
Gains basic scientific process skills.
Loves his country and is willing to keep his historical and cultural values alive.
It is sensitive to nature and environment.
Uses information and communication technologies in accordance with its purpose.

When Table 2 is examined, it is seen that values and higher order thinking skills are emphasized and attitudes are mentioned. The skills included in the Life Science Course Curriculum are listed in Table 3:

Table 3: Skills in Life Science Course

Skills
Research
Using Information and Communication Technologies
Perceiving Change and Continuity
Balanced diet
Protecting Nature
Recognizing National and Cultural Values
Self-direction
Keep Healthy
Problem Solving
Social Participation
Time management
Entrepreneurship
Self Protection
Self Knowledge
Personal care
Following the Rules
Detecting Space
Observation
Communication
Cooperation
Decision Making
Career Awareness Development
Use of Resources

These skills are called life skills in Life Science Course Curriculum. When Table 3 is examined, it is seen that higher order thinking skills such as problem solving, decision-making, research, and self-direction are included, similar to the objectives. In addition, the skills of “balanced diet”, “protecting nature”, “self-knowledge”, “self-protection”, “keep healthy”, “following the rules” and “recognizing national and cultural values”, which are related to the subjects of the course, are also included.

Findings About the Attainments Which Take Part in Life Science Course Curriculum

The results of the analysis regarding the attainments in the first grade of the Life Science Course Curriculum to contain the eight basic competencies specified in TQF are presented in Table 4.

Table 4: Competencies included in the first grade attainments of the Life Science Course Curriculum

Competencies	f
<i>"Communication in the mother tongue"</i>	10
<i>"Communication in foreign languages"</i>	-
<i>"Mathematical competence and basic competences in science and technology"</i>	11
<i>"Digital competence"</i>	7
<i>"Learning to learn"</i>	6
<i>"Social and civic competences"</i>	15
<i>"Sense of initiative and entrepreneurship"</i>	10
<i>"Cultural awareness and expression"</i>	-

When Table 4 is examined, in 10 of the 53 attainments in the Life Science Course Curriculum, Communication in the Mother Tongue; 11 of them Basic Competencies in Science/Technology; Digital Competence in 7; 6 of them Learning to Learn; It is seen that 15 of them have Social and Civic Competencies and 10 of them have Sense of Initiative Entrepreneurship competencies. No attainment has been detected regarding the competencies of Communication in Foreign Languages and Cultural Awareness and Expression. Examples of achievements are presented below:

"Participates in the classroom meeting activity."
(Communication in Mother Tongue)

"Observes the animals in his immediate vicinity."
(Basic Competencies in Science / Technology)

"Uses technological tools and equipment safely."
(Digital Competence)

"Plans what he can do during the day."
(Learning to Learn)

"Follows the rules of courtesy when communicating with family members at home."
(Social and Civic Competences)

"Participates in the process of determining in-class rules."
(Sense of Initiative and Entrepreneurship)

Findings regarding the attainments at the second grade are included in Table 5.

Table 5: Competencies included in the second grade attainments of the Life Science Course Curriculum

Competencies	f
<i>"Communication in the mother tongue"</i>	12
<i>"Communication in foreign languages"</i>	-
<i>"Mathematical competence and basic competences in science and technology"</i>	14
<i>"Digital competence"</i>	5
<i>"Learning to learn"</i>	6
<i>"Social and civic competences"</i>	21
<i>"Sense of initiative and entrepreneurship"</i>	6
<i>"Cultural awareness and expression"</i>	2

According to Table 5, in 12 of the 50 attainments in the Life Science Course Curriculum, Communication in Mother Tongue; 14 of them Basic Competencies in Science / Technology; Digital Competence in 5; 6 of them Learning to Learn; 21 of them Social and Civic Competences, 6 of them Sense of Initiative and Entrepreneurship; In 2 of them, it is seen that Cultural Awareness and Expression competencies are included. No attainment has been determined regarding the competence of Communication in Foreign Languages. Examples of achievements are presented below:

"Expresses himself clearly while communicating at school."

(Communication in the Mother Tongue)

“Realizes the effects of seasonal fruit and vegetable consumption on human health.”

(Basic Competencies in Science / Technology)

“Investigates Atatürk's childhood.”

(Digital Competence)

“Implements the work planned during the day.”

(Learning to Learn)

“Follows the rules when playing games with friends at school.”

(Social and Civic Competences)

“Participates in family decision-making processes.”

(Sense of Initiative and Entrepreneurship)

“Researches the cultural heritage items in his close environment.”

(Cultural Awareness and Expression)

Findings regarding the attainments at the third grade are included in Table 6.

Table 6: Competencies included in the second grade attainments of the Life Science Course Curriculum

Competencies	f
<i>“Communication in the mother tongue”</i>	19
<i>“Communication in foreign languages”</i>	-
<i>“Mathematical competence and basic competences in science and technology”</i>	12
<i>“Digital competence”</i>	7
<i>“Learning to learn”</i>	3
<i>“Social and civic competences”</i>	20
<i>“Sense of initiative and entrepreneurship”</i>	10
<i>“Cultural awareness and expression”</i>	1

When Table 6 is examined, in 19 of the 45 attainments in the Life Science Course Curriculum, Communication in the Mother Tongue; 12 of them Basic Competencies in Science / Technology; Digital Competence in 7; Learning to Learn in 3; 20 of them have Social and Civic Competences, 10 of them have Sense of Initiative and Entrepreneurship and 1 of them has Cultural Awareness and Expression competencies. No attainment has been determined regarding the competence of Communication in Foreign Languages. Examples of achievements are presented below:

“Gives examples of the necessity of following the rules in traffic.”

(Communication in Mother Tongue)

“Takes responsibility for protecting nature and the environment.”

(Basic Competencies in Science / Technology)

“Researches people who have contributed to our country with their work.”

(Digital Competence)

“Gives examples of the contributions of being planned to his personal life.”

(Learning to Learn)

“Realizes the individual and social contributions of his school.”

(Social and Civic Competences)

“Expresses his wishes and needs regarding school in a democratic way in the school environment.”

(Sense of Initiative and Entrepreneurship)

“Participates in social responsibility projects aimed at the problems of people in different cultures living in our country.”

(Cultural Awareness and Expression)

Conclusions

The purpose of this research is to examine the Life Science Course Curriculum within the scope of TQF. The research findings are discussed in three parts. In the first part where the objectives of the curriculum were examined, the main purpose of the curriculum was to raise individuals who has self-knowledge, society, protect nature and love their country by acquiring basic life skills. In addition, other objectives of the curriculum are included. Considering that the main purpose of TQF is that individuals are lifelong learners in the society, it can be said that the aims refer to lifelong learning (Social participation, learning to learn, scientific process skills, information and communication technologies). However, in the curriculum, it is seen that these objectives are written in sentences only and although they contain expressions for lifelong learning, there is no direct emphasis on the concept of lifelong learning. Nkomo (2000) states that framework qualifications should be included in the curricula and therefore standards and objectives should be given in the curriculum accordingly.

When the skills in the Life Science Course Curriculum are investigated, it is seen that higher order thinking skills such as problem solving, decision making, research, self-direction are included. TQF (2015) defines the concept of skill as "using knowledge" and "problem solving", which requires logical, intuitive and creative thinking acquired in a field of study or learning, and the ability to use manual skills, methods, materials, tools and equipment. According to this definition, it can be said that the skills included in the program are consistent with TQF. However, it is thought that there may be problems in providing lifelong learning or being taught of these skills. As a matter of fact, Baykal (2017) states that these skills are among the skills that students are expected to have in PISA, but due to the low scores, it is necessary to be clearer in order to develop higher order thinking skills and ensure permanent learning. Diker-Coşkun (2017) also states that TQF skills may not be understood adequately because these skills do not fully correspond in the attainments, therefore, sample applications and explanations should be included regarding these skills.

When the attainments in the Life Science Course Curriculum are investigated, it is seen that there are five competencies in the first grade. These competencies are listed as follows: Social and Civic Competences, Basic Competencies in Science/Technology, Communication in Mother Tongue, Sense of Initiative and Entrepreneurship, Digital Competence and Learning to Learn. It is seen that this order did not change in the second grade and in the third grade, and the competence of Cultural Awareness and Expression was included in very few achievements. These competencies have been accepted as Gelen (2017) 21st century skills and it was emphasized that the development of each is very critical. TQF (2015) defines these competencies as "the basic competencies required by the information society, that all individuals should have, that support the individual development of individuals within the framework of lifelong learning, their social participation as active and responsible individuals in the society, and their employment". Therefore, it is critical that these competencies are included in the curricula. In this respect, it is challenging that "Digital Competence" and "Learning to Learn" competencies are included in the attainments at a low rate, and "Cultural Awareness and Expression" competence does not take place in almost any attainment. Oker (2019) emphasizes that while Life Science Course raises the individual as a whole, art should be included in its content. In the Life Science definitions, the subject of being a "citizen of the world" is also mentioned. From these points of view, it would not be wrong to think that "Cultural Awareness and Expression" competency should be included in the Life Science Course much more. In addition, it has been shown that the competence of "Communication in the Mother Tongue", which is seen as very critical for the individual, is included in less than half of the achievements. Yüksel and Taneri (2020) examined Life Studies textbooks in terms of key competencies and stated that Social and Civic Competences, Communication in the Mother Tongue and Basic Competencies in Science/Technology are emphasized in the books. In addition, they found that Digital Competencies are rarely included in the books and stated that the distribution of competencies on the basis of units is at a balance. In their research, Yalkın and Işık (2019) examined the attainments in the Science Course Curriculum within the content of lifelong learning competencies, and as a result of the research, they revealed that the competency that is the lowest in the attainments is Digital Competence. These results are consistent with the research results.

Based on the research results; It may be suggested that the TQF, which is stated to be included in the Life Science Course, should be put forward more clearly and all competencies should be included equally and at a high rate, and the curriculum should be reviewed within this scope. In addition, examining the curricula of different courses within the scope of TQF and making suggestions for the curricula can contribute to the organization of the curricula and make them more consistent with TQF.

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ANALYSIS OF ONLINE CUSTOMER COMPLAINTS OF MOBILE TELECOMMUNICATION SECTOR WITH TEXT MINING

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Abstract

Internet usage has become widespread as a result of the rapidly developing information sector and technological revolutions and people have started to use internet channels such as online complaint sites to express their opinions about companies from wherever they are. Customer satisfaction is one of the basic elements of businesses to make their activities sustainable. Increasing the loyalty to the brand is possible with the correct understanding of the points where the customers are satisfied or not. At this point, customer complaints about companies are of great importance for businesses. Customer complaints can be considered as an opportunity. Because, if the complaints are analyzed correctly, companies will be able to retain the customer or acquire new customers. Here, it is very important to analyze the data correctly. In this study, Natural Language Processing technique, one of the text mining techniques, was used with the data obtained from the online customer complaint site and analyzes were carried out. As a result of the analysis, the companies belonging to the telecommunication sector were classified according to the data sets created and various comments were obtained. Based on the complaints with structured data, the operators with the highest cost, most customer contact center failure, and the weakest signal strength were determined.

Keywords: Online Customer Complaint, Customer Relationship Management, Text Mining, Natural Language Processing

Introduction

Nowadays, thanks to the developments in the field of informatics, users are able to master more advanced computer technologies and these developments bring the accumulation of digital data. Outputs can be obtained for different purposes with the data obtained from information technologies.

In recent years, it is observed that the amount of recorded data has reached enormous amounts due to the widespread use of information technologies, especially mobile technologies and social media, and this trend continues to accelerate. The fact that digital technologies enable large amounts of data to be collected, stored, processed, and analyzed offers a variety of opportunities for businesses both in managing their operations and in competing. With the analysis of the collected data, it is possible to develop various applications that will contribute to companies in gaining competitive advantage, making better decisions, developing new products and services, increasing quality and productivity, and better understanding the customer and the market (Çiğdem and Seyrek, 2015). While accessing data was a priority and costly problem until 20 years ago, development in computer and internet technology almost eliminated this problem (Chen et al., 2014).

The fact that digital technology allows the storage of excessive amounts of data and the proliferation of data collection tools have made it possible to access large amounts of data very easily. Because of that, nowadays, storing data has become more costly than accessing it (Elgendy and Elragal, 2014). In the age we live in, it is possible to record all the data available to the public. Nowadays, from online transactions, emails, search queries, health records, social network interactions, scientific data, sensors, mobile phones, etc. Data obtained from many channels and analysis of these data are among the most important issues for modern science and business world. (Kalyvas and Albertson, 2014).

Big data provides advantages to businesses in many areas from statistics to computers, internet to social media, marketing to retail (Gürsakar, 2014). For example, in retailing, data obtained from internal sources such as financial records, customer shopping traffic, product records, and data obtained from external sources such as comments on social networking networks, mobile data, emails, website clicks are analyzed and used to understand customer behavior.

Thanks to technology, large amounts of information can be stored and become accessible. The Internet has become important in driving the changes in the customer world. In addition, thanks to the internet, people and communities, markets are connected, borders are crossed and information is shared (Fisk, 2010).

An unsatisfied customer can take direct action to complain, seek compensation, take legal action, and resolve the problem that caused dissatisfaction with third parties or media (media, consumer protection associations, etc.), or they may take indirect and passive actions such as negative word of mouth communication (Gülfidan, 2008). Today, one of these communication ways is online customer complaint sites on the internet.

Comments and evaluations on online complaint sites in the internet environment have emerged with the development of internet technology of traditional word-of-mouth communication and has a wider spread and impact area than traditional (Aymankuy, 2010).

In the globalizing world where millions of businesses operate, competition conditions make it more difficult for companies to survive. Businesses have to accelerate their efforts to gain new customers and grow by ensuring the satisfaction of their existing customers with their business volume. In this direction, companies show sensitivity in customer relationship management practices.

One of the most important factors enabling the development of the products and services offered by the companies is the voicing of customer dissatisfaction. Customer satisfaction determines and evaluates whether a product is satisfactory. In terms of result evaluation, it is important to compare the complaint management process with the standards in order to see and improve the existing structure (Keskin, 2016).

In the telecommunication sector; Since comprehensive communication services such as voice transmission, fax, mobile phone services, photo transmission, e-mail, internet access are provided to both long and close distances, there is a large amount of data transfer.

With the rapid development of computer and internet technologies, the telecommunication sector is also developing rapidly and competition in this sector is increasing. In cases where competition increases, customer satisfaction becomes important. For this reason, techniques such as text mining are used in services such as better understanding the business content, using resources better, increasing the quality of the service and preventing fraud attempts (Şimşek, 2006).

Scientific Literature Review

During the selection of the text mining technique to be used in the study, the algorithm used by the academic publications previously created in the field of text mining, the way of clustering the data and the way of categorization were examined and shed light on the progress of the study.

In Pasin's study, in which he analyzed text mining methods on Turkish texts, he classified the Turkish data. He divided and examined it into three categories. He formed a data set consisting of Turkish corner posts and used Naive Bayes and k-NN classifiers in the study (Pasin, 2018).

By applying the Latent Dirichlet Allocation (LDA) method to the descriptions of real estate ads, the topics used by real estate agents to attract the attention of consumers, the most common words in these topics; It has been investigated whether the advertisement varies according to its location, type (house, plot, etc.) and whether it is for sale or rent (Kızıltan, 2018).

For banks operating in Turkey, a model proposal presented that includes providing support for businesses to make new and strategic decisions by analyzing customer complaints that are not structured on online platforms while using data mining methods

Tunalı designed and implemented a cluster structure developed on text mining. In the study, the idea of creating overlapping clusters in flexible clustering approach by modifying the global K-Means algorithm was applied to the Global K-Means algorithm, a unique algorithm in which documents are allowed to be included in more than one cluster according to their similarity to the clusters in the K-Means cycle, Multi Cluster Global K-Means algorithm has been developed (Tunalı, 2011).

Gökdeniz developed a text mining model for relationships between brain parts using natural language processing. With a linguistic approach, the author selected the sentences containing the relationships depending on the patterns, and then using the commitment parser and item parser on these sentences, the author revealed the relevant brain parts and their relations with each other (Gökdeniz, 2016).

Method

Businesses need to understand their customers better and identify their needs for sustainability. In this context, complaint management, as a marketing activity, provides a quick solution to the problem perceived by the customer and makes a positive contribution to customer satisfaction by preventing similar complaints.

Data required for these applications obtained from Şikayetvar.com, Turkey's first and biggest complaint platform. It acts as a bridge between the customer and the brand, where consumers seek solutions to their complaints about companies, companies find solutions to complaints in order to gain customers and protect brand reputation. The code was written with the Scrapy module in Python and the frequency of using the data in the texts was obtained. Natural Language Processing (NLP) technique, one of the text mining techniques, is used to structure the data.

Data Collection

As the first step of the study, a code was written with Scrapy, which is used as a web scanning module in Python, and the data was obtained from the online customer complaint site. The data set of complaints was created between 1 October 2018 and 31 March 2019. There are 10 customer complaints on each page of the brands.

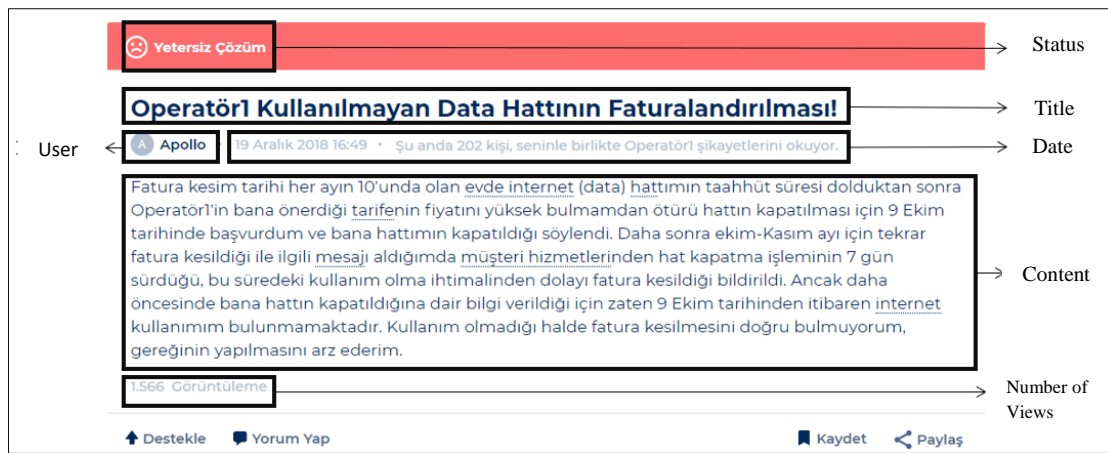


Figure 1. An example of a customer complaint on Sikayetvar.com

The program code of the data to be obtained in the study is shown in Figure 2.

Saving Data in the Database

The title of the complaint or the whole text in the data set is unstructured data. The contents obtained through codes written in Python have been saved in the SQLite database. The sample of the data set created according to the complaint sample model shown in Figure 1 is shown in Table 1.

The complaints were recorded in the SQLite database as in the example given in the table. During the acquisition of data, an ID is defined for each complaint in order to protect the personal rights of the users. The complaints were recorded in separate columns as title text and content text. In addition, the information on how much each complaint was viewed by other users was included in the data set. The study covers the 6-month period between October 1, 2018 and March 31, 2019. In this process, the number of complaints belonging to brands is shown in Table 2. Pie distribution of data is shown in Figure 3.


```
# -*- coding: utf-8 -*-
import scrapy
from scrapy import Selector
import sqlite3
import csv
import os

say=0

sitelink= "www.sikayetvar.com"
sitelink = str(sitelink).replace("https://", "")
sitelink = sitelink.replace(".com/", ".com")

marka = open("marka.txt", "r")
marka = marka.read()
print(marka)

class MySpider(scrapy.Spider):
    name = "link"
    start_urls = [
        "https://"+sitelink+"/"+marka+"
    ]

    marka = marka.replace("-", "")
    with open("marka.txt", "w", encoding="utf-8") as file:
        file.write(marka)

    conn = sqlite3.connect('database.db')
    c = conn.cursor()
    c.execute("CREATE TABLE IF NOT EXISTS " + str(marka) + "(sikayet_id TEXT, baslik TEXT, icerik TEXT, kisi TEXT, goruntulenme TEXT, tarih TEXT, link TEXT)")

    def parse(self, response):
        with open("linkler.txt", "a", encoding="utf-8") as file:
            liste = response.xpath('//*[@id="gridListView"]/div/div/div[1]/div/h2/a/@href').extract()
            liste = str(liste).replace("'", "")
            liste = str(liste).replace(" ", ",")
            liste = str(liste).replace("]", "")
            liste = str(liste).replace("[", ",")
            file.write(str(liste))
```

Figure 2. Code written in Python to collect links

Table 1. Customer Complaint Data Set Sample

Complaint_id	Title	Content	Person	View Count	Date
#11699276	Operator1 Charges More Than What Is Said On The Bills!	I changed my tariff before January 1, 2019 as it would be 79 TL. But somehow, except this month, I did not pay a bill below 110 liras. This month, my bill is over 90 lira. I pay more than 10 lira under the name of tax, and this is also an installment. Also, when I want to change the tariff, I cannot switch to a tariff with less bill amount. For some reason it always allows us to change to even higher bill Operator1.	Talha	328	11 March 2019 15:55
#11700135	Operator2 Customer Representative Insulted Me	Operator2 customer representative addressed me on the phone with insulting language. I made a complaint about this and days have passed since. When I call and ask about the result of my complaint, it just says, "We apologize on his behalf, the complaint has been closed." I'm not paying to be insulted by customer representatives.	Şeyma	61	11 March 2019 22:26
#11693634	No Signal in the City Center Operator3	I live in Ankara Keçiören, my house is on the 2nd floor and there is not even a single building front of it, its completely open. But Operator3 has no signal, we can barely connect to the internet with 4G, we cannot talk while wandering around the house, the line is cut, how many times I have called and	Ömer	16	09 March 2019 23:57

complained, there is no solution, there is continuous work in progress etc. excuses.

Table 2. Number of complaints of brands in 6 months

Telecommunications Brand	Number of Complaints
Operator2	29164
Operator1	9252
Operator3	12710
Total	51126

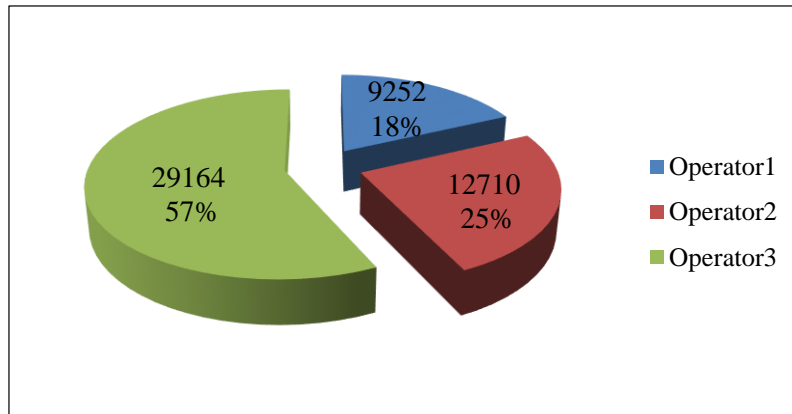


Figure 3. Distribution of complaints by operator companies in 6 months

Natural Language Processing Process

For the natural language processing process, noise removal, normalization and standardization processes were carried out with the codes written in Python. Noise reduction was provided with Python replacement codes in order to distinguish between signs, conjunctions and suffixes in the text and to provide capitalization. For example; Python code used to parse text from conjunctions and suffixes is shown in Figure 4. The Python code used for separating the text from the signs is shown in Figure 5, and the Python code used to change the capitalization in it is shown in Figure 6.

```
icerik = str(icerik).replace(" bir ", " ")
icerik = str(icerik).replace(" ve ", " ")
icerik = str(icerik).replace(" veya ", " ")
icerik = str(icerik).replace(" bu ", " ")
icerik = str(icerik).replace(" için ", " ")
icerik = str(icerik).replace(" de ", " ")
icerik = str(icerik).replace(" da ", " ")
icerik = str(icerik).replace(" ile ", " ")
icerik = str(icerik).replace(" ne ", " ")
icerik = str(icerik).replace(" bana ", " ")
icerik = str(icerik).replace(" ama ", " ")
icerik = str(icerik).replace(" hiç ", " ")
icerik = str(icerik).replace(" rağmen ", " ")
icerik = str(icerik).replace(" olarak ", " ")
icerik = str(icerik).replace(" diye ", " ")
icerik = str(icerik).replace(" gibi ", " ")
icerik = str(icerik).replace(" hakkında", " ")
icerik = str(icerik).replace(" bu ", " ")
icerik = str(icerik).replace(" şu ", " ")
icerik = str(icerik).replace(" o ", " ")
icerik = str(icerik).replace(" ki ", " ")
icerik = str(icerik).replace("Bu", "bu")
icerik = str(icerik).replace("beni", "ben ")
icerik = str(icerik).replace("ben", " ")
icerik = str(icerik).replace("en", " ")
icerik = str(icerik).replace("ya", " ")
icerik = str(icerik).replace("ise", " ")
icerik = str(icerik).replace("in", " ")
icerik = str(icerik).replace("in", " ")
icerik = str(icerik).replace("ini", " ")
icerik = str(icerik).replace("ını", " ")
icerik = str(icerik).replace("mi", " ")
icerik = str(icerik).replace("mi", " ")
icerik = str(icerik).replace("ler", " ")
icerik = str(icerik).replace("lar", " ")
```

Figure 4. Code used to parse text from conjunctions and suffixes

```
icerik = str(icerik).replace(".", " ")
icerik = str(icerik).replace("'", " ")
icerik = str(icerik).replace(":", " ")
icerik = str(icerik).replace(";", " ")
icerik = str(icerik).replace("'", " ")
icerik = str(icerik).replace("-", " ")
icerik = str(icerik).replace("!", " ")
icerik = str(icerik).replace('@', " ")
icerik = str(icerik).replace("(", " ")
icerik = str(icerik).replace(")", " ")
icerik = str(icerik).replace("*", " ")
icerik = str(icerik).replace("/", " ")
icerik = str(icerik).replace('?', " ")
icerik = str(icerik).replace("'", " ")
icerik = str(icerik).replace("//", " ")
icerik = str(icerik).replace("\n", " ")
icerik = str(icerik).replace("'", " ")
icerik = str(icerik).replace(", ", " ")
icerik = str(icerik).replace("+", " ")
icerik = str(icerik).replace("=", " ")
```

Figure 5. The code used to separate text from signs

```
icerik = str(icerik).replace("İ", "i")
icerik = str(icerik).replace("İ", "i")
icerik = str(icerik).replace("I", "i")
icerik = str(icerik).replace("Ö", "ö")
icerik = str(icerik).replace("Ü", "ü")
icerik = str(icerik).replace("Ç", "ç")
icerik = str(icerik).replace("Ş", "ş")
icerik = icerik.lower()
```

Figure 6. The code used to change capitalization in the text

After the noise cancellation, words that comes from the same root such as "I did, I'm doing, I will" were arranged. In Figure 7, the misspelled words that can be named as exceptions are transferred to the correct words, and the code written in Figure 8 is used for the words that will have meaning when they are together.

```
if "üslup" in word:
    word = str(word).replace(word, "üslup")

if "üslub" in word:
    word = str(word).replace(word, "üslup")

if "taahhüd" in word:
    word = str(word).replace(word, "taahhüt")

if "haks" in word:
    word = str(word).replace(word, "haksızlık")
```

Figure 7. Code used for exception words

```
if "müşteri" in word:
    if "müşteri_" not in word:
        word = str(word).replace(word, "müşteri")

if "hizmet" in word:
    if "_hizmet" not in word:
        word = str(word).replace(word, "hizmet")

if "telekom" in word:
    if "_telekom" not in word:
        word = str(word).replace(word, "telekom")

if "öde" in word:
    if "ödev" not in word:
        if "ödem" not in word:
            word = str(word).replace(word, "ödeme")

if "çekm" in word:
    if "çekmeköy" not in word:
        if "çekmekoy" not in word:
            if "çekmece" not in word:
                word = str(word).replace(word, "çekim")
```

Figure 8. Code containing some special words to be used together

While obtaining the information about the word customer, it is seen in Figure 8 that in cases where the word customer and service are crossed side by side, the code "_" is written to be included with the Python code in the content. Again, when considered for the words customer and service, if these two words cross side by side, it is a special code written to be taken as customer_services.

With the object standardization technique, the situations where the word "tl" in the text is the same as "türk_lirası", and the word "operatortwo" and the word "operator2" are equivalent are defined in Figure 9.

```
icerik= str(icerik).replace("tl", "türk_lirası")
icerik= str(icerik).replace("müşteri hizmet", "müşteri_hizmetleri")
icerik= str(icerik).replace("operator1", "operatör1")
icerik= str(icerik).replace("operatöriki", "operatör2")
```

Figure 9. Codes of object standardization technique

In addition to the natural language processing process with the codes mentioned above, the number of times the words in the data set created with the "count words in content" command are passed in the database is calculated. This data calculated with the help of code is generally recorded in Figure 10 as the Operator1, Operator2, Operator3 and sum of all three in MS Excel table.

Operator1		Operator2		Operator3		Total	
Count	Word	Count	Word	Count	Word	Count	Word
16419	operator1	37559	internet	20432	operator3	48932	internet
9872	bill	28049	operator2	12694	bill	45870	bill
8605	line	23304	bill	12253	line	35872	line
7865	turkish_lira	19008	turkish_lira	8664	turkish_lira	35537	turkish_lira
6252	payment	15014	line	7518	internet	28300	operator1
5705	package	13619	payment	7388	package	36272	payment
4573	telephone	12898	not	6401	payment	23469	package
3855	internet	12709	customer_service	6006	customer_service	21746	customer_service
3653	cost	11253	month	5767	telephone	20984	telephone
3409	customer	11148	problem	4457	month	20841	operator3
3346	month	10644	telephone	4287	customer	19141	not
3031	customer_service	10376	package	3775	cost	19056	month
2799	number	9876	customer	3730	after	17572	customer
2780	more	9860	service	3596	more	16873	operator2
2701	not	9384	cost	3586	complaint	16812	cost
2624	after	8920	after	3542	not	16255	problem
2555	date	8730	day	3384	number	15274	after
2551	money	8675	amount	3362	every	14730	more
2264	complaint	8362	cancel	3341	day	14291	day
2235	every	8354	more	3110	process	13801	until
2220	day	8302	available	3093	available	13750	complaint
2183	until	7900	complaint	3081	problem	13400	cancel
2145	operator	7503	commitment	3041	cancel	13356	available
2137	gb	7470	process	3943	until	13025	every
2056	process	7428	every	2865	such	12695	number
2038	such	6974	money	2811	operator	12636	process
2026	problem	6820	date	2763	message	12463	service
2023	one	6695	subscription	2708	date	12232	money
1997	cancel	6512	number	2707	money	12083	date

Figure 10. The frequency of the words in the complaint texts of the brands

Classification of Data

When the common words in the file containing the words shown in Figure 10 and the words containing various tariff names of brands and their frequencies are examined one by one, it is seen that the words are grouped more as Cost, Network Services, Customer Service, Tariff / Package Troubles and Device Problems.

The classification described above is given in Table 3, Table 4 and Table 5 for Operator1, Operator2 and Operator3. Data of all brands are given in Table 6.

Table 3. Classification table created for operator1

Count	Cost	Cnt	Network	Cnt	Customer service	Cnt	Package	Cnt	Device
9872	Operator1	981	signal	3409	customer	8605	line	4573	telephone
7865	turkish_lira	884	contact	3031	customer_service	5705	package	1641	device
6252	payment	310	network	1510	representative	3855	internet	1506	return
3653	cost			1268	request	2799	number	387	apple
2551	money			1261	service	2145	operator	147	samsung
1093	price					2137	gb	119	huawei
948	lira					1601	subscription	114	trouble
						1470	commitment		
						1284	campaign		

1218 contract
904 minute
479 fiber

Table 4. Classification table created for operator2

Count	Cost	Cnt	Network	Cnt	Customer Service	Cnt	Package	Cnt	Device
23304	bill	1738	signal	12709	customer_service	37559	internet	10644	telephone
19008	turkish_lira	1181	contact	9876	customer	15014	line	5945	trouble
13619	payment	541	network	9860	service	10376	package	1942	return
9384	cost			4036	representative	7503	commitment	1830	device
6974	money			3149	request	6695	subscription	140	apple
2944	lira					6512	number	76	samsung
2632	price					5283	fixed	52	huawei
						4042	gb		
						3867	wired		
						2846	campaign		
						2595	tariff		
						2446	operator		

Table 5. Classification table created for operator3

Count	Cost	Cnt	Network	Cnt	Customer Service	Cnt	Package	Cnt	Device
12694	bill	2073	signal	6006	customer_service	12253	line	5767	telephone
8664	turkish_lira	732	network	4287	customer	7518	internet	1462	return
6401	payment	718	contact	2614	representative	7388	package	1389	device
3775	cost			1342	service	5767	telephone	185	apple
2707	money			1332	request	3384	number	147	trouble
1210	lira					2811	operator	125	samsung
783	price					2261	gb	103	huawei
						2095	campaign		
						2027	tariff		
						1681	commitment		
						1473	minute		
						1150	subscription		

Table 6. Frequency of Use of Words Belonging to All Brands

Count	Cost	Cnt	Network	Cnt	Customer Service	Cnt	Package	Cnt	Device
45870	bill	4792	signal	21746	customer_ser vice	48932	internet	20984	telephone
35537	turkish_lira	2783	contact	17572	customer	35872	line	6206	trouble
26272	payment	1583	network	12463	service	23469	package	4910	return
16812	cost			8160	representative	20984	telephone	4860	device
12232	money			5749	request	12695	number	712	apple
5102	lira					10654	commitment	348	samsung
4508	price					9446	subscription	274	huawei
						8440	gb		
						7402	operator		
						6225	campaign		
						5606	tariff		
						5590	contract		
Total									
146333		9158		65690		195315		38294	

FINDINGS

The graphic created by categorizing the data is shown in Figure 11.

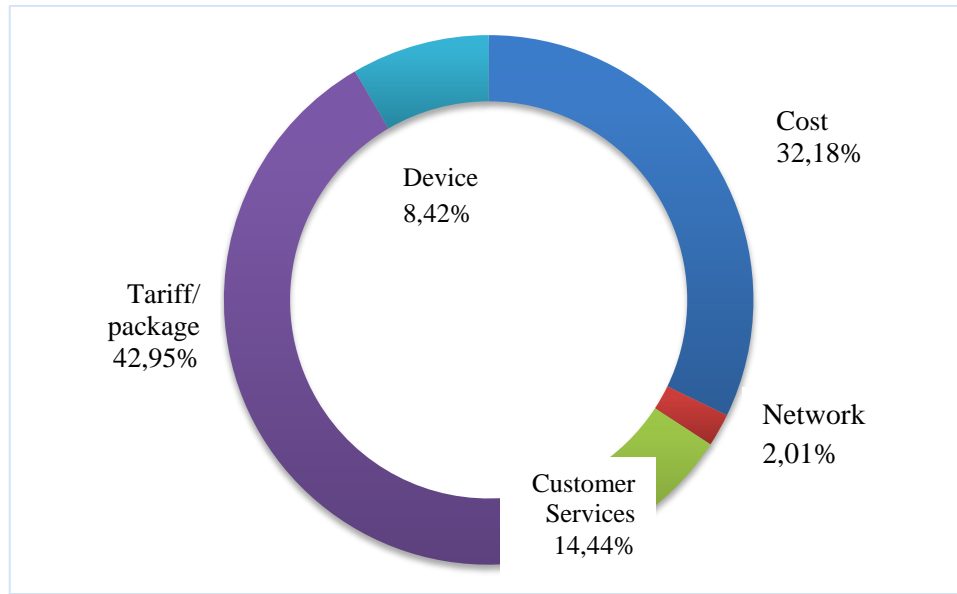


Figure 11. Distribution of the most common problems faced by telecommunication brands

Considering the percentage distribution of the difficulties experienced by the telecommunication brands, it can be said that the customers mostly experience problems with the tariff and packages with a rate of 42.95%, followed by the cost with a rate of 32.18%. The distribution of the problems according to the operators is given in Figure 12. The biggest problems of telecommunication brands are;

- Tariff/Package
- Cost
- Customer Services
- Device Problems
- Network Problems

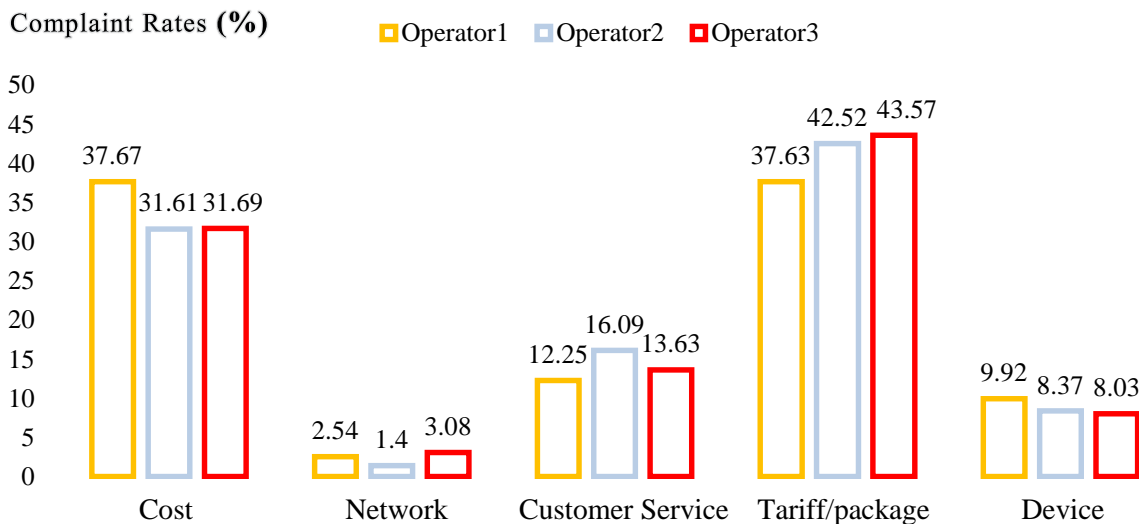


Figure 1. Graphical distribution of problems experienced by brands

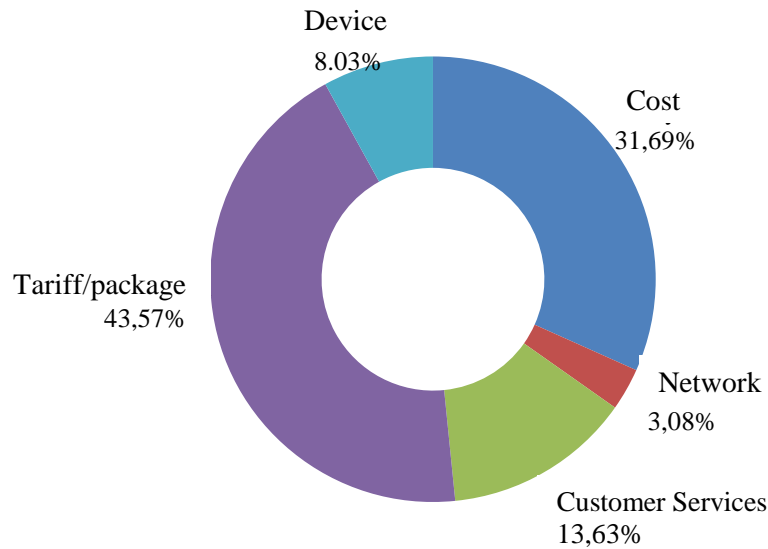


Figure 2. Distribution of complaints for operator3

As can be seen in Figure 13, topic with most complaints for Operator3 is "Tariff/Package". Relevant employees of Operator3 who provide customer relations management should turn to this area.

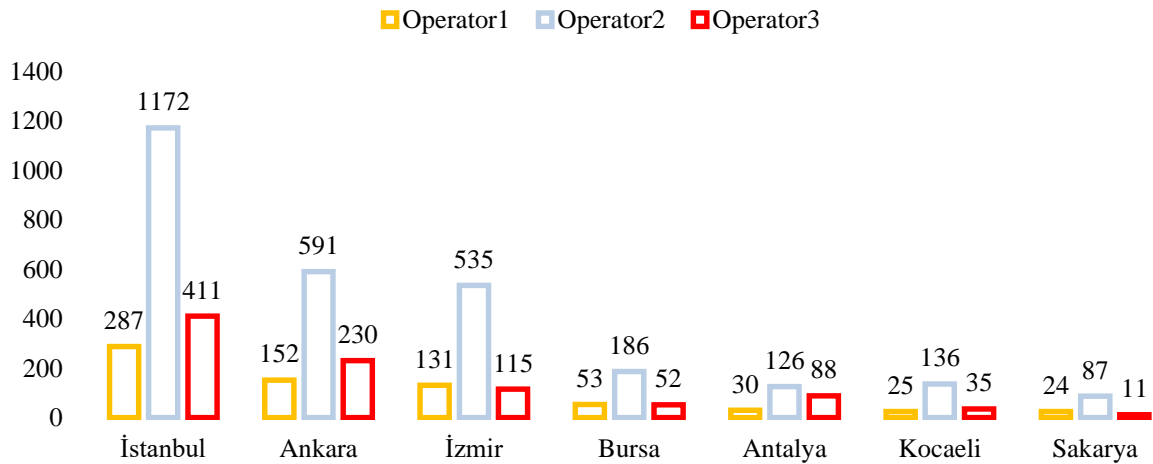


Figure 14. Distribution of brand complaints by provinces with the most problems

When the words mentioned in the complaint texts are examined, the most mentioned provinces according to the brands are given in Figure 14. It shows the distribution of the provinces where telecommunication brands have the most problems.

Table 7. Distribution rates of brands according to complaints

	Cost	Network Problems	Customer Service	Tariff/Package	Device Problems
Operator1	%37,67	%2,54	%12,25	%37,63	%9,92
Operator2	%31,61	%1,40	%16,09	%42,52	%8,37
Operator3	%31,69	%3,08	%13,63	%43,57	%8,03

When Table 7 is examined, the brand with the highest rate among the distributions according to costs is Operator1 with 37.67%. In this case, it can be commented that "the most expensive telecommunications brand is Operator1". Considering the distribution of network problems, the brand with the highest rate is Operator3 with 3.08%. In this case, the telecommunications brand that has the most network problems is Operator3. According to the distributions of Customer Service, the brand with the highest rate is Operator2 with 16.09%. At this point, the most problematic customer representatives belong to Operator2. Again, the operator with the most negative tariff,

package and internet problems belongs to Operator3 with 43.57%. The most problematic device selling telecommunications brand is Operator1 with a rate of 9.92%.

Results

The development of technology and the increase in the usage areas of the internet causes too much data. This increases the need for more storage space and complicates the analysis of data. Customers are very important for the sustainability of businesses. Ensuring customer satisfaction is one of the most fundamental steps that will take the company forward. For this reason, businesses should pay more attention to customer complaints and aim to acquire new customers while retaining the customer. Customers prefer to use online customer complaint channels because internet technology is fast and requires little effort. This is why there are many complaints on online complaint sites.

In this study, the analysis of these scattered, complex and natural language data arising from the excessive number of complaints has been structured and interpreted by text mining. Customer complaint data of different brands were collected, analyzed, and transformed into meaningful information. The data stack created by text mining will help the relevant people in the customer relations department make decisions without having to be read one by one.

The data obtained as a result of the study were recorded and interpreted. According to the classifications, it was ensured that companies have an idea about which area they should focus terms of customer satisfaction. In this way, understanding the customers who make their voices heard by using online complaint sites and perceiving the problems will push businesses to make improvements in their customer complaint management policies and they will be able to manage complaints better and faster in line with this information provided.

As a result of the analysis, it was concluded that the most expensive brand was Operator1, the brand with the most network problems was Operator3, and the company with the most problematic customer representatives was Operator2.

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ANALYSIS OF THE TUNISIAN WOMEN'S ACQUISITIONS FOLLOWING THE "ARAB SPRING" REGARDING VARIOUS VARIABLES

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Abstract

It was aimed in this study to analyze the views of Tunisian women related to the roles they played throughout the Arab Spring, the impacts of their roles on the process, and subsequently, what sort of acquisitions they achieved during the transition period and in the established new social order, following a remarkable popular mass movement, namely, "Arab Spring". The population of the study included 113 Tunisians consisting of 73 females and 40 males who gave consent to participate in the study.

Personal data forms and questionnaires were used as data collection tools in the research. The questionnaires were sent via e-mail and the eligible answers were included in the study. The application of LinkedIn was utilized to determine the participants, and their e-mail addresses were accessed via this application. Participants were informed about how to fill in the questionnaires, as well as how and where the data would be used, etc. The impacts of the participants throughout the Arab Spring were discussed in terms of their personal profiles and clustered profiles. Hence, it has been intended to assess the impacts of the females in Arab societies on the social changes and their acquisitions, particularly in the case of Tunisia.

The answers to the queries of "Did Tunisian women have (social and political) gains following the Arab Spring popular movement?" and "How do you consider the situation of women in Tunisia currently?" were sought in the research, and the frequency and percentages of the answers were analyzed regarding age, educational status and marital status. It was determined as a result of the research that the majority of the participants considered that the Tunisian women have had (social and political) gains and that the current situation of women in Tunisia is "good", following the Arab Spring popular movement.

Keywords: Political Social Rights, Gender, Women's Rights, Arab Spring, Tunisia.

Introduction

The "Arab Spring" broke out in Tunisia upon the self-immolation of a greengrocer-street vendor due to inhumane socio-economic circumstances (Winkel, 2017). Mohammed Buazizi, who had been a street vendor in the province of Sidi Buzid in central Tunisia, set himself on fire and died on January 4, 2011. Buazizi made a living of his family and was a popular man in his humble neighborhood for giving free food from the wheelbarrow to the poor people. Buazizi had got tired of his life, due to Tunisian police harassment to Buazizi, as he could not pay bribes to them or pay his license fees, throughout his life. This was the fate of the hard-working informal sector: to be incessantly humiliated by the police state just for living. When these humiliations became unbearable for him, he set himself on fire by pouring gasoline on him in front of the governor's office, yelling: "How do you expect me to make a living?" (Prashad, 2012: 28).

The mass revolts, which broke out in Tunisia in December 2010 and spread rapidly to other Arab countries in the Middle East and North Africa, led to the occurrence of most dramatic political changes in the region since the mid-20th century. Economic problems under autocratic and authoritarian governments, poverty and corruption, and a high unemployment rate led to mass uprisings. The revolts, which spread rapidly to many Arab countries in a short while, ended up with the overthrow of the governments in Tunisia, Egypt, Libya, and Yemen. The uprisings were commonly termed as the "Arab Spring", referring to the Spring of the Peoples in the 19th century (Aktaş, 2018). Various conceptualizations have been performed to describe these uprisings that led to a regional change beginning with Tunisia. Terms such as the Arab Spring, the Jasmine Revolution, the Arab Awakening, the Arab Revolutions, the Arab Revolt, the Arab Uprisings, the Democracy Revolutions, the Islamic Awakening, the Internet Revolutions, the Twitter Revolutions, the Facebook Revolutions and the Wikileaks Revolution are commonly used to describe the uprisings and their impacts on the region (Öter Candan, 2018).

As the representatives of a significant group that should have the same rights as men, which constitute half of the population, women have mostly experienced remarkable aggrievement related to their rights throughout history. Western societies are making progress on these rights, albeit they are too late; whereas particularly eastern society and those who govern the society still lag behind regarding women's rights for various reasons or prefer to stay behind.

The issue, why men and women have different roles and status in social life, has been among the issues that are constantly discussed and kept up to date. The notion of equality, which was generated in this context, suggests that there should be no difference between these two genders, and underscores that women and men should be treated

equally without being exposed to any discrimination in both social and private life. However, the notion of equality cannot account for the current situation on this issue accurately and overlooks the fact that men and women are distinct concerning their nature of creation. Yet, the women's and men's views of life and hence, their expectations and powers are also different from each other (Aydın Yılmaz, 2015).

Women also took part in the popular movement, which started in Tunisia for the first time in 2011 and affected many countries, and, which is also known as the transition process in the Middle East and North Africa and called the "Arab Spring", and they demanded to achieve gains in democratic change as well as women's rights (in the advancement of women's rights, in prioritizing the laws concerning women, and in the appreciation of women in the society). When the literature is reviewed, it can be noticed that various acquisitions have been achieved, regarding some democratic rights that concern society and women's rights, in some countries, which have been impacted by the Arab Spring; whereas in some of these countries, inadequate or no acquisition has been achieved. Women, who bore to all sorts of hardships through participating in the wars of independence together with men in the Middle East and North African countries, gained certain rights as a result of long-lasting struggles. The participation of women in the elections thanks to having the voting right has provided remarkable political support for the regimes in these countries. Noticing the significance of getting the support of women, who constitute half of the population; regimes have also considered women as a potential domain of propaganda and have made some progress in women's rights occasionally. However, women have never acquired an equal status with men in the political and economic domains. Women, who rallied in the streets and the public squares of the countries such as Tunisia, Egypt, and Libya together with the men, had struggled for a democratic society, based on freedom, equality, and human rights, throughout the Arab Spring. Women have paid the price as much as men, sometimes even more than them, in the struggle for democracy. Nowadays, women who have toppled the oppressive dictators along with men demand equal rights with men in social, political, and economic fields (Aktaş, 2012).

The majority of Tunisian women actively took part in the protests, which demanded democratic change. Bloggers, journalists, activists, trade unionists, students, mothers called for Ben Ali's resignation, used every means in seeking their freedom and dignity, and took to the streets. Many women of all ages and from all strata of society participated in these demonstrations (Senir, 2019). Revolution can be considered as profound social change if long-lasting Arab revolutions enable women to fully participate in economic, social, and political life as active and equal actors. The collapse of a dictatorship does not signify the abolition of the patriarchal form of society. But rather signifies that women's liberation remains a utopia without the qualitative economic and social progress (Zein, 2013). In spite of all the challenges and setbacks, progress experienced in Tunisia is a success story. This small country is the only country where the revolt against dictatorship, arbitrariness, and violation of human dignity has been successful. Tunisia is much freer today and people have more right to speak than in 2010 (Gerlach, 2016).

Women in Tunisia, where the first spark of the Arab Spring was ignited and spread to other countries with the domino effect, considered this as a new opportunity to act on both their basic rights and their own rights and demanded democracy, social justice, freedom, honor, and equality in the public squares, and participated in demonstrations shoulder to shoulder with men. Women were arrested, taken into custody, and tortured by the ruling regimes, but did not give up on the demonstrations. It is an undeniable fact that the contribution of women to the Arab Spring popular movement is very considerable and significant in achieving the expected outcome. The previous perception of passive women who did not struggle, did not seek their rights, and did not get their rights changed entirely with the active participation of women in the movement throughout the Arab Spring, and possibly played a critical role as the most crucial factor in the success of this movement. When the acquisitions of women following the Arab Spring are considered, it is noticed that Tunisian women have attained considerable gains compared to other countries. It is a reality that should be underscored that the women relatively reaped the benefits of their struggles and their activities in popular movements, yet they still do not have equality in real terms, regarding their rights.

Method of the Research

The views of Tunisian women regarding the roles they undertook throughout the Arab Spring, the effects of their roles on the process, and subsequently, what kind of gains they attained during the transition period and in the new social order, following a remarkable popular mass movement, namely, "Arab Spring", were examined in this research. The study group of the study consisted of 113 Tunisians, 73 of whom were females, 40 of whom were males, who agreed to participate in the study.

The descriptive survey method was used in the research. Descriptive surveys are studies that are implemented on large groups, in which the views and attitudes of the individuals in the group related to a phenomenon and an event are obtained, and the phenomena and events are tried to be described (Karakaya, 2012:59).

Personal data forms and questionnaires were used as data collection tools in the research. The questionnaires were sent by e-mail and the answers were analyzed through statistical analysis. The application of LinkedIn was utilized to determine the participants, and their e-mail addresses were accessed via this application. The effects of the

participants during the period of Arab Spring were discussed regarding their personal profiles and clustered profiles. Hence, it has been attempted to evaluate the impacts of the females in Arab societies on the social changes and their acquisitions, especially in the case of Tunisia. The statistical analysis of the obtained quantitative data was interpreted and discussed.

Results and Analysis

A total of 113 Tunisians, 73 women and 40 men, were included in the study. The answers responded by the participants were analyzed both in general and regarding some variables such as age, educational status, and marital status.

Of the participants who were included in the study, 13.3% of them aged between 18 and 25 years, while 54.9% of them aged between 26 to 40 years old, and 31.9% were 41 and over. Educational status of the participants as follows: 9% of them was secondary school graduate, 6.2% of them was high school graduate, 4.4% of them had an associate degree, 32.7% of them had a bachelor's degree, 42.5% had a master's degree, 11.5% of them had Ph.D., 9% had a doctorate in art and 9% was specialist. 51.3% of them were married, while 44.2% of them were single and 4.4 % of them were divorced.

Considering the general population of the participants, 87.6% of them think that Tunisian women have social and political gains following the Arab Spring, whereas the remaining 12.4% state that they have not observed any change in women's rights following this popular movement.

When the general population of the participants is considered, it was found out that 99 (87.6%) of them rated the situation of women in Tunisia as "Good" today, 9 (8.0%) of them rated as "Poor", while 2 (1.8%) of them rated as "Neutral-Same", and 3 (2.7%) of them rated as "It could have been better".

Table 1: Advancements in Women's Rights following the Arab Spring by Age

Age			Total
	Yes	No	
Aged between 18 and 25 years	14	1	15
	93,3%	6,7%	100,0%
	14,1%	7,1%	13,3%
	12,4%	0,9%	13,3%
Aged between 26 and 40 years	54	8	62
	87,1%	12,9%	100,0%
	54,5%	57,1%	54,9%
	47,8%	7,1%	54,9%
Aged 41 years and over	31	5	36
	86,1%	13,9%	100,0%
	31,3%	35,7%	31,9%
	27,4%	4,4%	31,9%

Total	99	14	113
	87,6%	12,4%	100,0%
	100,0%	100,0%	100,0%
	87,6%	12,4%	100,0%

87.6% of the participants consider that Tunisian women have had social and political gains following the Arab Spring, whereas 12.4% of them state that they have not observed any change in women's rights following this popular movement.

When the distribution of the participants' answers were examined regarding their age, it was determined that 93.3% of those aged between 18 and 25 considered that Tunisian women have attained social and political gains following the Arab Spring, whereas the remaining 6.7% stated that they have not observed any change in women's rights following this popular movement.

87.1% of those aged between 26 and 40 considered that Tunisian women have attained social and political acquisitions after the Arab Spring, whereas 12.9% of them stated that they have not observed any change in women's rights following this popular movement.

When the answers of those aged 41 and over were analyzed, it was found that 86.1% of them considered that Tunisian women have attained social and political gains following the Arab Spring, whereas the remaining 13.9% stated that they have not observed any change in women's rights in the period after this popular movement.

Upon analyzing the answers, it was determined that there was a similarity in the responses of those aged between 26 and 40 and those aged 40 and over, and those aged between the 18 and 25 have not observed any change in women's rights following this popular movement, at a higher rate, compared to the other two groups.

Table 2: Assessment of the Current Situation of Women in Tunisia by Age

Age				Could have been better	Total
	Neutral	Good	Poor		
Aged between 18 and 25 years	0	15	0	0	15
	0,0%	100,0%	0,0%	0,0%	100,0%
	0,0%	15,2%	0,0%	0,0%	13,3%
	0,0%	13,3%	0,0%	0,0%	13,3%
Aged between 26 and 40 years	2	53	5	2	62
	3,2%	85,5%	8,1%	3,2%	100,0%
	100,0%	53,5%	55,6%	66,7%	54,9%
	1,8%	46,9%	4,4%	1,8%	54,9%

Aged 41 and over	0	31	4	1	36
	0,0%	86,1%	11,1%	2,8%	100,0%
	0,0%	31,3%	44,4%	33,3%	31,9%
	0,0%	27,4%	3,5%	0,9%	31,9%
	2	99	9	3	113
	1,8%	87,6%	8,0%	2,7%	100,0%
	100,0%	100,0%	100,0%	100,0%	100,0%
Total	1,8%	87,6%	8,0%	2,7%	100,0%

Of the participants, 99 (87.6%) of them rated the current situation of women in Tunisia as "Good", 9 (8.0%) of them rated as "Poor", while 2 (1.8%) of them rated as "Neutral-Same", and 3 (2.7%) of them rated as "It could have been better".

Upon examining the distribution of the answers regarding the age of the participants, it was determined that 100.0% of those aged between 18 and 25 years considered the current situation of women in Tunisia as "Good" today, and 85.5% of those aged between 26 and 40 years considered it "Good", while 8.1% of them rated it as "Poor", 3.2% rated it as "Neutral-Same", and 3.2% of them rated as "It could have been better".

86.1% of those aged 41 and over considered the situation of women in Tunisia as "Good" today, whereas 11.1% of them considered it as "Poor" and 2.8% of them considered as "It could have been better".

When the answers are examined regarding the age of the participants, it is noticed that those who rated the current status of women in Tunisia with the highest rate as "Good" were those aged between the 18 and 25 years, and the ratings of those aged between 26 to 40 and those aged 41 and over are akin to each other.

Table 3: Progress in Women's Rights following the Arab Spring by Educational Status

Educational Status			Total
	Yes	No	
Secondary School Graduate	1	0	1
	100,0%	0,0%	100,0%
	1,0%	0,0%	0,9%
	0,9%	0,0%	0,9%
	6	1	7

High School Graduate	85,7%	14,3%	100,0 %
	6,1%	7,1%	6,2%
Associate Degree	5,3%	0,9%	6,2%
	4	1	5
	80,0%	20,0%	100,0 %
	4,0%	7,1%	4,4%
Bachelor's Degree	3,5%	0,9%	4,4%
	33	4	37
	89,2%	10,8%	100,0 %
	33,3%	28,6%	32,7%
Master's Degree	29,2%	3,5%	32,7%
	43	5	48
	89,6%	10,4%	100,0 %
	43,4%	35,7%	42,5%
Ph.D.	38,1%	4,4%	42,5%
	11	2	13
	84,6%	15,4%	100,0 %
	11,1%	14,3%	11,5%
Doctor of Arts	9,7%	1,8%	11,5%
	1	0	1
	100,0%	0,0%	100,0 %
	1,0%	0,0%	0,9%
Specialized	0,9%	0,0%	0,9%
	0	1	1
	0,0%	100,0%	100,0 %
	0,0%	7,1%	0,9%
	0,0%	0,9%	0,9%

Total	99	14	113
	87,6%	12,4%	100,0%
	100,0%	100,0%	100,0%
	87,6%	12,4%	100,0%

87.6% of the participants consider that Tunisian women have had social and political gains following the Arab Spring, whereas 12.4% of them state that they have not observed any change in women's rights following this popular movement.

When the distribution of the participants regarding their educational status was analyzed, it has been found that 89.2% of those with bachelor's degree and 89.6% of those with a master's degree think that Tunisian women have attained social and political gains following the Arab Spring, whereas 10.8% of those with a bachelor's degree and 10.4% of those with a master's degree states that they have not observed any change in women's rights following this popular movement.

Upon analyzing the answers, it is determined that there is no difference between the rates of women whose educational status is graduate and postgraduate in terms of considering that Tunisian women have attained social and political gains following the Arab Spring. Whereas this rate is lower for those with the educational status of high school, associate degree, and doctorate.

Table 4: Assessment of the Current Situation of Women in Tunisia Regarding Educational Status

Educational Status					Total
	Neutra l	Good	Poor	Could have been better	
Secondary School Graduate	0	1	0	0	1
	0,0%	100,0%	0,0%	0,0%	100,0%
	0,0%	1,0%	0,0%	0,0%	0,9%
	0,0%	0,9%	0,0%	0,0%	0,9%
High School Graduate	0	7	0	0	7
	0,0%	100,0%	0,0%	0,0%	100,0%
	0,0%	7,1%	0,0%	0,0%	6,2%
	0,0%	6,2%	0,0%	0,0%	6,2%
	0	5	0	0	5

Associate Degree	0,0%	100,0%	0,0%	0,0%	100,0%
	0,0%	5,1%	0,0%	0,0%	4,4%
Bachelor's Degree	0,0%	4,4%	0,0%	0,0%	4,4%
	0	32	5	0	37
	0,0%	86,5%	13,5%	0,0%	100,0%
	0,0%	32,3%	55,6%	0,0%	32,7%
	0,0%	28,3%	4,4%	0,0%	32,7%
	1	44	2	1	48
Master's Degree	2,1%	91,7%	4,2%	2,1%	100,0%
	50,0%	44,4%	22,2%	33,3%	42,5%
	0,9%	38,9%	1,8%	0,9%	42,5%
	1	8	2	2	13
Ph.D.	7,7%	61,5%	15,4%	15,4%	100,0%
	50,0%	8,1%	22,2%	66,7%	11,5%
	0,9%	7,1%	1,8%	1,8%	11,5%
	0	1	0	0	1
Doctor of Arts	0,0%	100,0%	0,0%	0,0%	100,0%
	0,0%	1,0%	0,0%	0,0%	0,9%
	0,0%	0,9%	0,0%	0,0%	0,9%
	0	1	0	0	1
Specialized					
Specialized	0,0%	100,0%	0,0%	0,0%	100,0%

	0,0%	1,0%	0,0%	0,0%	0,9%
	0,0%	0,9%	0,0%	0,0%	0,9%
Total	2	99	9	3	113
	1,8%	87,6%	8,0%	2,7%	100,0%
	100,0%	100,0%	100,0%	100,0%	100,0%
	1,8%	87,6%	8,0%	2,7%	100,0%

Of the participants, 99 (87.6%) of them rated the current situation of women in Tunisia as "Good", 9 (8.0%) of them rated as "Poor", while 2 (1.8%) of them rated as "Neutral-Same", and 3 (2.7%) of them rated as "It could have been better".

When the distribution of the answers was analyzed regarding the educational status of the participants, it was found that 86.5% of those with a bachelor's degree rated the status of women in Tunisia today as "Good", whereas 13.5% of them rated as "Poor".

91.7% of those with a master's degree rated the current situation of women in Tunisia as "Good", whereas 4.2% of them rated "Poor", 2.1% of them rated "Neutral-Same", and 2.1% of them rated that "It could have been better". 61.5% of those with a doctorate rated the current situation of women in Tunisia as "Good", and 15.4% of them rated as "Poor", while 7.7% of them rated "Neutral-Same" and 15.4% of them rated that "It could have been better". When the answers of the participants were analyzed regarding their educational status, it was determined that those with a master's degree rated the current situation of women in Tunisia as "good" at a considerably higher rate. This rate is lower in those with a bachelor's degree, whereas it was even lower in those with a doctorate.

Table 5: Developments in Women's Rights following the Arab Spring Regarding Marital Status

Marital Status			Total
	Yes	No	
Married	50	8	58
	86,2%	13,8%	100,0%
	50,5%	57,1%	51,3%
	44,2%	7,1%	51,3%
Single	45	5	50
	90,0%	10,0%	100,0%
	45,5%	35,7%	44,2%
	39,8%	4,4%	44,2%
Divorced	4	1	5
	80,0%	20,0%	100,0%

Total	4,0%	7,1%	4,4%
	3,5%	0,9%	4,4%
	99	14	113
	87,6%	12,4%	100,0%
	100,0%	100,0%	100,0%
	87,6%	12,4%	100,0%

87.6% of the participants consider that Tunisian women have had social and political gains following the Arab Spring, whereas 12.4% of them state that they have not observed any change in women's rights following this popular movement.

86.2% of the married participants and 90% of the single participants stated that there were advancements in women's rights following the Arab Spring. Whereas this rate was %80 among those with the marital status of divorced. Based on these results, it has been determined that there is no correlation between marital status and positive observations regarding the progress of social and political rights following the Arab Spring.

Table 6: Assessment of the Current Situation of Women in Tunisia Regarding Marital Status

Marital Status					
	Neutral	Good	Poor	Could have been better	Total
Married	1	53	3	1	58
	1,7%	91,4%	5,2%	1,7%	100,0%
	50,0%	53,5%	33,3%	33,3%	51,3%
	0,9%	46,9%	2,7%	0,9%	51,3%
Single	1	42	5	2	50
	2,0%	84,0%	10,0%	4,0%	100,0%
	50,0%	42,4%	55,6%	66,7%	44,2%
	0,9%	37,2%	4,4%	1,8%	44,2%
Divorced	0	4	1	0	5
	0,0%	80,0%	20,0%	0,0%	100,0%
	0,0%	4,0%	11,1%	0,0%	4,4%
	0,0%	3,5%	0,9%	0,0%	4,4%
Total	2	99	9	3	113
	1,8%	87,6%	8,0%	2,7%	100,0%
	100,0%	100,0%	100,0%	100,0%	100,0%
	1,8%	87,6%	8,0%	2,7%	100,0%

Of the participants, 99 (87.6%) of them rated the current situation of women in Tunisia as "Good", 9 (8.0%) of them rated as "Poor", while 2 (1.8%) of them rated as "Neutral-Same", and 3 (2.7%) of them rated as "It could have been better".

Upon examining the distribution of the answers regarding the marital status of the participants, it was determined that 91.4% of those married rated the current situation of women in Tunisia as "Good", and 5.2% of them rated as "Poor", while 1.7% of them rated as "Neutral-Same", and 1.7% rated that "It could have been better".

When the answers of the single ones were analyzed, it was found that 84.0% of them rated the current situation of women in Tunisia as "Good", and 10.0% of them rated as "Poor", while 2.0% of them rated as "Neutral-Same", and 4.0% of them considered that "It could have been better".

Upon examining the answers, it is seen that those who are married, regarding their marital status, consider the situation of women in Tunisia as "Good" at a higher rate.

Discussion and Conclusion

When the participants' answers to the query of "Have Tunisian women attained (social and political) gains following the Arab Spring popular movement?" are examined, it has been determined that they considered that "Tunisian women have attained social and political gains following the Arab Spring popular movement". This result is consistent with the conclusion that Gurboga Yazici (2019) reached in his study that "progress has been achieved concerning the women's rights, even if not at world standards". Senir (2019) revealed in his study that there has been a relative increase in Tunisian women's rights following the revolution. Öter Candan (2018) concluded that the developments, which had occurred in Tunisia following the popular movement, were favorable. Tunisia has become a considerably progressive Islamic country, regarding women's rights, in recent years (Schröter and Zayed, 2013). Tunisia is the sole country that has achieved success in the democratization movement (Ertan and Dikme, 2016). When the acquisitions of women following the Arab Spring are considered, it is noticed that Tunisian women have attained considerable gains compared to other countries. It is a reality that should be underscored that the women relatively reaped the benefits of their struggles and their activities in popular movements, yet they still do not have equality in real terms, regarding their rights.

When the participant's answers to the question of "How do you consider the current situation of women in Tunisia?" are examined, it is noticed that the majority of them consider "the current situation of women in Tunisia" as "good".

Ertan and Dikme (2016a) analyzed the indicators related to women's rights and democracy in 13 countries in their study and concluded that the only country that is relatively successful in democratization is Tunisia, based on the results of their analysis. For Öter Candan (2018), the steps taken in issues such as violence against women after the transitional period of constitutional amendments, the reorganization of women's rights in the political, social, and economic domains, and the developments, upon the adoption of the new constitution in Tunisia, that brought Tunisia to the first place regionally, in terms of women's rights. Thus, the developments that took place after the popular movement in Tunisia indicate that remarkable progress has been accomplished in terms of women's rights and continues to be performed.

Tunisia is considered remarkably developed, regarding women's legal status, unlike other Arab countries in the Middle East and North Africa (Scheiterbauer, 2011). Women have been very active throughout the revolution and made themselves visible. They made great attempts to protect their rights and managed to take part in every phase of the process, though they were tried to be put in the background when the settlement negotiations were held after struggles. Ultimately, they managed to attain what they demanded through both the constitution and subsequently enacted laws. However, it is evident that they have been confronted with challenges and impediments, when it is considered in terms of access to these rights (Gurboga Yazici, 2019).

The Arab Spring, which broke out in Tunisia in 2010 and then gave rise to revolts in many Arab countries, in particular Egypt, Libya, and Syria, has led to ongoing civil wars, civil unrest, and armed conflicts in these countries, though it began as a democracy movement. Even though the nature and objective of these movements, which have been described as the quest for democracy, have been widely discussed in the literature, the role of women in this movement and how they were impacted by this movement has not been adequately examined in the academic literature (Ertan and Dikme, 2016).

When the participants' answers to the question of "Have Tunisian women attained (social and political) gains following the popular movement of Arab Spring?" were analyzed regarding variable of age, it has been determined that the rate of those who considered that Tunisian women have attained social and political acquisitions after the Arab Spring is higher in all age groups, while there was a similarity in the responses of those aged between 26 and 40 and those aged 40 and over, and those aged between 18 and 25 observed a relatively higher change in their rights compared to the other two groups.

When the answers given to the question of "How do you consider the current situation of women in Tunisia?" were analyzed regarding the variable of age, it was found that all of the participants considered the current situation

of women in Tunisia as "good" at a significantly higher rate, and those who considered the current situation of women as "good" at the highest rate were those aged between 18 to 25, while the rate of those who considered the current situation of women in Tunisia as "good" were akin to each other among those aged between the 26 to 40 and those aged 41 and over.

When the responses given to the query of "Have Tunisian women attained (social and political) gains following the Arab Spring popular movement?" were analyzed in terms of the educational status variable, it has been determined that the rate of those who consider that Tunisian women have attained social and political gains after the Arab Spring was high in all age groups, and there was no difference between the rate of those whose educational status was graduate and postgraduate, regarding the fact that Tunisian women have social and political gains after the Arab Spring, whereas this rate was higher among high school graduates, those with associate's degree and Ph.D.

Upon analyzing the responses given to the question of "How do you consider the current situation of women in Tunisia?", in terms of the educational status, it was determined that the rate of women who considered the current situation of women in Tunisia as "good" was significantly high among all age groups, and those with a master's degree considered the current situation of women in Tunisia as "good". This rate is lower in those with a bachelor's degree, whereas it was even lower in those with a doctorate.

When the answers to the question of "Have Tunisian women attained (social and political) gains following the Arab Spring popular movement?" were examined, in terms of the marital status variable, it was found that the rate of those who think that Tunisian women have attained social and political acquisitions following the Arab Spring was higher among those who were married and single, and that there was no significant difference between the answers given by married and single people, in terms of their marital status. This rate is the lowest among those whose marital status is divorced.

When the answers to the question of "How do you consider the current situation of women in Tunisia?" were examined in terms of the marital status variable. It has been found that there was not a significant difference between the answers given by married and unmarried people with regard to their marital status, whereas the rate of those who consider the current situation of women in Tunisia as "good" was higher among those who were married and single. This rate is the lowest among those whose marital status is divorced.

In spite of all the challenges and setbacks, progress experienced in Tunisia is a success story. This small country is the only country where the revolt against dictatorship, arbitrariness, and violation of human dignity has been successful. Tunisia is much freer today, and people have more right to speak than in 2010 (Gerlach, 2016). It is an undeniable fact that the contribution of women to the Arab Spring popular movement is very considerable and significant in achieving the expected outcome. The previous perception of women, who were passive, did not struggle, did not seek their rights, and did not get their rights changed entirely with the active participation of women in the movement throughout the Arab Spring, and possibly played a critical role as the most crucial factor in the success of this movement. Based on the results of this study, Tunisian women have achieved to reap the benefits of their active roles, which they played throughout the Arab Spring, and ensured ameliorating their rights even better.

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ANALYSIS ON PHILOSOPHICAL BELIEFS OF PHYSICAL EDUCATION AND SPORTS TEACHERS TOWARDS EDUCATION IN TERMS OF DIFFERENT VARIABLES

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Abstract

The purpose of this study is to determine the philosophical beliefs of physical education and sports teachers towards education and to analyze whether these beliefs differ by various demographic variables. The research group of the study is composed of 789 physical education teachers working in official secondary schools and high schools who voluntarily participated in the study. Data of the research were collected through personal information form and “Educational Belief Scale”. It has been determined that physical education and sports teachers mostly adopt the existentialist philosophy and essentialism philosophy least. It has been concluded that educational philosophical beliefs of teachers significantly differ by the variables of gender, type of school they work, educational background and professional seniority. Accordingly, it has been ascertained that female teachers mostly adopt progressivism and existentialism, female teachers adopt perennialism and essentialism while high school teachers mostly adopt perennialism educational philosophy. Educational philosophical beliefs of postgraduate physical education and sports teachers are higher in the dimensions of progressivism, perennialism and essentialism. It has been determined that as the professional seniority of teachers has increased, their philosophical beliefs have weakened in the sub-dimensions of progressivism, existential education and reconstructivism, and their philosophical beliefs have become stronger in the sub-dimension of essentialism.

Keywords: Physical Education and Sports, Educational Philosophy, Belief, Teacher.

Introduction

The subject of education which exists in every era and every human society is the imperfect person educated for perfection. People need education, they are capable of being educated and strive in this direction (Ergün, 2015). In this context, the idea of educating individuals in the historical process has been a constant field of interest of both theological sciences and positive sciences. Especially the human mind's efforts to make sense of the world have led to the emergence of new and different mental thoughts about education, and these thoughts have influenced people at the social level over time. All of these mental efforts and intellectual activities are actually philosophical activities. Since philosophy is a humanistic activity and art of human mind. It is philosophy that human tries to understand and enlighten the world and the universe through her/his mind (Ergün, 2015). Just like philosophy connects with every science, every science has to connect with philosophy (Büyükdüvenci, 1991). From this point of view, philosophy constitutes the basis of all branches of science (Şişman, 2015).

As a field of science, education is in a relatively very close and comprehensive relationship with philosophy compared to other branches of science. The philosophy of education which deals with this relationship is the effort of explaining the concepts, ideas and principles that enlighten education in addition to the problems that disrupt educational activities (Büyükdüvenci, 1991). Educational philosophy is the subject of teacher, student, content of teaching, teaching activities, values and attitudes desired to be acquired through education (Cevizci, 2015). As a matter of fact, each society has created its own educational policies by determining the aims and content of the educational process in line with their own controls and objectives (Fidan, 2012). At this point, educational philosophy plays an active role in determining the goals of education, checking whether it is suitable for the individual and society, and revealing the quality of educational practices (Baş, 2015). Because philosophy is taken as a criterion in evaluating the goals, tools, applications and results of educational programs (Ornstein, 2016).

Social changes and transformations that occurred in the form of social life and thinking over time as a result of historical breakdowns on a global scale have led to the emergence and development of various philosophical trends towards education. The definition, purposes, principles, education program, teaching method and teacher and student relations have differed by every philosophical thought discussed (Gutek, 2017). Although the number of educational philosophy approaches in the literature varies, the basic approaches are observed to be perennialism, essentialism, progressivism, existentialist education and reconstructivism (Sönmez, 2008). In this study, these educational philosophies are discussed as basic approaches. Some of these trends have their origin in general philosophical thought. For example, perennialism and essentialism originate from idealism and realism while reconstructivism and progressivism originate from pragmatism (Duman and Ulubey 2008). Perennialism and

essentialism are seen as traditional-conservative educational philosophies while progressivism, existentialism and reconstructivism are seen as contemporary educational philosophies (Kısakürek, 1982).

Perennialism, one of the educational philosophy movements, is the oldest and traditionalist educational philosophy movement (Bansal, 2015) based on classical idealism and realism. Perennialism defines human beings as an intelligent being and argues that education can teach people the universal, unchangeable and absolute truths through reason (Çüçen, 2018). The aim of education is to develop a rational personality by improving the mind and moral character of individuals and to reveal universal values (Ornstein and Hunkins, 2014). Essentialism, which emerged as an educational movement directly rather than being based on a philosophy after perennialism, is a widely accepted and long-lasting philosophical movement in the world and suggests a traditional and conservative education system (Tozlu and Yayla, 2006). According to the essentialists, the function of schools is to provide students with the absolute correct knowledge that is constantly accumulated in society and thus act as a cultural transmitter (Sönmez, 2008). The duty of school is to transfer absolute and correct knowledge to students (Hançerlioğlu, 1987). Analyzing the educational perspectives, the educational philosophies of perennialism and essentialism are interrelated (Arslan, 2017). Perennialism and essentialism are the supporters of creating a homogeneous society and homogeneous individuals by using their preferences in favor of the society for the balance that should be established between the individual and the society in social life (Dağ and Çalık, 2020). Progressivism movement, which emerged as a reaction to the traditional education understanding of perennialism, adopts the view that education is in a continuous development by counting on the view that "the essence of reality is change" based on pragmatic philosophy (Cevizci, 2015). According to the progressive education philosophy, students' interests and wishes should be taken into the center while organizing the content of the education program according to the progressive education philosophy (Sönmez, 2008). At this point, there is no strict discipline in the progressive education philosophy as in traditional educational philosophies (Gutek, 2017), and it advocates that the educational environment should be arranged in a way that enables students to be influenced by each other and to express their opinions freely.

The pragmatic philosophy movement is at the root of the reconstructivism education philosophy, which is the continuation of the progressive educational philosophy (Demirel, 2010). According to the reconstructivism movement, there is no absolute truth and the society is in continuous change. For this reason, the knowledge to be presented to students is not absolute and it should bear a characteristic that can change any minute since the education programs will also change in time too (Kıncal, 2006). Argued by the reconstructivism movement suggesting that the student must be active during the learning process, the school environment should teach social changes (Bingöl and Kinay, 2018). On the other hand, the existentialist educational philosophy is a libertarian philosophy of education that rejects general moral principles and advocates that the individuals should make their own decisions according to their own principles and bear the consequences of these decisions. According to existentialist education, the way to acquire knowledge is intuition, and the person who creates her/his own existence creates her/ his own values and chooses the path (Yargı, 2019). As suggested by this movement, every student must develop her/his own values system freely and without the coercion of adults (Demirel, 2010). When the movements of educational philosophy are analyzed as a whole, essentialism and perennialism philosophies feature discipline in class while progressivism and reconstructivism educational philosophies highlight a democratic education environment where there is absolutely no punishment in a free class environment (Hayırsever and Oğuz, 2017). In progressivism, reconstructivism and existentialist education, the individual is at the forefront and the student is positioned at the center of education processes. Therefore, a heterogeneous social structure is preferred where individual differences are taken into account (Dağ and Çalık, 2020).

Looking at the literature, there are some researches investigating the beliefs of teachers in various education levels and branches about educational philosophies (Dağ and Çalık, 2020; Kahramanoğlu and Özbakiş, 2018; Kozikoğlu and Erden, 2018; Aslan, 2017; Hayırsever and Oğuz, 2017; Yazıcı, 2017; Çakmak et al., 2016; Baş, 2015; Çelik and Orçan, 2015; Tunca et al., 2015; Oğuz et al., 2014; Meral, 2014; Altınkurt et al., 2012; Geçici and Yapıcı, 2008; Doğanay and Sarı, 2003). These researches mostly focus on prospective teachers. Although there are some researches analyzing the epistemological beliefs of prospective physical education teachers (Alemdağ, 2015) and the philosophical views of physical education teachers about the physical education (Özüdoğru, 2010), there is no research found which analyzes the beliefs of physical education and sports teachers regarding the educational philosophies by different demographic variables. In this context, this study is thought to contribute to the literature. This study aims to determine the philosophical beliefs of physical education and sports teachers for education. In addition, whether the philosophical beliefs of teachers vary according to the variables of gender, the type of school they work, educational background and professional seniority constitutes the sub-objectives of the study.

Method

This study, in which the philosophical beliefs of physical education and sports teachers towards education were examined according to various demographic variables, was designed in a descriptive survey model. The study group of the research consists of 789 physical education teachers working in official secondary and high schools. As data collection tool, an online questionnaire form created by using google docs infrastructure was used in the

research. The link of the questionnaire was shared with the relevant teacher groups and the questionnaire was filled on a voluntary basis.

The data collection tool is composed of “Personal Information Form” and “Educational Belief Scale” developed by Yılmaz et al. (2011). There are 4 questions in the personal information form directed to determine the gender of physical education and sports teachers, the type of school they work, educational background and professional seniority. In the “Educational Belief Scale”, there are 40 items composed of five sub-dimensions that are scored as five-point Likert-type (1-Strongly Disagree, 2-Disagree, 3-Partially Agree, 4-Agree, 5-Strongly Agree) and collected to determine teachers’ philosophy of education beliefs. The sub-dimensions of the scale are “Progressivism (13 items)”, “Existentialist Education (7 items)”, “Re-constructionism (7 items)”, “Perennialism (8 items)” and “Essentialism (5 items)”. There are no reverse scored items in the scale. The arithmetic mean ranges were interpreted as 1.00-1.80; “Strongly Disagree”, 1.81-2.60; “Disagree”, 2.61-3.40; “Partially Agree”, 3.41-4.20; “Agree” and 4.21-5.00 “Strongly Agree” in order to determine the level of the items by considering the calculation of the interval width of the scale with the formula “array width / number of groups to be made” (Tekin, 1993). The high scores obtained from the sub-dimensions of the scale indicate that the participants believe and adopt the educational philosophy more in that sub-dimension, and the low level indicates that their belief in the relevant philosophy is low.

Following the exploratory factor analysis by Yılmaz et al. (2011), 40-item structure of the scale collected under five sub-dimensions was verified with the confirmatory factor analysis (GFI = .85; AGFI = .83; RMSR ≤ .05; RMSEA ≤ .05; RMR and SRMR ≤ .08; CFI ≥ .95; NFI and NNFI ≥ .95; PGFI = .75). The researchers found the Cronbach Alpha internal consistency coefficients of the scale between .70 and .91 in the sub-dimensions. In the current study, the Cronbach Alpha internal consistency coefficients of the scale were calculated as .75-.87 in the sub-dimensions, and .89 in total. The scale can be said to be considerably reliable according to these results (Fraenkel et al., 2014). In the analysis of the data, the non-parametric Mann-Whitney U and Kruskal-Wallis H tests besides descriptive statistical techniques were used to compare the participants’ philosophical beliefs about education according to their demographic variables, since the data did not show a normal distribution. Bonferroni correction was performed in the Mann-Whitney U tests, which were applied to determine between which pair groups the significant changes obtained from the Kruskal Wallis H-test occurred.

Findings

Table 1. Personal characteristics of the participant physical education and sports teachers

Personal Characteristics	Category	n	%
1.Gender	Male	513	65.0
	Female	276	35.0
2.Type of school they work	Middle school	450	57.0
	High school	339	43.0
3. Education	Undergraduate	660	83.7
	Graduate	129	16.3
4.Professional seniority	1-5 Years	260	33.0
	6-10 Years	148	18.8
	11-15 Years	165	20.9
	16-20 Years	103	13.1
	21-25 Years	113	14.3
Total		789	100.0

According to Table 1, 513 of the participant physical education and sports teachers (65.0%) are male and 276 of them (35.0%) are female. 450 of the teachers (57.0%) work in middle school and 339 of them (43.0%) work in high school. 660 of the teachers (83.7%) have undergraduate degree and 129 of them (16.3%) have graduate degree. 260 of the teachers (33.0%) have 1-5 years of professional seniority, 148 (18.8%) have 6-10 years, 165 (20.9%) have 11-15 years, 103 (13.1%) have 16-20 years and 113 (14.3%) have 21-25 years.

Table 2. Descriptive statistics results of educational philosophy beliefs of the participant physical education and sports teachers

Philosophical dimension	N	Av.	S.D.	Min.	Max.	Participation Level
Progressivism	789	4.37	0.36	13	65	Strongly Agree
Existentialist Education	789	4.53	0.42	7	35	Strongly Agree
Reconstructivism	789	4.01	0.64	7	35	Agree
Perennialism	789	3.95	0.63	8	40	Agree
Essentialism	789	2.77	0.95	5	25	Partially Agree

Looking at Table 2, the highest dimensions in which the philosophical beliefs of the participant physical education and sports teachers towards education are Existentialism (4.53 ± 0.42), Progressivism (4.37 ± 0.36),

Reconstructivism (4.01 ± 0.64), Perennialism (3.95 ± 0.63) and Essentialism (2.77 ± 0.95) respectively. Physical education and sports teachers mostly adopt the Existentialist Education philosophy and the Essentialist education philosophy approach least.

Table 3. Mann-Whitney U test results of physical education teachers' views on philosophical beliefs of education according to gender variable

Dimensions	Gender	N	Mean rank	Sum of rank	U	Z	p
Progressivism	Male	513	377.35	193581.00	61740.00	-2.980	0.00*
	Female	276	427.80	118074.00			
	Total	789					
Existentialist Education	Male	513	373.37	191538.00	59697.00	-3.685	0.00*
	Female	276	435.21	120117.00			
	Total	789					
Reconstructivism	Male	513	390.68	200416.50	68575.50	-0.729	0.46
	Female	276	403.04	111238.50			
	Total	789					
Perennialism	Male	513	451.75	231745.50	41683.50	-9.579	0.00*
	Female	276	289.53	79909.50			
	Total	789					
Essentialism	Male	513	445.25	228415.50	45013.50	-8.488	0.00*
	Female	276	301.59	83239.50			
	Total	789					

*p<0.05

According to Table 3, educational philosophy beliefs of physical education and sports teachers significantly differ by gender in the sub-dimensions of Progressivism ($U = 61740.00$; $p < 0.05$), Existentialist Education ($U = 59697.00$; $p < 0.05$), Perennialism ($U = 41683.50$; $p < 0.05$) and Essentialism ($U = 45013.50$; $p < 0.05$) while educational philosophy beliefs do not differ significantly by gender in the sub-dimension of Reconstructivism ($U = 68575.50$; $p > 0.05$). Considering the mean rank of the dimensions in which there is a significant change, it can be stated that female physical education and sports teachers adopt the educational philosophy beliefs mostly in the dimensions of Progressivism and Existentialist Education while male physical education and sports teachers adopt these educational philosophy beliefs in the dimensions of Perennialism and Essentialism more.

Table 4. Mann-Whitney U test results of physical education teachers' views on philosophical beliefs of education according to the variable of type of school they work

Dimensions	Type of school	N	Mean rank	Sum of rank	U	Z	p
Progressivism	Secondary school	450	391.13	176008.50	74533.50	-0.552	0.58
	High school	339	400.14	135646.50			
	Total	789					
Existentialist Education	Secondary school	450	386.52	173934.00	72459.00	-1.221	0.22
	High school	339	406.26	137721.00			
	Total	789					
Reconstructivism	Secondary school	450	393.62	177129.00	75654.00	-0.197	0.84
	High school	339	396.83	134526.00			
	Total	789					
Perennialism	Secondary school	450	327.60	147420.00	45945.00	-9.615	0.00*
	High school	339	484.47	164235.00			
	Total	789					
Essentialism	Secondary school	450	384.70	173115.00	71640.00	-1.470	0.14
	High school	339	408.67	138540.00			
	Total	789					

*p<0.05

According to Table 4, educational philosophy beliefs of physical education and sports teachers significantly differ by the type of school they work only in the sub-dimension of Perennialism ($U=45945.00$; $p<0.05$) while educational philosophy beliefs do not differ significantly by the type of school they work in the other sub-dimensions ($p>0.05$). When we look at the mean rank of physical education and sports teachers according to the type of school in the sub-dimension where there is a significant change, it is observed that teachers working in

high schools have higher beliefs in education philosophy with the Perennialism dimension compared to the teachers working in secondary schools.

Table 5. Mann-Whitney U test results of physical education teachers' views on beliefs of education philosophy according to the education variable

Dimensions	Education	N	Mean rank	Sum of rank	U	Z	p
Progressivism	Undergraduate	660	380.93	251412.00	33282.00	-3.943	0.00*
	Graduate	129	467.00	60243.00			
	Total	789					
Existentialist Education	Undergraduate	660	394.07	260083.50	41953.50	-0.264	0.79
	Graduate	129	399.78	51571.50			
	Total	789					
Reconstructivism	Undergraduate	660	394.50	260367.00	42237.00	-0.141	0.88
	Graduate	129	397.58	51288.00			
	Total	789					
Perennialism	Undergraduate	660	383.15	252879.00	34749.00	-3.319	0.00*
	Graduate	129	455.63	58776.00			
	Total	789					
Essentialism	Undergraduate	660	367.11	242290.50	24160.50	-7.816	0.00*
	Graduate	129	537.71	69364.50			
	Total	789					

*p<0.05

Looking at Table 5, it is observed that educational philosophy beliefs of physical education and sports teachers significantly differ by education in the sub-dimensions of Progressivism (U=33282.00; p<0.05), Perennialism (U=34749.00; p<0.05) and Essentialism (U=24160.50; p<0.05) while educational philosophy beliefs do not differ significantly by education in the sub-dimensions of Existentialist Education (U=41953.50; p>0.05) and Reconstructivism (U=42237.00; p>0.05). Considering the mean rank of the sub-dimension where there is a significant change, it is observed that physical education and sports teachers studying in a graduate program have higher beliefs in education philosophy compared to the teachers with an undergraduate degree in the dimensions of Progressivism, Perennialism and Essentialism.

Table 6. Kruskal- Wallis H test results of physical education teachers' views on beliefs of education philosophy according to the variable of professional seniority

	Seniority	N	Mean rank	Chi-square	df	p	Bonferroni
Progressivism	1-5 Years	260	415.80	54.119	4	0.00*	1-5
	6-10 Years	148	413.01				2-5
	11-15 Years	165	404.41				3-5
	16-20 Years	103	455.63				4-5
	21-25 Years	113	254.54				
	Total	789					
Existentialist Education	1-5 Years	260	405.42	52.218	4	0.00*	1-5
	6-10 Years	148	407.92				2-5
	11-15 Years	165	455.59				3-5
	16-20 Years	103	398.28				4-5
	21-25 Years	113	262.64				
	Total	789					
Reconstructivism	1-5 Years	260	413.14	40.619	4	0.00*	1-5
	6-10 Years	148	394.10				2-5
	11-15 Years	165	402.36				3-5
	16-20 Years	103	464.92				4-5
	21-25 Years	113	279.95				
	Total	789					
Perennialism	1-5 Years	260	371.25	8.005	4	0.09	No difference
	6-10 Years	148	378.83				
	11-15 Years	165	409.05				
	16-20 Years	103	432.12				
	21-25 Years	113	416.48				
	Total	789					

Essentialism	1-5 Years	260	348.14	55.846	4	0.00*	3-1
	6-10 Years	148	343.13				3-2
	11-15 Years	165	421.94				5-1
	16-20 Years	103	407.51				5-2
	21-25 Years	113	520.02				
	Total	789					

*p<0.05

Looking at Table 6, it is seen that educational philosophy beliefs of physical education and sports teachers significantly differ by professional seniority in the sub-dimensions of Progressivism ($KWH_{(4-789)}=54.119$; $p<0.05$), Existentialist Education ($KWH_{(4-789)}=52.218$; $p<0.05$), Reconstructivism ($KWH_{(4-789)}=40.619$; $p<0.05$) and Essentialism ($KWH_{(4-789)}=55.846$; $p<0.05$) while educational philosophy beliefs do not differ significantly by professional seniority in the sub-dimension of Perennialism ($KWH_{(4-789)}=8.005$; $p>0.05$). Following the Bonferroni corrected Mann-Whitney U test performed to determine among which groups the significant change exists, it is determined that between the teacher group with 21-25 years of professional seniority and the teachers with less seniority, it is in favor of the teachers with less professional seniority in the sub-dimensions of Progressivism, Existentialist Education and Reconstructivism; between the teacher group with 11-15 years of professional seniority and the teacher groups with 1-5 and 6-10 years of professional seniority, it is in favor of the teacher group with 11-15 years of professional seniority and between the teacher group with 21-25 years of professional seniority and the teacher groups with 1-5 and 6-10 years of professional seniority, it is in favor of the teacher group with 21-25 years of professional seniority in the sub-dimension of Essentialism. In other words, it can be stated that as the professional seniority of physical education and sports teachers has increased, their philosophical beliefs have weakened in the Progressivism, Existentialist Education and Reconstructivism dimensions and their philosophical beliefs have become stronger in the Essentialism sub-dimension.

Conclusion and Recommendations

In this study in which the philosophical beliefs of physical education and sports teachers towards education are tried to be determined, the sub-dimensions in which teachers participate most are existentialism, progressivism, reconstructivism, perennialism and essentialism respectively. Physical education and sports teachers have expressed to mostly adopt the existentialist philosophy and essentialism philosophy least. Similar results have been obtained when the researchers conducted in different branches and school types are examined in the literature. In the study of Dağ and Çalık (2020), they stated that Anatolian High School teachers showed the highest participation in the existentialist education and progressive education, and the least participation in the essentialist education philosophy in terms of their philosophical approach to education and according to this result, teachers adopt modern educational philosophies more, which is known as the traditional educational philosophy and they showed less adoption of essentialism educational philosophy. In the study of Aslan (2017), class teachers participated in the existentialist education at highest level in the sub-dimensions of existentialist education and progressivism and at the lowest level in the sub-dimension of essentialism. Yargı (2019) reported in their thesis in which the relationship between the needs determination tendencies of the lecturers and their philosophy of education beliefs was examined, lecturers adopted the existential approach to education relatively more. The fact that teachers mostly adopt existentialism and progressivism educational philosophies in that they defend student-centered, questioning, libertarian and more democratic educational environment is seen positively (Altinkurt et al., 2012). Similar result is observed in the studies of Kahramanoğlu and Özbakış (2018), Yazıcı (2017), Oğuz et al. (2014), Yılmaz and Tosun (2013), Altinkurt et al. (2012) and Ekiz (2007).

It is observed that educational philosophy beliefs of physical education and sports teachers significantly differ by gender in the sub-dimensions of progressivism, existentialist education, perennialism and essentialism, female teachers mostly adopt progressivism and existentialist education philosophies while male teachers mostly adopt perennialism and essentialism educational philosophies. Although there are similar and different results in the literature, it is determined that female teachers are more inclined to modern educational philosophies while male teachers are more inclined to more traditional educational philosophies. In the research of Dağ and Çalık (2020), they have reported that progressivism approach is mostly adopted by female teachers and essentialism is mostly adopted by male teachers. In the study of Aslan (2017), there is a significant difference in favor of female teachers in the sub-dimensions of progressivism and existentialist education while female teachers mostly adopt progressivism and existentialist education philosophies. In the research of Yılmaz and Tosun (2013), they have established that male teachers agree with the perennialism and essentialism more while female teachers mostly agree with the existentialist education philosophy. In the study of Biçer et al. (2013) performed on prospective teachers, they have found that male prospective teachers mostly adopt essentialism education philosophy. In the study of Ektem (2018), the educational philosophies preferred by prospective teachers are existentialism, progressivism, perennialism, reconstructivism and essentialism respectively. These findings also indicate that philosophical beliefs of teachers towards education do not change greatly before and after having the profession. Similar findings also exist in the studies of Oğuz et al. (2014) and Kahramanoğlu and Özbakış (2018), Biçer et al.

(2013). On the other hand, there are also some research findings indicating that philosophical beliefs of prospective teachers and teachers towards education do not differ by gender variable (İlgaz et al., 2013; Biçer et al., 2013; Altinkurt et al., 2012; Çoban, 2007; Doğanay and Sarı, 2003).

It has been ascertained that philosophical beliefs of physical education and sports teachers towards education only change in the sub-dimension of perennialism by the type of school they work, teachers working in high school adopt the perennialism sub-dimension more than the teachers working in secondary school. In the study of Altinkurt et al. (2012), they have found that educational beliefs of teachers do not change by the type of school; however, beliefs change by the branch in the sub-dimensions of perennialism and essentialism. Following the analysis of re-coded data by the branch, it has been determined that secondary school teachers adopt the perennialism and essentialism educational philosophies more than class and branch teachers in primary school. While these findings support our finding, the fact that Oğuz et al. (2014) have ascertained in their study that beliefs of high school teachers towards perennialism educational philosophy are less than secondary school teachers does not support our finding. It can be thought that branch and sample groups are the reason for obtaining different findings.

Another finding obtained from the study is that physical education and sports teachers studying in a graduate program have higher educational philosophy beliefs in the dimensions of progressivism, perennialism and essentialism compared to the teachers with an undergraduate degree. This result is an expected situation in the sub-dimension of progressivism while it is not an expected condition in the sub-dimensions of perennialism and essentialism in terms of graduate education level. However, it is thought that increased age and professional seniority together with the graduate education are the reasons for this result. It is observed that the teachers with higher professional seniority adopt classical education philosophy more. Concerning literature, there are findings that do not coincide with our finding. In the study of Tunca et al. (2015), they have concluded that teachers with an associate degree adopt the perennialism educational philosophy higher than the teachers with an undergraduate and graduate degree. In the research of Aslan (2017), they have found that no significant difference exists among the scores obtained by teachers from the sub-dimensions of progressivism, existentialist education, reconstructivism, perennialism and essentialism by the education.

The last finding of the study is that the higher the professional seniority of the physical education and sports teachers is, the weaker their philosophical belief becomes in the dimensions of progressivism, existentialist education and reconstructivism and the stronger their belief is in the sub-dimension of essentialism. Thinking about the nature of philosophical movements, this is an expected result. Looking at the literature, similar results are observed. In the study of Aslan (2017), it is stated that there is a significant difference for the favor of the teachers with more professional seniority in the educational philosophy of perennialism and the teachers with higher professional seniority adopt the perennialism philosophy more. Although in different sub-dimensions, considering the philosophical origins of perennialism and essentialism, this finding is parallel to our study findings. In the study of Altinkurt et al. (2012), educational beliefs of teachers by the variable of professional seniority differ in the dimensions of progressivism and existentialism, the teachers with less than 10 years of seniority adopt the educational philosophies of progressivism and existentialism more. In the study of Oğuz et al. (2014), beliefs of teachers with less than 10 years of seniority towards educational philosophies are more than those with more than 20 years of seniority and the teachers with less than 10 years of seniority and 10-19 years of seniority believe in progressivism educational philosophy more compared to the teachers with more seniority. In the study of Dağ and Çalık (2020), they have found that as the professional seniority of teachers increases, their belief in perennialism and essentialism approaches also increases. The fact that teachers with higher seniority, especially those with 20 years and more seniority, have been trained with a more perennial and essentialist understanding in their education life can be shown as the reason why their belief in these educational philosophies is higher than other teachers (Oğuz et al., 2014).

This study tries to determine the philosophical beliefs of physical education and sports teachers towards education by some demographic variables. Due to the fact that the results obtained from this study and other studies in the literature performed on physical education and sports teachers are limited, different researches can be conducted. In this context, educational beliefs of physical education and sports teachers can be analyzed on a wider sample group and in terms of different variables. The philosophical beliefs of teachers can be examined quantitatively and qualitatively in a comparative manner within the context of sports philosophy and educational philosophy.

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ANALYZING THE VIOLENT TENDENCIES OF THE SECONDARY SCHOOL STUDENTS ACOORDING TO THEIR SPORT ACTIVITIES: EXAMPLE OF ESKİŞEHİR ODUNPAZARI AND TEPEBAŞI

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Abstract

The aim of this research is to determine the violent tendencies of middle school students, living in Eskişehir, district of Odunpazarı and Tepebaşı, according to their sport performances. The violent of tendency research, which is determined, aims to analyze year of doing sport, licence status, whether they are exposure to violence, whether the level of doing sport depends on their families income level. For the purpose of the research; after getting permission from Eskişehir Provincial Directorate for National Education, a total of 64 secondary school in Odunpazarı and Tepebaşı district, representing the world, students are informed in 8 secondary school selected by simple random sampling method. After elucidating, information survey which is developed by Haskan and Yıldırım and determine the violence tendency scale and socio-demographic feature, is applied to 232 secondary school students in total who want to participate voluntarily. Since the data normally distributed, t test and one-way analysis of variance are used among parametric methods. The margin of error is $p < 0.05$.

As a result, students violent tendencies to participate in sports branch competition, licence status, whether they are doing sport in the family, income level, sibling status is found to be meaningless according to their education level of parents and their exposure to violence. However, tendency to violence; boys' scores are found to be significantly higher than those who are exposed to violence than those who are not, 13-year-old students than 11-year-olds, and 8th grade students than 6th grade. Finally, as a result of social learning and gender role learning, it is thought that the tendency of violence increases in males and in those who are exposed to violence as a result of role modelling. It is recommended to plan detailed studies on the subject in order to eliminate the tendency to violence.

Key Words: Violence, Sport, Secondary School Students, Tendency to Violence

Introduction

When you consider violence, physical violence often comes to mind. However, violence is not always a tangible situation that can be seen or heard. By creating emotional strains, its effects can be realized indirectly. In the literature, it has been mentioned that violence includes behaviors such as sometimes using vulgar expression or physical force, sometimes being unresponsive and inaction (Krug et al., 2002).

The World Health Organization reports that 470.000 murders are committed around the world every each year and millions of people are injured in connection with this violence. They also state that there are 3 types of violence against those who are exposed to violence; self-directed, interpersonal and collective (WHO, 2020). It has been suggested that interpersonal violence, which is one of these 3 types of violence, usually occurs in environment such as home, school, or streets and between people who are acquaintance (Kocacık, 2001; Özgür, Yörükoğlu & Baysan Arabacı, 2011). School is one of the place that is suitable for interpersonal violence and where there are people who know each other. Social status, income level, characteristics of the region where the school is located, low school success, family relationships and childhood traumas are shown as factors that increase the tendency to violence at school (Hökelekli, 2007). It is also stated that girls are most likely to experience violence in home and boys in school and male students are more prone to violence than female students (Donat Bacı & Özben, 2011; Ögel, Tarı, & Yılmazçetin-Eke, 2006; Özcebe, Çetik & Üner, 2006; Özgür et al., 2011).

Based on the definition of violence tendency, it is suggested that individuals without a violent behavior have positive feelings, thoughts and behaviors. It is explained that in violent tendency, individuals may use violence or may have thinking that confirm violence without using any violent act. Violence is defined as all kinds of harmful acts in physical, psychological, sexual, economic and even social dimensions, while the tendency to violence is defined as a positive view of violence, an opinion (Haskan & Yıldırım, 2012). It is suggested that the tendency to violence is affected by individual and environmental factors, family problems, media and peers also

have an effect (Avcı & Güçray, 2013; Gençoğlu, Kumcağız, Ersanlı, 2014). In a study conducted by the Minister of National Education in 34.656 primary schools and 7934 secondary schools for 2007, it was determined that there were 3.7% violence in primary education and 28.5% in secondary education. In this study, physically damaging actions were the most common type of violence with a rate of 34.5%. It was determined that behaviors such as bullying, threats and teasing were in the second place with 23.7%, followed by 10.1% in behaviors such as gossip and nicknames (Gençoğlu et al. 2014).

As can be seen from this study conducted by the Ministry of National Education, it can be concluded that violence incidents in primary education, which is 3.7%, increase by 28.5% in secondary education, in other words, violence incidents increase as the age gets older. When looked at with the social learning theory which states that behaviors are learned by modelling and imitating; the behaviors that children observe from their parents, teachers shows the importance of addressing the issue at an early age (Ayhan & Hökelekli, 2004; Kılavuz, 2006). Besides, there are many publications reporting that doing sport has positive effects on children physically, mentally, socially and emotionally, especially to relieve anger and have a relaxing effect (De Vries 1981; Kalyon, 1994; Koç, 2007; Krechtle, 2004). Considering these positive effects of sport, it is considered important to determine the violent tendencies of secondary school students who are at the beginning of adolescence according to their participation in sports.

Objectives Of The Research

It is wanted to determine the level of violence tendency in secondary school students who participate in sports and do not. For this purpose, answers to the following questions are searched.

Does the tendency to violence in secondary school students show a change according to whether they do sports or not?

Does the tendency to violence among secondary school students show a significant difference according to socio-demographic characteristics?

Does the tendency to violence among secondary school students show a significant difference according to their exposure to violence?

Methods

Study Group: This research is a descriptive study. The target population of the study consists of 64 secondary school students in Eskişehir, Odunpazarı and Tepebaşı districts in 2019-2020 academic year. The sample group, on the other hand, consists of a total 232 students, who participate voluntarily, from 8 secondary schools selected by simple random method from the secondary schools that constitute the research population.

Data Collection Tools

Information survey; in order to determine the socio-demographic characteristics of secondary school students, a 13 question information survey prepared by the researchers in the light of the literature information is applied.

Violence tendency scale; violence tendency scale developed by Haskan and Yıldırım is used to determine students' violent tendencies. The scale consists of 20 items, one of which is reversed. The scale is triple (3=always, 2=sometimes, 1=never) graded. The result that can be obtained from the scale varies between 20 and 60. High results indicate high tendency to violence. The response time of scale, which can be applied both individually and as a group, is approximately 15 minutes. The Cronbach Alpha coefficient of the scale is found to be 0.87 (Haskan & Yıldırım 2012) and 0.82 is found for this research.

Data Collection

After getting permission from the Eskişehir Provincial Directorate of National Education in December 2019 for the research, students were informed about the research by going to the schools determined by simple random method. Information form and violence tendency scale were applied to those who voluntarily participated in the study.

Analysis Of The Data

Percentage distributions of the personal characteristics of secondary school students according to their sports performances are determined. Mean and Standard deviation values are used to determine the scores they get from the violence tendency scale. Since the data show normal distribution when analyzed in the spss 21.0 package program, for groups independent of parametric methods, t test is used for pairwise cluster comparisons and one-way analysis of variance is used for comparisons of more than two clusters. Margin of error is $p < 0.05$.

Finding

In this section, the results students get from the violence tendency scale are analyzed in accordance with the research questions and presented in tables. Descriptive data are given with mean comparisons.

Looking at table ,42.2% of the participants are female students and 47.8% are male students. Violence tendency scores are found significantly higher in favor of males. 76% of participants are doing sports outside of school. No significant difference are found when violent tendencies are compared according to their sports activity. While 59.9% of the students doing sports are licensed, 34.5% states that they are not licensed. 12.9% of the students state that they are exposed to violence, 86.6% state that they are not exposed to violence when the violence tendency scores are analyzed, it is found to be significantly high in favor of those who are exposed to violence [Table 1].

Table 1: Violence t test results in terms of gender-violence and sports situations

Variable		N	%	Mean±Ss	F	P
Gender	Girl	98	42.2	28.77± 7.17	0.353	0.000
	Boy	134	47.8	32.81±6.34		
Sports activities	Yes	180	77.6	30.92±6.81	0.348	0.532
	No	50	21.6	31.66±7.50		
License condition	Yes	139	59.9	31.05±6.44	6.400	0.972
	No	80	34.5	31.08±7.93		
Exposure to violence	Yes	30	12.9	35.66±7.19	0.403	0.001
	No	201	86.6	30.46±6.70		
Sport branch	Team	143	61.6	31.09±7.00	0.198	0.660
	Individual	48	20.7	30.58±6.96		

Violence tendency scores do not differ significantly according to sports branch of the students. However, the violent tendencies of secondary school students according to the years of doing sports differ significantly ($p=0.043, p<0.05$). When the source of the significant difference is examined, it is seen that the group doing sport 1-3 years and those who do sports for 7-9 years are due to the points they get. Violence tendency is found to be the lowest among students doing sports for 1-3 years, and highest for those who do sports for 7-9 years. Considering the violence tendency scores of the students according to the grade point average they get in the previous period before the research, it is found that the tendency to violence is significantly higher in favor of the students who get 70 points or less. ($p=0.009, p<0.05$) When the source of the difference is considered, the scores of those with grade point average of 91 points or more; it is found to be due to the difference between the groups with both 70 points or less and 71-80 points [Table 2].

Table 2: Analysis of variance results regarding the violence tendency scores of the students according to their violence and sport activities

Variable		N	%	Ort±Ss	F	P	Tukey
Year of sports	1-3 years ^a	114	49.1	30.50±6.93	3.208	0.043	a-c
	4-6 years ^b	73	31.5	31.34±6.90			
	7-9 years ^c	15	6.5	35.33±7.60			
Grade point average	70 points and below ^a	46	19.8	32.97±7.55	3.969	0.009	a-d b-d
	71-80 points ^b	53	22.8	32.13±7.06			
	81-90 points ^c	54	23.3	31.66±6.36			
	91 points and above ^d	53	22.8	28.49±7.24			

In table 3; Students' violent tendencies do not show a significant difference according to the education and income levels of their parents and the number of their siblings. However, when analyzed by age variable, significant differences are found in favor of 13 years old. ($p=0.004, p<0.05$) When the source of the significant difference is analyzed with Tukey test, it is determined that the tendency to violence is the lowest among the students aged 11 and under, and the highest among the 13-year-old students. It is seen that the significant difference is due to the difference between the scores obtained in these age groups. Significant differences are found according to the class variables. It is observed that the difference between the scores of 8th grade students and the scores of 6th grade students is caused by the difference [Table 3].

Table 3: Variance analysis results of the mean scores of the violence tendency of the participants according to their socio-demographic characteristics.

Variable		N	%	Ort±Ss	F	P	Tukey
Age	11 years and under ^a	45	19.4	28.35±6.37	4.562	0.004	a-c
	12 years ^b	68	29.3	31.29±7.41			
	13 years ^c	78	33.6	32.97±7.17			
	14 years and older ^d	40	17.2	30.30±5.53			
Grade	5th grade ^a	10	4.3	26.70±5.88	3.691	0.013	b-d
	6th grade ^b	43	18.5	29.04±6.25			
	7th grade ^c	56	24.2	31.08±7.29			
	8th grade ^d	123	53	32.19±6.93			
Mother education	Illiterate	28	12.1	31.07±7.42	1.039	0.395	
	Primary	103	44.4	31.95±7.65			
	Secondary	46	19.8	30.60±6.39			
	High school	37	15.9	29.51±5.72			
	University	11	4.7	28.90±5.55			
	Graduate	1	0.4	36.00±			
Father education	Illiterate	3	1.3	24.66±4.04	1.068	0.379	
	Primary	79	34.1	31.24±7.25			
	Secondary	53	22.8	31.69±7.81			
	High school	72	31.0	31.22±6.40			
	University	14	6.0	28.35±5.61			
	Graduate	2	0.9	33.50±6.36			
Income level	2000 TL and below ^a	66	28.4	30.51±7.13	1.676	0.173	
	Between ^b 2001-2500 TL	61	26.3	32.08±7.70			
	Between ^c 2501-3000 TL	42	18.1	29.33±6.42			
	3001 TL and above ^d	53	22.8	31.90±6.39			
Number of siblings	No siblings	21	9.1	30.09±6.34	0.632	0.595	
	2 siblings	79	34.1	30.53±7.14			
	3 siblings	74	31.9	31.37±7.34			
	4 siblings and above	57	24.6	31.94±6.63			

Discussion And Conclusion

When the research findings are examined, the violent tendencies of secondary school students have no significant differences in terms of parents' education level, income level, number of siblings, whether they do sports or not, the sport branch of those who do sports and whether they are licensed or not. In this section, only results that show significant differences are interpreted and discussed with the literature information.

Looking at table 1, the tendency to violence in terms of gender is found to be higher in boys than in girls (Avcı, 2010; Gençoğlu et al., 2014; Haskan, 2009; Karagün, 2015; Ögel et al., 2006; Özgür et al. 2011; Sağlam & İkiz 2017). Contrary to these results, it is seen that there are studies that find a high tendency to violence in girls (Ellickson & McGuiga, 2000; Kırmoğlu, Parlak, Dereceli & Kepoğlu, 2008), as well as studies that do not find a significant difference in violent tendency according to gender (Arpacı, 2011; Gökbüzoğlu, 2008; Karataş-Bolat, 2002). Considering the findings of the study, with the information that as a result of gender role learning in the literature, aggressive attitudes of men are supported by the society, on the contrary, behaviors such as calm and harmony are taught to girls (Astin, Redston & Campbell, 2003; Giles & Heyman, 2005; Karagün, 2015; Lopez & Emmer, 2002), it is thought that these results are obtained due to gender role learning.

When the violence tendency scores of secondary school students are analyzed according to their exposure to violence or not; significantly high scores are observed in favor of those exposed to violence. When the studies conducted are examined, there are also studies showing that the violence tendency scores of those who are exposed to violence are also high (Gençoğlu et al., 2014; Ireland & Smith: 2009; Karagün, 2015). In the literature; it is stated that individual and environmental factors such as family problems, media and peers affect the tendency towards violence (Avcı & Güçray, 2013; Gençoğlu et al. 2014), witnessing or being exposed to

violence increases the tendency to violence and aggression (Dilillo, Tremblay & Paterson, 2000; Frias-Armenta, 2002; Mazefsky & Farrel, 2005). It is thought that the presence of violence in the environment, most importantly, exposure to violence teaches some kind of violence and there is a need for deep studies that investigate the tendencies of those who are exposed to violence. In this study, while there is no significant difference in violence tendency scores according to whether or not to do sports or to be licensed, a significant difference is found according to the year of doing sports. It is seen that there are similar results in the literature (Haskan, 2009; Haskan Avcı & Yıldırım, 2014; Karagün, 2015). When table 2 is examined, it is seen that the tendency to violence is the lowest in those who do sports between 1-3 years, but the highest in those who do sports for 7-9 years. It is reported in the literature that the tendency to violence does not increase with sports, but the type of sport can increase the tendency to violence depending on whether it has a competitive content or not. In addition, it is observed that sports activities in a game format are recommended to eliminate violence (Karagün, 2015). In this study, while there is no significant difference in violence tendency scores according to whether or not to do sports and whether or not to be licensed, a significant difference is found according to the sports year. Again, when we look at the information that sports in the literature contains violence and aggression in nature (İkizler, 1994); in this study, it is deemed appropriate to recommend planning studies that will reveal more detailed data on the subject, since it is not examined whether those who have more years of sports and high violence tendency scores are professional. Considering the grade point average in Table 2, it is seen that as the students' grade point average decreases, the violence tendency scores of the students increase significantly. Considering the literature, the information that situations such as low school success, indifference to school and lessons play an active role in the formation of violence (Fager & Boss, 1998; Morrison, Furlong & Morrison, 1994) is in line with the research findings. However, contrary to our research findings in the literature, it is observed that there are studies that do not find a significant difference in violence tendency in terms of school success (Karagün, 2015). It can be said that as the academic success of the students increases, the tendency to violence decreases. In the literature, grade average point is shown as a factor in addition to familial factors that increase the tendency to violence (Hökelekli, 2007). In addition, considering that communication and interaction within the family are among the factors that reveal the tendency to violence (Kılıç, 2012; Ögel et al. 2006); considering that academic success is very important in our society, it is thought that as the success decreases, the tendency to violence may increase as a result of conflict in family communication. There is a need to plan detailed studies on this subject.

In Table 3, when the violent tendencies of secondary school students are examined by age; it is determined that the highest scores are obtained by the 13-year-olds, and the lowest is the 11-year-olds. In the eye of the literature, violence is exhibited as a show of strength and acceptance behavior with adolescence and there is an increase in the tendency towards negative behaviors at the beginning of adolescence (Yavuzer, 2011), and especially the 15-17 age group is considered to be the most risky age group in terms of violence (Ögel et al. 2006); as age increases, the violent tendencies increase, too. These studies also support the literature information. When the violence tendency scores of secondary school students in terms of their grade level are examined, it is observed that the 5th grade students get the lowest score, followed by 6th grade, 7th grade and the 8th grade, the tendency to violence increase parallel to the grade level increase. When the class variable is examined, it is seen that the difference is between 6th and 8th grades. These findings are parallel to previous studies (Bellici, Sardoğan & Yılmaz, 2015; Özgür et al., 2011). This result is actually similar to the age variable. It is thought that this situation is mostly due to the physiological and psychological processes brought about by adolescent period characteristics. In addition, it is thought that preparing for the high school pass exams in the 8th grade may also have an effect, but detailed studies should be planned in terms of final results. As a result, the violent tendencies of secondary school students differ significantly according to gender, age, grade level, grade point average of previous term, exposure to violent and years of doing sports. In order to eliminate the tendency to violence, it is recommended to conduct detailed researches on the subject, to educate families and to increase sports activities.

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ASSISTIVE TECHNOLOGY: EMPOWERING TEACHERS

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Abstract

The purpose of the paper is to critically analyze how assistive technology is incorporated in the schools today. A secondary focus is to review some of the best practices commonly used by classroom teachers when teaching students with disabilities.

Introduction

The 1997 Amendments to the Individuals with Disabilities Education Act (IDEA) requires every state to have in effect policies and procedures for every student receiving special education services. This act strengthens academic expectation and accountability for students with disabilities (National Association of Special Education Teachers, 2020). The Technology-Related Assistance for Individuals with Disabilities Act of 1988 was the first introduction of assistive technology services. School-age children were included with the 1990 passage of the Individuals with Disabilities Education Act.

IDEA (retrieved August 25, 2020) defines assistive technology as “any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities.” Teachers and administrators are challenged by identifying the devices needed for any particular year. This year, especially, there is much unknown due to the coronavirus. Parents, now, more than ever, also need to be aware of the best practices and the devices that are available. As they say, “it takes a village.”

The overall percentage of children ages 3 - 21 being served in programs for those with disabilities in 2017-2018 was 13.7 percent (National Center for Education Statistics, 2020). In perspective, this represents 7 million students (Disability Scoop, 2020). This compares to 2016-2017 with 13.4 percent (6.8 million public school students) ages 3-21 receiving special education services (McFarland, Hussar, Zhang, Wang, Wang, Hein, Diliberti, Forrest Cataldi, Bullock Mann, & Barmer, 2019).

Several studies have examined best practices and assistive technology tools (Aronson, Orr, Carter, & Beachner, 2015; Dell, Newton, & Petroff, 2017; Zascavage & Winterman, 2009). Assistive technology tools can enhance the learning of students with disabilities if teachers empower themselves to effectively use the tools and practice research-based teaching strategies.

The four types of learning disabilities discussed in this article are categorized into (1) learning and academic difficulties, (2) language and communication difficulties, (3) perceptual and motor difficulties, and (4) social-emotional and behavioral difficulties. Aronson, et al. (2015) reported that most classroom teachers have at least two learning disabilities present in the classroom.

Learning and academic difficulties are common characteristics of students who often have trouble with memory, attention, and organization skills. Reading, writing, and math deficiencies are often associated.

Students with language and communication difficulties have difficulty listening and understanding what is being said. Other examples (The Bercow Report, 2008) can include difficulties with fluency, forming sounds and words, formulating sentences, understanding what others say, and using language socially. Bercow states “approximately 50% of children and young people in some socio-economically disadvantaged populations have speech and language skills that are significantly lower than those of other children of the same age.”

Perceptual and motor difficulties are observed in students who have difficulty recognizing and interpreting visual and auditory stimuli.

Edyburn (2006) describes social-emotional and behavioral difficulties as an inability to learn that cannot be explained by intellectual, sensory, or health factors; an inability to build or maintain satisfactory inter-personal relations with peers and teachers; inappropriate type of behavior or feelings under normal circumstances; a general pervasive mood of unhappiness or depression; and a tendency to develop physical symptoms or fears associated with personal or school problems.

Some examples of assistive technologies available to public schools are: mobility aids, hearing aids, and cognitive aids. Mobility aids include wheelchairs, walkers, crutches, and prosthetic devices. The most common mobility aid is wheelchairs. Students that are hearing impaired will most likely use hearing aids. Closed captioning will allow students

to be engaged with an educational video during class. Cognitive aids include computer assistive devices to help students with cognitive (thinking, problem solving) skills.

A Comparison of Two Studies

Purpose

The purpose of the studies was to determine the best practices and assistive technology tools used in the classrooms with students with learning disabilities. The researcher compared a study in 2013 to a similar study in 2019 in the same geographic region.

Methodology

Two studies were conducted to determine the best practices and assistive technology tools used in the classroom with students with learning disabilities. In both studies a convenience sample of public high school teachers in a midsouth state were invited to participate in the study. An online survey was disseminated. The first study was conducted during the 2012-2013 school year with a second study conducted in the 2018-2019 school year. Both studies focused on how teachers use assistive technology and what best practices are incorporated. The participating subjects were all public school teachers in the secondary education (grades 7 – 12) classroom. The survey included researcher-generated questions relating to assistive technology and best practices and was disseminated electronically. Due to turnover and attrition participants changed overall but the geographic location remained the same. Both surveys were conducted during the same month of the spring semester.

Findings

In the 2013 and 2019 studies teachers could select four types of learning disabilities including learning and academic difficulties, language and communication difficulties, perceptual and motor difficulties, and social-emotional behavioral difficulties. Participants were asked to rank order the learning disabilities identified in the classroom. The learning disabilities most often reported in the classroom are in rank order: learning and academic difficulties, social-emotional and behavioral, language and communication difficulties, and perceptual and motor difficulties. In comparison, the 2019 study asked the teachers the same question and the rank order of learning disabilities in the classroom reported were: language and communication difficulties, followed by social-emotional and behavioral difficulties, and perceptual and motor difficulties. The major difference was perceptual and motor difficulties was not reported as a major learning disability in the 2013 study.

The best practices identified in 2013 were adjusting time allowances, peer instruction/tutoring, and individualized instruction and group work. Similarly, in 2019 adjusting time allowances and peer instruction/tutoring were also identified as the most often used best practices. One classroom teacher wrote “When a large assignment is daunting to a student, I usually give them a chance with the regular length. When I notice they’re not on track to get done, I will talk to them about how we can shorten the assignment.” Another classroom teacher wrote “Grouping special education students with regular education students for projects.... pairing students.”

The assistive technology tools varied. It is interesting to note that in 2013 more than half (60%) of the teachers did not use any assistive technology tools; however, in 2019 over half the teachers (52.3%) used assistive technology tools. The most often reported assistive technology tools reported were audio recordings, digital tools, and screen reader text-to-speech.

Impact of the Study

With the increase in numbers of students with learning difficulties it is important to be able to identify the learning disabilities and adapt teaching methods to better meet the needs of those students. Becoming more aware of learning difficulties and being able to know what technology tools to use will engage the students more, helping students achieve in the classroom, and foster a more positive learning environment.

Conclusions

Assistive technology tools are still used infrequently by teachers. The study found that adjusting time allowances and peer instruction/tutoring are successful best practices and are used most often by classroom teachers. In the longitudinal study audio records and digital tools have consistently been used over the years.

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BODY PERCEPTION IN PHYSICAL EDUCATION TEACHER CANDIDATES STUDYING AT KOCAELI UNIVERSITY: A COMPARISON IN TERMS OF 1ST AND 4TH GRADES

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Abstract

The aim is to compare the body perceptions of candidates for physical education teachers studying at Kocaeli University in terms of 1st and 4th grades. It is also to examine whether body perceptions change according to variables such as age, gender, housing, parent education, monthly income level, whether to play sports, sports branch and exposure to violence. After obtaining a research permit, all students studying in 1st and 4th grades were informed about the research. After the information; 88 students from 1st grade and 84 volunteers from 4th grade were applied to 172 students; the body perception scale developed by Secard and Jourard and adapted to Turkish by Hovardaoğlu with the information survey. Since the data showed normal distribution, parametric tests; t test, and variance analysis were applied. The margin of error is 0.05. As a result of the analysis; age, mother and father education, housing, exposure to violence, type of sports he participated in, Year of professional work, -out of school- work status in terms of satisfaction scores did not differ significantly. Level of satisfaction with the body; boys received significantly higher scores than girls, 4th grade compared to 1st grade, professional sports compared to amateurs, amateur Sports year more than those and income level 1500 tl and below. As a result, in parallel with the year of amateur sport, it is recommended to conduct detailed studies measuring the effects of increasing sports activities in school programs.

Keywords: Physical Education, Teacher Candidate, Sports, Body Perception, University Student

Introduction

Currently, although being thin and in shape is expressed as a physical and aesthetic image, it is also known that compliance with body mass indices, that is, being in shape, is important for health. But contradicting this fact; on the one hand, unhealthy and weight-gaining fast foods are encouraged by advertising, while on the other hand, the energy taken with sedentary life cannot be spent balanced as a result of an unwanted increase in the body mass index. Body perception, which is considered important for aesthetic and physical health, is also in an important position in terms of mental health. Looking at the literature, body perception was previously related to a damaged body caused by brain damage, while the definition made by Paul Schilder in 1920 also included a psychological and sociological assessment of body perception. It has been suggested that it is actually a picture of their own bodies shaped in people's minds, which is a reflection of how people look to themselves (Alagül, 2004; Teberu-Acar, 2010). It has been emphasized that as a result of people's thoughts about their body parts, their attitude is shaped, and this situation also results in a psychological result that is reflected in people's social relationships (Özerkan, 2004; Yentür 2004). Body perception, which is considered important in the social dimension, consists of people's experiences about their own bodies, as a result of these experiences, along with self-recognition; self-respect, self-confidence are formed (Aslan, 2004; Scully et al., 1998). In the formation of a healthy body perception, the importance of sports as well as social dimension is emphasized (Alagül, 2004; Aşçı et al., 1993; Karagöz & Karagün, 2015; Yentür, 2004). Based on their explanation of the contribution of sports to body perception, it seems that along with body perception, it also affects self-confidence, self-respect and, ultimately, personality development. Based on the knowledge that body perception also develops through experience; physical education and sports lessons, where each person necessarily encounters sports, become important. Physical education course, due to its important contributions, it is important to adjust the content of the course in terms of body perception and that the teachers of the course are also knowledgeable. From this point of view, it has been wondered how candidates for teachers who will conduct a physical education course perceive their own bodies before knowledge of body perception. In this study, what level is the body perception of the 1st grade students who have just started the profession of teaching physical education and the final year students who are now in the practice phase of the profession? Based on the question; comparing the body perceptions of candidates for physical

education teachers studying at Kocaeli University in terms of 1st and 4th grades was the main goal of our research. Based on this main goal, the response to the following sub-problems was sought.

Does the body perception of physical education teacher candidates vary according to socio - demographic variables such as age, gender, housing, parent education, monthly income level?

Do physical education teacher candidates' body perceptions differ significantly depending on their exposure to violence and their Sports?

Method

Study Group: Permission was obtained from the school administration in the 2014-2015 academic year for research of the descriptive type. Research universe Kocaeli University physical education and Sports College; 100 people 1st grade 100 people 4th grade, including a total of 200 physical education and sports teaching department students. A sample was determined using a simple non-selective method from the universe. After the teacher candidates were informed about the study, the data form and body perception scale were applied to the volunteer participants. The research sample consisted of a total of 172 volunteer students, 88 from 1st grade and 84 from 4th grade.

Data Collection Tools

Information survey; An 18-question Information survey was conducted in the light of literature information to determine the socio-demographic characteristics of candidates for physical education teachers, participation in sports and exposure to violence.

Body Perception Scale; In order to determine the body perceptions of candidates for physical education teachers; developed by Secord and Jourard and adapted into Turkish by Hovardaoğlu (1993) ($r=.89$) the body perception scale was used. It is a five-Type likert scale that questions the satisfaction of individuals from separate parts of their body with 40 questions and is answered as "1: I don't like it at all; 2: I don't like it very much; 3: I'm indecisive; 4: I like it very much; 5: I like it very much". The lowest score that can be taken from the scale is 40, the highest score is 200". It was noted that in parallel with the increase in scores, the positive assessment also increased (Dökmen, 2009; Hovardaoğlu, 1993). For this research, Cronbach Alpha value was found to be 0.85.

Analysis Of The Data

Percentile distributions of data on personal characteristics, sports and violence of candidates for physical education teachers were extracted. Mean and standard deviation values were used to determine the scores they received from the body perception scale. Since the data showed normal distribution when analyzed in the SPSS 21.0 package program, Independent Group-t testing was used for binary cluster comparisons, and one-way variance analysis (ANOVA) was used for three or more cluster comparisons. The margin of error is 0.05.

Findings

In this section, the scores obtained by teacher candidates from the body perception scale are analyzed in accordance with the research questions and presented in tables. Descriptive data are provided with average comparisons. It is not presented as a separate table. Looking at Table 1, which includes a comparison of the numerical distributions and averages of physical education teacher candidates, 51.2% of 1st grade and 48.8% of 4th grade make up. Looking at Table 1, which includes a comparison of the numerical distributions and averages of physical education teacher candidates; 51.2% of 1st grade students and 48.8% of 4th grade students study. Participants of 52.3% were female and 47.7% were male. Body perception scores were significantly higher in terms of gender in favor of men ($p=0.013$, $p<0.05$) and in terms of class level in favor of 4th grades ($p=0.027$, $p<0.05$). But there was no significant difference between whether the candidates for teachers had a job outside the school [Table 1].

Table 1: t test results for personal information and body perception scale score average

	Variable	N	%	mean±Sd	P
gender	Woman	90	52.3	154.55±22.18	.027
	Man	82	47.7	162.18±22.54	
Grade	1st grade	88	51.2	154.02±2.24	.013
	4th grade	84	48.8	162.56±24.22	
Out-of school job	Yes	62	36.0	155.82±23.85	.316
	No	110	64.0	159.53±21.88	

As can be seen in Table 2, the body perception scores of teacher candidates with incomes of 1500TL and below are significantly higher than other income groups ($p=0.004$, $p<0.005$). However, there was no significant difference in body perception scores according to age, mother and father education level [Table 2].

Table 2: Test results (one way Anova) for participants ' average scores on family information and healthy lifestyle behaviors

Variable		N	%	mean±Sd	P	Tukey
Mother Education	University	28	16.3	157.96±22.91	0.122	
	High school	53	3.8	159.32±21.29		
	Secondary	39	22.7	150.48±18.77		
	Primary	35	20.3	161.77±26.47		
	Literate	17	9.9	165.35±26.47		
Father Education	University	45	26.2	158.40±20.02	0,185	
	High school	62	36.0	154.76±22.93		
	Secondary	27	15.7	156.33±26.11		
	Primary	22	12.8	167.54±19.41		
	Literate	16	9.3	163.40±23.92		
Family Year Income	1500 TL and below ^a	9	5.2	178.89±19.42	0,007	a-b b-c
	Between ^b 1501-2000 TL	35	20.3	157.31±23.39		
	Between ^b 2001-2500 TL	66	38.4	153.17±21.53		
	2501 TL and above ^d	62	36.00	161.03±22.04		
Age	16-20	82	47.7	155.36±20.81	0,220	
	21-25	75	43.6	161.58±23.74		
	26-30	15	8.7	156.66±25.49		

In Table 3, the body perception of teacher candidates according to their place of residence and the year of professional sports was not found to be significant. But as the year of sports as an amateur increased, body perception also increased significantly ($p=0.001$, $p<0.05$) [Table 3].

Table 3: Test results (one-way Anova) for body perception scale score averages in terms of personal information

Variable		N	%	Mean±Sd	P	Tukey
Year of amateur sport	1-3 years ^a	57	33.1	157.68±21.19	0.002	a-e b-e
	4-6 years ^b	31	18.0	150.89±22.72		
	7-9 years ^c	20	11.6	163.80±21.42		
	10-12 years ^d	14	98.1	160.56±18.64		
	13- and more ^e	5	2.9	182.77±16.51		
Year of Professional sport	1-3 years	14	7,6	158.36±25.02	.280	
	4-6 years	11	6,4	175.45±22.33		
	7-9 years	3	1,7	166.88±24.73		

Looking at Table 4, body perception scores were significantly higher in favor of professional athletes ($p=0.02$, $p<0.05$). But there was no significant difference between team or individual sports and whether they were subjected to violence [Table 4].

Table 4: t test results for personal information and body perception scale score averages

Variable		N	%	Mean±Sd	P
Sports department	Team	92	53.5	159.77±20.87	.491
	Individual	60	34.9	162.34±20.87	
Sports status	Amateur	127	73.8	157.65±22.66	.031
	Professional	25	14.5	170.20±22.88	

Exposure to violence	Yes	62	36.0	153.95±25.63	.084
	No	110	64.0	160.58±20.46	

Discussion And Conclusion

As can be seen in Table 1, the state of work in an out-of-school job did not create a significant differentiation in body perception. In terms of gender, the body perception of boys was found to be significantly higher than that of girls. Looking at the literature, it was observed that similar results were obtained (Pulur, Üstün & Karabulut, 2009; Selcen-Çiftçi, 2012). Studies have shown that women's body perception is lower because women do not participate too much in physical activity, women can be influenced by ethnicity, and their perception is lower in relation to nutrition (Alagül, 2004; Aşçı, Tüzün & Koca, 2006; Avan, 2015; Kalafat & Kınca, 2008; Karagöz & Karagün, 2015; Örsel et al., 2004; Phares, Steinberg & Thompson, 2004; Smith et al., 1999; Terberru Acar, 2010; Wardle & Cooke, 2005).

In addition, body perception is formed; men acquire self-knowledge by looking at their own bodies, while women look at how others interpret their own bodies. Again, it has been suggested that women criticize their own bodies more as a result of being detailed, especially in adolescents, this condition is more common, and all this will negatively affect the perception of the body (Alagül, 2004; Göksan, 2007). Research data interpreted with this information; while reading the education section physical education teacher body shape and body of men be applied to gym class about their perceptions of others' reviews positive reviews of their own bodies without the need of, the women are more fussy and critical approach to negative body perception is thought to have developed as a result of.

In terms of class variable, body perceptions of students in 4th grade were significantly higher than in 1st grade. As a reason for this, regular participation in practical classes has been observed for a long time as school attendance has increased. In addition, it was thought that there was a positive increase in students' own body perception due to the influence of scientific knowledge in theoretical courses such as physiology, anatomy, nutrition, body form, regulation of metabolism and health. In the literature, there are studies that do not find significant differences in the body perception of athletes according to class status (Alagül, 2004), as well as studies that find significant differences (Kaya & Karaca, 2018). In a study conducted with sections unrelated to sports, conversely, the level of satisfaction with the body decreased as the level of class increased (Selcen Çiftçi, 2012).

After all, as the level of class increases, it can be said that body satisfaction remains due to the effect of regular sports and knowledge for a long time in the curriculum.

There was no significant difference in the body perception of physical education teacher candidates according to age, mother and father Education. But in terms of income levels, the body perception of those on low incomes was positively higher. It has been thought that these results may have been obtained due to the fact that people with low economic status have limited opportunities and have the opportunity to participate in body-related studies along with education. In contrast to the literature, body perception was found to be high in high-income families (Selcen Çiftçi, 2012). In some studies, it has been found that body perception is also high if athletes' own income is high, and body perception does not change depending on family income (Alagül, 2004). It has been noted that having a high income increases the opportunities for self-care and leisure activities, thus improving body perception, as it will increase self-confidence and communication with others (Alagül, 2004; Selcen Çiftçi, 2012). Table 3 was examined; while there was no significant difference in body perception in terms of the year of professional sports, body satisfaction scores increased significantly in amateur sports as the year of Sports increased. In the literature, as a result of the increase in satisfaction with their abilities together with the success obtained as the year of sports increases, changes that indicate fitness with body muscle as the year goes on; body satisfaction of those who play professional sports was higher than that of amateur athletes (Hausenblas & Downs, 2001; Hausenblas & Fallon, 2006; Karagöz & Karagün, 2015; Vocks et al., 2009).

In this study, it was thought that the reason why body perception at the professional level did not change according to the year, the appreciation of the work done together with professionalism and the successful conclusion did not change according to the years, as it also increased body perception in a positive way.

Looking at Table 4, the body perceptions of physical education teacher candidates were found meaningless according to their exposure to violence, working status in individual or team sports. But compared to those who play amateur and professional sports, significantly higher results were obtained in favor of those who play professional sports. Looking at the literature; in support of these findings; it is stated that sports increase body satisfaction, but do not make a difference between athletes at the National stage (Alagül, 2004; Aşçı et al., 1993; Hacıoğlu, 2017; Hausenblas & Downs, 2001; Hausenblas & Fallon 2006; Koca, Aşçı & Oyar, 2003; Richman & Shaffer, 2000; Yentür 2004).

Also in sport; enhancing communication and therefore it is a aspect that allows you to socialize, in physical form to provide positive feedback to being reflected positive perception of the body (Labre, 2005; Temel, 2007),when

the information considered, because professional athletes receive more positive feedback than amateurs, their body perception was also thought to be more positive than amateurs.

In addition, there is no significant difference in this study compared to the year of work as a professional athlete, and a significant increase in body perception as the year increases compared to the year of participation in sports as an amateur also confirms our comments.

As a result, in order for children and young people to be positively supportive of their personality development by experiencing their bodies positively, it is recommended that the physical education course be structured in a way that will support the positive development of body perception, and teachers should also be informed about this.

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CHALLENGES IN DEVELOPING A JOINT STUDY PROGRAMME: THE CASE OF THE BALTIC STATES

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Abstract

Today students expect that their university will provide them not only with valuable knowledge, skills and competencies, but will also be prestigious and practically accessible both on the daily basis, to diversify and enrich the study process experience, and during global pandemic crises, which will probably remain a serious challenge in the next decades. The topicality of this study is based on the need to overcome the COVID-19 pandemic impact on the European Union higher education system and enhance its competitiveness and shift from traditional to remote study forms that could help students to overcome temporary lockdown situations caused by global pandemic crisis. The aim of the current research was to present the data obtained during the development of the joint master studies programme “Agri-food Business Management” to be implemented in the Baltic States – Latvia, Estonia and Lithuania. The specific research tasks were: 1) to justify the need and topicality for creation of joint study programmes and their potential; 2) to characterize the practical implementation of the master studies programme “Agri-food Business Management” by identifying its advantages and challenges. The research employed desk study, analysis and synthesis methods, comparative analysis, logical construction and in-depth interviews with the “Agri-food Business Management” stakeholders in the Baltic States. The study reveals that participation in the joint study programme implementation significantly enhances competitiveness of the three involved universities as offers more interdisciplinary knowledge, students’ mobility during the studies and flexibility in organizing the study process as well as sharing external risks. However, the external threats associated with global pandemic crises have many uncontrollable side effects (lockdown, quarantine, specific hygiene requirements, decreasing of income etc.) that need to be addressed by the universities very seriously, thus remote studies’ environment needs to be regularly improved and tailored to the joint study programme students’ needs.

Keywords: competitiveness, agri-food business, remote studies, the Baltic States.

Introduction

The recent global changes caused both by digitalisation and increasing global pandemic threats call the European Union higher education institutions to action in order to sustain students’ demand for higher education products. The behaviour and expectations of the generations Y (1980-1995) and Z (1996-2015) require fundamental changes in the study environment, study programmes and curriculums (Oganisjana et.al, 2017; Perkuna, Licite, 2019). Moreover, there is a growing need to acquire new skills and knowledge not only for technology implementation, but also for safe study environment during the breakout of pandemic crises like it happened in March-June 2020. In the field of higher education, significant commitment of each newly established government in the EU for years has been to continue a gradual increase funding for higher education studies, as well as to support students by strengthening the social dimension in higher education. For example, in Latvia during the last decade, efforts have also been made on the increase of government funding for the effective operation of the three-pillar model (the first pillar provides funding for budgetary positions and the science base, the second pillar provides funds for performance improvement, while the third pillar is intended for improving and modernizing university infrastructure and curricula) for internationally competitive excellence in higher education by, among other activities, promoting digitalisation in higher education, which today is a boosting factor of international cooperation and competitiveness (Grinberga, Zvirbule, 2020).

The current study is a continuation of the research work series conducted in scope of the National Research programme “Latvian Heritage and Future Challenges for the Sustainability of the State” and its project “Challenges for the Latvian State Society and Solutions in the International Context (INTERFRAME-LV)”, which has been implemented since 2019 by the social sciences research unit of Latvia University of Life Sciences and Technologies (hereinafter - LLU).

The aim of the current study was focused on presenting the data obtained during the development of the joint academic master studies programme “Agri-food Business Management” to be implemented in the Baltic States – Latvia, Estonia and Lithuania. In order to reach this aim, the following research tasks were set: 1) to justify the need and topicality for creation of joint study programmes and their potential; 2) to characterize the practical

implementation of the master studies programme “Agri-food Business Management” by identifying its advantages and challenges. The research employed desk study, analysis and synthesis methods, comparative analysis, logical construction and in-depth interviews with agri-food programme students, academic staff and employers in the Baltic States. The study was developed jointly with LLU (Latvia) strategic partner universities – Estonia University of Life Sciences (hereinafter – EMU) and Vytautas Magnus University (hereinafter – VMU) in Lithuania.

The Topicality For The Creation Of A Joint Agri-Food Master-Level Study Programme In The Baltic States

The joint master programme Agri-food Business Management of the leading universities of the three Baltic States (LLU, the Estonian University of Life Sciences (EMU) and Vytautas Magnus University (VMU)) is a unique programme having no analogues either in Latvia or in the Baltic States.

According to Schwab (2017), today the world is at crossroads, since the society with increasing regularity expresses its disappointment with national policies and global economics that are incapable to tackle the negative externalities of global economy future developments. Although Europe has the most educated workforce in all its history, it is important to assess challenges and readiness of the European Union to use its capacity to ensure that technological progress and liberal economy benefit people and bring them towards more inclusive societies enhancing opportunities to use technological advancements for making health, education, agriculture, services and manufacturing industries more accessible and people-friendly. Accordingly, the future competitiveness of the EU depends on its human capital’s ability to master new skills and thus seize opportunities both in real-life and digital environment to be able to balance the overall social, economic and environmental challenges and thus enhance sustainable development (Schwab, 2017; Harari, 2018, WEF, 2020).

Following the global trends in the human capital demand, the mission of the joint academic master programme Agri-food Business Management developed in 2017 by LLU, EMU and VMU was set to provide an in-depth knowledge of the agri-food industry and environmental principles, thereby contributing to graduate careers in multinational companies. The programme focuses on the inter-disciplinarity of three closely interrelated sciences and disciplines – agriculture, food production and management science. The urgency of developing such a programme was determined by the fact that modern companies need managers who can independently analyse, plan and manage agri-food business functions from the perspective of the primary and secondary sectors, making complex decisions on international business and having knowledge of sustainable management of agri-food business processes and developing innovative products. The necessity for the programme is also justified by the priorities set by the European Union – to ensure economically viable food production and stable food supply, while also meeting the requirements of food safety as well as taking into account the rural economy, animal welfare and social and environmental issues. For small and open economies such as Latvia, Lithuania and Estonia, sustainable economic growth and competitive exports are key drivers for achieving the priorities set. However, without active regional cooperation, integration, networking and innovation, this is difficult to achieve.

The choice of partner universities – EMU and VMU – involved in implementation of the joint master programme by LLU was determined by close cooperation with these universities within the university network BOVA (the Baltic Forestry, Veterinary and Agricultural University Network) since 1996. One of the main goals of BOVA was to cooperate on strategic development directions and joint master and doctoral programmes, which provided opportunities to develop and strengthen cooperation with leading universities in the Baltic States, contributing to the exchange of experience and the generation of new common ideas. Given the need for closer cooperation among the three Baltic States, this joint master programme was developed, and its implementation is proof of sustainability and successful cooperation within the BOVA network for 21 years. The joint master programme Agri-food Business Management, which is implemented in English, is a new and unique programme not only in the Baltic States but also in Europe, as no joint programme has so far focused on training professionals and managers in agri-food business.

LLU master students enrolled on the joint programme take first-semester courses in Estonia, the second semester is organised in Lithuania and the third semester – in Latvia, which is followed by the last semester for preparing and defence of a master thesis.

Table 1. Study modules of the joint study programme

Semester 1, EMU, Tartu, Estonia	Semester 2, VMU, Kaunas, Lithuania	Semester 3, LLU, Jelgava, Latvia	Semester 4, either EMU or VMU or LLU depending on the place on enrolment
• Bioeconomy	• Finances	• Operations	• Research
• Leadership	• Strategy	• Marketing	• Master Thesis

Source: authors’ construction

Estonia University of Life Sciences (EMU), as a partner university of LLU for the joint master programme, is the only university in Estonia whose priorities in academic and research activity are focused on sustainable development of natural resources. EMU is the fourth largest university in terms of number of students and is responsible for research and development in the field of sustainable use of natural resources and in the areas related

to rural development and the rural economy. EMU promotes cooperation and research in six key areas: agriculture, environmental science, forestry, food and health, engineering and technology as well as rural economics.

The second LLU partner university – Vytautas Magnus University (VMU) - is the only state higher education and research institution in Lithuania that delivers bachelor, master and doctoral programmes in the fields of food science, agriculture, forestry, water and land management, bioenergy and mechanical engineering, climate change and sustainable use of natural resources.

Accordingly, the partner universities selected by LLU have the necessary resources and expertise to implement the joint master programme designed for the specifics of business management in agriculture and food production. A joint Programme Committee, which consists of programme managers from all the three partner universities, employers from the agricultural and/or food sectors as well as a representative appointed by the programme's students, has also been established to continuously and systematically ensure, organise and monitor progress in student learning, the quality and methodological aspects of the joint master programme and the defence of master theses. The specifics of the joint master programme are in line with trends in the European Higher Education Area, as the leading universities of the three Baltic States, based on their close international cooperation, are able to attract students and teaching personnel from both Europe and the rest of the world.

Practical Implementation Of The Study Programme “Agri-Food Business Management”: Advantages And Challenges

In order to perform an in-depth evaluation of the study programme “Agri-food Business Management” before its planned accreditation, the implementers of the study programme conducted a multi-dimensional assessment at several levels, involving both policy makers, academic staff, potential employers of the programme graduates and 1st year students, thus collecting opinions of more than 250 respondents from the three Baltic States. In general, the newly established programme was viewed in the context of the overall social, economic and political situation in Latvia, Estonia and Lithuania. The data were aggregated and content analysis was conducted in each country, followed by these data comparison, analysis, synthesis and constructing of logical regularities and findings. Thus, the obtained programme evaluation was determined by socio-economic trends, national policies made in specific fields, labour market forecasts, which are concisely presented in the SWOT analysis (Table 2).

The SWOT analysis allows drawing the following key conclusions: the field of study programme has a number of competitive advantages in relation to both the curriculum and the implementation of the course programmes. The programme focuses on strengthening the uniqueness and unique areas: developing management-based skills and competences. Most of the weaknesses relate to the problems concerning funds, including acquiring the funds, as well as to the factors affecting the overall capacity of the programme. Most of the threats relate to available funds (government funding and funds from tuition), yet there are also threats relating to opportunities for attracting teaching personnel and the external factors affecting the practical implementation of the programme.

Moreover, self-confidence of the study programme implementers is based on the fact that the analysis of the information provided by the Food and Agriculture Organization of the United Nations regarding the prospects of the agricultural sector on a global scale reveals that global overproduction of food is not expected and the demand for sustainable agricultural productivity and innovation will increase (FAO, 2017). Therefore, the study programme of agri-food business management implemented in the three Baltic States is well designed to provide students with opportunities to acquire relevant knowledge demanded by labour market on specific features of agri-food industries, bioeconomy development and international business management in the Baltic States.

In the opinion of the study programme directors, it is also positive that the total number of admitted students has tripled; however, the main difficulty for organizing the study process is the arrangement of the documentation of the third-country nationals due to a long procedure of arranging admission documentation. This creates situations where students who are interested in studying in this programme receive visas and residence permits very late and thus they are no longer able to be on time for the beginning of the study process. In such cases students are looking for opportunities to enrol in other private universities with more flexible admission deadlines and easier requirements for students who are late for the studies.

So far the Baltic States have been less affected by the breakout of COVID-19 pandemic and are a positive example of dealing with the negative post-pandemic economic consequences. By successful and well-coordinated activities, the Baltic States after more than two months of isolation since March 2020 already on 15 May 2020 were able to cancel their pandemic travel restrictions on each other, thus creating “the Baltic bubble”. Citizens from these countries were allowed to travel freely across the three Baltic states without self-isolating upon crossing internal borders, provided that they had not been outside the Baltic states in the previous 14 days, they were not already required to be quarantined and had no symptoms of respiratory illness. It became the first such travel zone within the EU 27 Member States during the pandemic in a bid to jump-start national economies.

Table 2. SWOT analysis of the joint study programme “Agri-food Business Management”

STRENGTH	WEAKNESSES
<ul style="list-style-type: none"> ➤ Application of modern teaching methods in delivering the programmes (e-studies, module approach, inter-disciplinarity, study trips; visiting lecturers – Baltic and Nordic agri-food industry professionals. ➤ Persistent, joint and shared (LLU, EMU, VMU) enhancement of the infrastructure and informational and material resources needed for delivering the programme. ➤ Constant involvement of experienced and professional three universities’ enhancing personnel in delivering courses thus ensuring cultural experience for students and teachers; ➤ Growing number of foreign students, which contributes to the internationalisation of the learning environment · ERASMUS+ mobility for students and teaching personnel to travel within the Baltics, which constantly strengthens cooperation. ➤ Academic personnel’s joint research activity (e.g. in INTERREG projects) and regular participation in scientific conferences in the Baltic States thus ensuring the link among agri-food business education, research and entrepreneurship. ➤ International scientific events within the BOVA network for students are held in the Baltics. ➤ Government-funded study places are available to the Baltic States students at LLU, EMU un VMU. ➤ Regular assessment of the study programme by involving students and professionals in the work of the Joint Programme Committee, thus providing a persistent enhancement of methodological support. 	<ul style="list-style-type: none"> ➤ Small number of foreign visiting lecturers in the main job due to uncompetitive remuneration compared to other universities in the EU. ➤ Medium high drop-out rate, especially among first-year students due to difficulties in combining the employment with studies; Limited opportunities to involve students in scientific research owing to insufficient funding for science that would encourage students to give up work and focus only to scientific activities. ➤ Insufficient exchange of students with foreign universities due to risks associated with continued pandemic crisis. ➤ Insufficient number of support personnel to perform social functions for the programme students, which results in students’ difficulties to integrate in the new study environment.
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> ➤ Dominance of the services sector in the national economies of Latvia, Estonia and Lithuania creates a high demand for qualified specialists not only in agri-food business entities but also in public, private and non-governmental sector organisations that deal with agricultural policy issues. ➤ Development of the EU international programmes allows attracting more foreign visiting lecturers in open tenders; promotion and expansion of international mobility of students and teaching personnel to foreign universities. ➤ Strengthening the link between education and scientific research by using national research projects’ potential of Latvia, Estonia, Lithuania both jointly and separately thus promoting of teaching personnel and student participation in international scientific research projects. ➤ Promotion of further education and increasing the motivation among teaching personnel (various courses, exchange trips to partner universities). 	<ul style="list-style-type: none"> ➤ Limited opportunities for social science organisations to acquire EU funding for enhancing the infrastructure for university studies in the Baltic States. ➤ Diverse levels of preparedness of the joint programme students in the context of theoretical knowledge, foreign language skills and other soft and hard skills. ➤ Stronger indirect competition in delivering International master study programmes within universities (e.g. MBA studies). ➤ Demographic situation in the Baltic States reduces the number of potential students. ➤ Insufficient government funding due to the potential economic recession caused by global COVID-19 pandemic consequences. ➤ Decrease in the number of students due to global COVID-19 pandemic economic factors. ➤ Due to worsening of national economy outcomes, students engage in the labour market along with their studies, which hinders them from fully dedicating themselves to and completing their studies. ➤ Remuneration and academic workload system creates a threat to attracting and retaining the highly professional academic personnel. ➤ Long and bureaucratic admission process for third countries’ students.

In order to overcome both temporary and long-term problems caused by COVID-19 lockdowns in 2020, the overall evaluation of the accessibility of the current study environment was conducted as a case-study of Latvia University of Life Sciences and Technologies (LLU). Both in 2020 spring and autumn semesters LLU academic and technical

staff has been working hard to tailor LLU e-studies system as much as possible to international students' needs, involving them also in the survey about LLU e-studies. The survey results obtained at LLU revealed that in 5-point grading system (5 – excellent, 1 – very poor), 49% of respondents claimed LLU studies' digital environment as "good" (4 points), which can be regarded positively. However, only 3% of respondents claimed it as "excellent", which means that LLU still have some gaps in meeting students' expectations. Most often respondents mentioned that the materials in e-studies were not updated as often as they expected, the information for many study courses was not timely available electronically. However, the conducted in-depth interview with e-studies department expert suggests that the reason for students' dissatisfaction most often is not linked with teachers' ignorance, but rather with limited availability and capability of university's human resources and their increasing workload due to internationalization of university, which results in increasing numbers of international students who due to pandemic restrictions all have to communicate remotely (Grinberga, Zvirbule, 2020; Tihankova, 2019). Nevertheless, the survey respondents also pointed out that LLU digital environment has many advantages: it is user-friendly and already today integrates many cutting-edge technologies with active students' involvement in creating digital content, brainstorming new ideas, which is a new and exciting experience.

With regard to the joint study programme, the implementation of practical issues between the joint programme directors is also enhanced by using modern IT software tools (ASANA, Dropbox, Google Docs, Spreadsheet etc.) in communication with each other and the administration of the faculties, which helps plan and direct efficiently the flow of work to ensure the study process.

Conclusions

The study programme content is created in such a way to enable its graduates in their future workplaces to plan and critically evaluate investment projects in food production and agriculture by demonstrating critical thinking and in-depth analysis during problem solving. In authors' opinion, owing to experience in three different countries' cultural environment, the programme graduates in their future career are able to demonstrate ethical awareness and socially responsible leadership skills in a variety of problem situations that nowadays are caused by cultural gaps and intolerance.

Students are able to integrate knowledge from different disciplines (agriculture, food technology and business), thus contributing to the generation of new knowledge, the development of research or professional methods. After programme graduation, students can demonstrate awareness of and ethical responsibility for a potential environmental and societal impact of scientific results or professional activities.

The close co-operation, exchange of experience and knowledge among the members of the teaching staff involved in the programme facilitate the professional development of the lecturers and the networking of students on complex or systemic agribusiness, bioeconomy and agribusiness management issues thus fostering agribusiness and management science research and innovation development potential of all the three countries.

The SWOT analysis revealed that currently the joint programme has more strong points than weaknesses. However, the external threats associated with global pandemic crises have many uncontrollable side effects (lockdown, quarantine, specific hygiene requirements, decreasing of income etc.) that need to be addressed very seriously, thus remote studies' environment needs to be regularly improved and tailored to the students' needs.

With regard to remote studies' potential at LLU, the survey results suggest that students would like to increase the amount of digital content, which is necessary for their "always on technology" and extreme risk aversion learning style. It also gives evidence of changes in the way of learning and teaching should be already today re-structured at universities with anticipating re-training of teachers and technical staff to be able to tackle problems connected with rapid integration of new technologies to provide efficient and secure study process in the jointly implemented study programme "Agri-food Business Management".

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CITIZENSHIP EDUCATION AND TEACHER TRAINING: IMPLICATIONS FOR TEACHING PRACTICE

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Abstract

Citizenship Education is one of the main challenges faced in educating children and young people in societies undergoing a rapid process of globalization in this decade, and it requires that teachers marshal particular knowledge and skills. Although this is a subject area that is part of the curriculum, it is often undervalued in teaching practice in the 1st cycle of basic education (CEB) [years 1 - 4]. It is, therefore, important to know the degree to which teachers are prepared to address citizenship issues, the relevance they attach to initial and ongoing training in this area, as well as the topics and/or content they would like to see addressed in their ongoing training, with a view to developing competencies related to citizenship in schools. To achieve these objectives, a descriptive cross-sectional study was conducted using a questionnaire survey as an instrument for data collection. The study covered a non-probabilistic sample of 91 mostly female 1st CEB teachers in the municipality of Viseu (Portugal), aged between 35 and 64 years. Regarding the results obtained, the overwhelming majority of teachers never attended training courses related to citizenship education, recognizing that there are aspects of their work that could be improved through attending such course, addressing issues related to teachers' didactic knowledge and conflict management in the classroom. The suggestions made by the teachers to promote meaningful learning in this area are an important contribution of this research, highlighting the focus on training (teachers and parents/guardians) and in fostering initiatives that promote the involvement of the educational community and other stakeholders in a cooperative and/or collaborative framework. This study aims to raise the scientific community's awareness of the importance of ongoing training in improvements and innovations in teaching in terms of citizenship education. In particular, the data presented enable policy makers, management bodies and teachers to reflect on the importance and implications that ongoing training has or may have on teaching practice for schools to be able to respond to the changing demands of today's society.

Keywords: Citizenship education, 1st cycle of basic education (CEB) [years 1 - 4], curriculum, teacher training, teachers' perspectives.

Introduction

Our society is undergoing rapid change and evidence shows that inequality and the role played by social minorities are becoming increasingly evident. Through citizenship education, schools become key agents in raising active citizens who will be capable of contributing to the development and well-being of the society in which they live. The issue analysed in this research addresses the importance that teachers attach to Citizenship Education training and the impact that such training may have on their daily teaching practice. That way, it anticipates possible responsibilities and implications for teacher training, by raising the scientific community's awareness to the importance that continuing training has in improving and innovating citizenship teaching.

The existence of a curriculum that encourages transdisciplinarity enables the emergence of innovative work practices, by interconnecting the different mandatory subject areas with the complementary subjects offered by the school and by promoting a closer interaction between the school and the surrounding community. This situation has led many teachers to realize that they need to change their practices in order to meet the new social,

technological and professional demands they have to face in their everyday practice in which teachers have to accept profound changes that affect the planning and performance of their profession (Esteve, 2014). These new demands and challenges may often lead to teacher demoralisation and to a growing unease among these professionals.

According to Figueiredo (2002), teachers' attitudes towards the teaching of citizenship issues may differ considerably. Most teachers claim they do not have the specific training required to teach such issues and tend to feel insecure when they are asked to address citizenship topics. For the teachers, training is a necessity and even a requirement whenever any kind of education restructuring and/or reform is proposed. Nevertheless, this alleged failure in the teachers' initial training can be overcome if they are able to plan and handle their own continuing education, one of the necessary skills a teacher has to master (Perrenoud, 2000).

The initial teacher education and the teachers' continuing training are factors that are crucial to the construction of a school of citizenship we all wish for, from the micro level that is the classroom to the macro level represented by the institution itself (Barbosa, 2000). This requires teachers to change the way they act and to acquire and develop the skills they need to be able to reshape school so it can embrace citizenship. That way, teachers' initial education and continuing training should be rethought to enable them to develop citizenship skills in their schools. According to the Eurydice European study (Eurydice, 2017), an effective teacher initial education, a well-planned teacher continuing training and other types of support are instrumental in providing teachers with the skills they need to develop citizenship in their schools. Most European countries offer teachers several continuing training projects in the field of Citizenship Education that may vary in length, objectives, and content. These continuing training programmes aim to improve the quality of Citizenship Education throughout the country and to strengthen teachers' knowledge and skills in this area.

In Portugal, a discussion space entitled "Fórum Educação para a Cidadania" (Education Forum for Citizenship) from the initiative of the Ministry of Education was created and involved several personalities. This initiative led to the production of a document that includes a set of strategic objectives and recommendations to be taken into account when working in this area, namely at the level of teachers and other education agents' initial education and continuous training (Ministério da Educação, 2008).

In order to meet the needs of the Portuguese education system, a new school subject called *Cidadania e Desenvolvimento – Estratégia Nacional de Educação para a Cidadania* (Citizenship and Development - National Strategy for Citizenship Education) was created (Ministério da Educação, 2017). In this new element of the curriculum, the teachers' mission is to prepare students for life, to be democratic, active, and humanist citizens in a time of increasing social and cultural diversity.

To promote the values of citizenship it is necessary to train teachers and to prepare them to face this challenge. Teacher training, both at a cognitive and humanist level, is crucial to the teaching of this subject, as it will facilitate the interconnection of the learning that takes place in the different subjects and in the different topics explored.

However, the teacher's action in this subject may be influenced by the kind of training he holds in this area as well as by his motivation to teach it. A profile including the specific skills of the Citizenship and Development teacher was defined by the Ministry of Education in 2017. The creation of such subject defines the areas that will be addressed and the skills to be developed.

The topic of this research follows the reflection conducted on the teaching practices surrounding Citizenship Education in Primary Education. It is important to understand to what extent are teachers prepared to address citizenship issues, the importance they attach to teacher initial education and to teacher continuing training in this field and the aspects and/or contents they would like to see addressed in continuing training programmes and that would help them develop citizenship skills in their schools.

The Study

Against this background, and in accordance with the objectives set for the research, we chose a descriptive and non experimental research that, according to Fortin (2009), aims to simply describe a phenomenon or a concept related to a certain population, in order to establish the characteristics of said population or of a sample of that population.

Participants

The study covered all the Primary teachers working in the municipality of Viseu. The sample included 91 teachers. This is a convenience sampling (Hill & Hill, 2000) since it was selected for practical reasons.

The vast majority of the respondents are female teachers (84.6%) and only about one sixth of all respondents are male. Their ages range from 35 to 64 years. The most common age groups are those which include teachers who were between 45 and 49 years old (27.5%) and between 50 and 54 years old (26.4%).

As far as professional experience is concerned, almost half of the teachers have been working for at least 7 years and for less than 25 years. Right after, we find those whose length of service ranges between 26 and 35 (39.6%). It should be noted that more than half of the participants in the study have completed their initial education between 1985 and 1994 and one third have completed it between 1995 and 2005. As far as academic qualifications are concerned, most teachers hold a bachelor's degree (80.2%) and only a small percentage (16.5%) holds a master's

degree.

Instrument

In order to collect the empirical data we used a questionnaire that was handed out to primary school teachers and that included several types of questions deemed important to collect the wide variety of answers required to achieve the objectives of the study. The instrument consists of closed-ended questions, matrix or Likert scale questions, and an open-ended question (Pardal & Lopes, 2011). It is divided into three parts: i) sociodemographic background data; ii) data concerning teacher initial education and continuing training; iii) data related to the teacher's view of Citizenship Education.

Before the questionnaires were applied, a pre-test was carried out using a small sample of teachers with the same characteristics as those who will take part in this research but who were not included in the final study. No gaps were identified and no amendment to the items was suggested.

Procedure

The questionnaire was submitted to the General Directorate of Education so it could be applied in the different schools using the Plataforma de Monitorização de Inquéritos em Meio Escolar (MIME), a platform whose aim is to ensure the monitoring of school surveys. The request was accepted, and the opinion issued stated that it met all the essential requirements and could therefore be applied.

Subsequently, contacts were made with all the principals of the school groupings located in the municipality of Viseu, and a request to apply the questionnaires was submitted in person.

Once the necessary authorization was issued, we went to the different primary schools to personally hand out the questionnaires to the coordinating teachers who then sent them to the different class teachers and who were responsible for collecting them back.

Data analysis methods

To process the quantitative data obtained from the questionnaires, a SPSS statistical programme (version 20) was used. Using this programme we were able to enter the data obtained, by variables, and to calculate absolute frequencies and relative frequency percentages.

To process the data extracted from the answers given to the open-ended question included in the questionnaire, we used the content analysis method (Bardin, 2013), a set of communication analysis techniques that researchers use to organize the information and make inferences based on the objective and systematic description of the specific characteristics of the message.

Findings

We tried to figure out the teachers' opinion on the importance played by their initial education in their preparation to teach Citizenship Education. Data analysis showed that most of the teachers (62.7%) consider that the kind of training they had was enough to teach that subject, whereas the remaining teachers (37.4%) consider that their training was far from enough.

Even though some of the teachers said that their initial education was not enough, they felt that they are prepared (52.7%), or even quite prepared (34.1%), and that they feel confident enough to discuss citizenship issues with their pupils at school. However, according to the data obtained, less than one fifth of the respondents (18.7%) said they had attended training programmes in this area and the vast majority of the teachers (78.0%) stated that they had never taken part in any of those training initiative. In order to analyse the importance that teachers attach to attending Citizen Education-related training courses, teachers were asked whether or not some aspects of their practice could be improved by training courses focusing on that matter. Teachers' opinions are quite diverse: 68.1% of those surveyed consider that the attendance of continuous training courses can improve their pedagogical practices, but 27.5% think otherwise, and some non-answers were also provided.

Teachers were given the opportunity to list aspects of their work that can be improved through continuing training and were asked to specify them. The responses were analysed and grouped into different categories to facilitate their understanding and analysis (see Appendix A).

The first category encompasses aspects related to the teacher's educational knowledge that can be developed in training sessions (59.0%). The indicator that received more references was the one where teachers claim they would like to learn how to address citizenship issues in the continuing training sessions. Evidence also shows that teachers are always eager to share teaching experiences and consider this sharing a good way to acquire a wider teaching knowledge.

The second category, with around half of the references compared to the first, concerns the contents/topics that teachers would like to see addressed in training programmes. The indicator that stood up had to do with learning "how to deal with aggressive and disruptive behaviour in the classroom - conflict management".

Content analysis was also used to study another issue. Teachers' suggestions on what they think can be done to promote meaningful Citizenship Education learning were sorted into different categories. This reflection will be important to help schools respond to society's current demands for change.

The responses were sorted into four distinct categories that are meant to cover different spheres of the educational action, from the micro to the macro level of the educational system, and include suggestions that will lead to

changes in the teachers' action or that call for changes in the educational system itself (Table 1).

The first category received the highest number of suggestions (37 references which account 33.3% of the responses) and includes the following subcategories: teacher training, parent/guardian training and student training that takes place outside the classroom.

The teachers surveyed consider that it is crucial to invest in citizenship training programmes, both for teachers (suggesting that there should be more training actions focusing on skills acquisition and on the creation and development of teaching resources) and for parents/guardians (general training for these educational agents).

The second category stresses the importance of the educational community and its involvement in the integral education of the pupils. This category obtained the lowest percentage of responses (16 references which amounts to only 14.4%). This category includes three subcategories that put forward a set of suggestions whose aim is to promote the interaction with the community and with other education actors to achieve significant learning and other suggestions that involve cooperative and/or collaborative work with the different agents who are part of the educational community.

Table 1: Suggestions for the promotion of meaningful learning in Citizenship Education.

Categories	Subcategories	NR	%
Citizenship Training	Teachers' training	19	17.1
	Parents/guardians' training	16	14.4
	Students' training outside the classroom	2	1.8
Involvement with the local community	Educational community	9	8.1
	Other actors (civil society)	2	1.8
	Suggestions involving cooperative/collaborative work	5	4.5
Organisational and curriculum changes	Statutory and organisational changes	6	5.4
	Curriculum changes	26	23.4
Changes in the teachers' educational performance	Promotion of citizenship experiences at school	17	15.3
	Human and material resources to implement innovation	9	8.1
Total		111	100.0

NM – Number of references

In the third category, teachers put forward a set of suggestions that will help implement organizational and curriculum changes (32 references which account for 28.8% of the responses). This category includes two distinct subcategories: proposals that will trigger organizational/legislative changes and proposals that will affect the curriculum. In this second subcategory, teachers stress the need for a reduction in the students' curriculum and for a subsequent curricular revision (that will focus on the extension and on the contents of said curriculum). They also stress the importance of a reduction in the number of students per class.

The fourth category, with a lower percentage of references (23.4%), gathers proposals whose aim is to bring some innovation to the teachers' educational action and includes two sub-categories: one of them has to do with the need to promote citizenship experiences at school (15.3%) (this need for innovation will be supported by the intervention of theater groups; more field trips, a closer contact with reality; the development of interpersonal relations and the development of more projects) and another subcategory that has to do with the need for human and material resources that are crucial to bring innovation to the teachers' educational action (8.1%).

Conclusions

Data analysis shows that most of the teachers consider that their initial education provided them with the necessary training to address Citizenship Education. Some of them say that their education was not enough, but further on, they state that they are prepared and feel confident to work on citizenship issues with pupils.

The outcomes obtained in this study differ from those obtained by Figueiredo (2002). This author states that most teachers do not have specific training and feel insecure to address citizenship issues. However, this gap in teachers' initial education can be overcome and teachers are responsible for planning their own continuing training (Perrenoud, 2000) to constantly renew their teaching knowledge and practice.

In this study we found out that, generally speaking, teachers have never attended training actions focusing on Citizenship Education. This is a negative aspect that may hinder the improvement of the quality of teaching. The data obtained are in line with the results of a study conducted by Nascimento (2015) where most of the teachers surveyed recognised how important their continuous training was to the promotion of their professionalism.

Teachers stated that, during their continuing training sessions, they would like to discuss aspects related to teachers' educational knowledge. They would like to learn new ways to approach the discussion topic and to be provided with new teaching resources or material. These aspirations are evident in the following answers: "teaching methodologies that take into account the characteristics of our current classes (very big, heterogeneous classes...)"; "to address topics that focus on entrepreneurship, financial education, consumer education"; "how to plan and design teaching materials, to address current issues"; "to broaden what we already know about strategies, activities, games... that we can develop later".

It should also be mentioned that some other topics that teachers would like to see addressed in their continuing training sessions show how concerned they are with conflict management in the classroom - "knowing how to deal with aggressive and disruptive behavior in the classroom - conflict management". According to Esteves (2012), this concern with the behaviour of their students leads teachers to sacrifice the quality and depth of their educational action, by avoiding any sort of activity that may facilitate the emergence of disturbing situations in the classroom. This kind of position stresses the importance of addressing that sort of topics so as not to compromise the quality of the teaching.

Teachers say that, in their training sessions, they would like to be introduced to new methodologies and be provided with new and more effective material resources that would help them address citizenship topics. However, we realize that most of the teachers are not aware of the reference documents developed and made available online by the Ministry of Education. These reference documents were developed to assist the teachers in their work in the classroom since they cover the different dimensions of Citizenship Education and include a large number of activities and strategies prepared to develop the topics/issues that will be discussed. We consider that the continuous training actions should not only make these references known, but should also lead the teacher to reflect on his own practice and on the students he works with so he can be prepared to adapt his teaching practices to the different learning profiles present in his classroom.

Most teachers consider that, during their initial academic career, they had adequate and necessary training to address Citizenship Education and state that they feel prepared to work on these issues. However, they are perfectly aware that the access to continuing training programmes would be important to improve their teaching practices. This shows that we currently have a class of teachers who are concerned with updating their professional knowledge. It is worth noting that, for Nóvoa (2009), continuing training programmes today must be able to adopt a collective vision, providing for the exchange of experiences, by leading teachers to move beyond individualistic and isolated practices that tend to compromise the much-needed reflection on their practice.

Teachers must possess all the skills they need to redefine school and to look at Citizenship Education transversally. The study we have conducted makes it possible to reflect on what can be done during teachers' initial education to provide them with the right skills to teach Citizenship Education. In addition, it puts forward a number of topics to may be addressed in upcoming continuing training programmes and that are based on suggestions and/or concerns shared by teachers themselves. It should also be noted that effective changes in teachers' educational practices will occur when teachers attend continuing training programmes that focus on the aforementioned topics or when initial education is rethought in order to provide them with the suitable skills to deal with citizenship issues, and, consequently, we will have better and more aware citizens who are able to live harmoniously in society.

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Appendix A: Aspects of the teacher's work to be improved through continuing training programmes.

Categories	Indicators	NR	%
Teacher's educational knowledge	"How to address the topics"	5	12.8
	"To broaden teachers' knowledge of strategies, activities and games they will develop later"	2	5.1
	"To learn how to plan and create teaching material"	1	2.6
	"Teaching methods taking into account the characteristics of today's classes (very big and heterogeneous classes)"	1	2.6
	"Suggestions of activities that can be developed"	1	2.6
	"How to address the topics in a more playful way"	2	5.1
	"To acquire new skills in this particular field: resources, materials"	2	5.1
	"To update scientific and educational knowledge that will pave the way for new approaches favouring teaching in context"	1	2.6
	"To update new methodologies that will be used to approach the topics to be discussed"	2	5.1
	"Participation in citizenship activities"	1	2.6
	"To share educational material"	2	5.1
	"To share experiences"	3	7.7
Subtotal		23	59.0
Topics to be addressed	"To address and discuss current issues"	1	2.6
	"To discuss issues related to entrepreneurship, financial education, consumer education"	1	2.6
	"How to be an active and responsible citizen"	1	2.6
	"The rights and obligations of an individual"	1	2.6
	"Topics related to personal/social relationships between children"	1	2.6
	"Discipline/indiscipline"	1	2.6
	"Current issues related to today's information society"	1	2.6
	"To understand how we deal with aggressive and disruptive behaviours in the classroom- conflict management"	3	7.7
	"To be familiar with the topics that will be discussed"	1	2.6
	"To discuss money saving strategies and interpersonal relations"	1	2.6

“Changes within families”	1	2.6
“Values/ethics”	1	2.6
“Gender equality and sexuality”	1	2.6
“Migration-related issues”	1	2.6
Subtotal	16	41.0
Total	39	100.0

NR – Number of references

COOPERATIVE EDUCATION IN TURKEY THROUGH OPEN AND DISTANCE EDUCATION

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Abstract

The aim of this study is to examine the main cooperative educational programs from past to present; to illustrate the design, components, operational process and the learning environments of the Cooperative e-Certificate Program designed for lifelong learning and carried out through open and distance learning; to investigate relevant experiences and problems encountered during the execution of the program; and to provide possible solutions. A cooperation protocol has been signed between Anadolu University and Directorate General of Cooperatives which is connected to the Ministry of Trade, to design and to implement the Cooperative e-Certificate Program. The aim of this cooperation is to increase the education level of people, especially the youth, who directly or indirectly work in the cooperative sector and to raise awareness of cooperatives in the society. Within this context, the Cooperative e-Certificate Program was prepared in cooperation with Anadolu University and the Ministry of Trade in order to expand the cooperative enterprises, which are economically and socially important and a great power, and to help existing cooperatives to continue their activities in a more successful and efficient manner. The Cooperative e-Certificate Program is designed to reach and contribute to a wide target audience, such as lawyers, accountants, cooperative managers, employees, partners, public officials working in cooperatives, members of cooperative management, audit and liquidation board. The unique content and e-learning materials of the educational program consists of 13 units which includes several topics such as organizational structure of cooperatives, contract procedures, rights and obligations of partners, general assembly, board of management, duties and authorities of the supervisory board, accounting, reporting, audit, budgeting, analysis of financial statements, preparation of annual reports. For a while now, some efforts have been made to make it compulsory for those who want to take part in the managerial positions of cooperatives.

Keywords: Lifelong Learning, Open and Distance Education, e-Certificate Programs, Cooperative

Introduction

Cooperatives are based on cooperation, a business model that has been successfully implemented in many countries by going through various stages of development during the times and have developed new features according to the needs. Cooperative literally means cooperation, and it is defined as “an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise” (ica.coop).

Based on the definition, cooperatives are seen as unions in which a democratic environment with voluntary participation is ensured, and the social and cultural needs of participants are met. Again based on the definition, cooperatives are enterprises in fact. The most important features that distinguish this business from others are them being democratic and non-profit. In addition to these, they are significantly different from others for having unique principles and values. Those principles and values play an important role in their activities.

The functions of cooperatives core values are to set out the basic philosophy, general frame and goals of cooperatives; to lead and shape the relationship between the purposes and the tools qualitatively, to provide an identity and a characteristic to this system; to establish and coordinate behavioral goals and patterns for the cooperative and its partners; to affect the selection of the required tools and methods directly; to bring abstract measures and standards to the system; to moderate the general approach, actions, behaviors that are thought-through implicitly or explicitly (Turan, 2017; p. 9) The core values of cooperatives are defined as self-help, self-responsibility, democracy, equality, equity and solidarity. In addition to these, ethical values such as honesty, openness, social responsibility and caring for others can be considered as core values (ica.coop).

On the other hand, the International Co-operative Alliance adopted seven cooperative principles (ica.coop). These are voluntary and open membership, democratic member control, member economic participation, autonomy and independence, education, training and information, cooperation among cooperatives and concern for community. Cooperatives are associated and function with these core values and principles.

Historically, cooperatives that are widespread all around the world were first established in England in 1844 (Mülayim, 2013; p. 10). With the Industrial Revolution that started at the end of the 18th century, the deterioration of the living conditions of the working class led to the emergence of the idea of cooperatives. Cooperatives were seen as an important opportunity in improving the economic and social conditions, and solving problems. Similarly, ideas and implementations related to cooperatives were adopted in France and Germany to improve social and economic conditions, and to reach prosperity. England was the pioneer of the consumer type; France was the pioneer of producer type and Germany was the pioneer of the credit cooperative (Turan, 2017; p. 3). Later

on, cooperative enterprises established for different purposes and started to spread rapidly all over the world. In our country, cooperatives started with a fund called Country Chests initiated by Mithat Pasha during the Ottoman Empire, and spread under the leadership of Ataturk in the Republic.

Cooperatives are effective tools in reducing poverty because of having an advantage of being established wherever they are needed. Furthermore, many cooperatives make significant contributions to the social and economic systems of countries by providing access to education, health, insurance, credit and other services needed in social life. All around the world, cooperatives that serve approximately more than 1 billion people operate in many different forms and sectors. As of 2019, based on the statistics that are provided by the Directorate General of Cooperatives which run under The Ministry of Trade in Turkey, 79.486 cooperatives in 32 different types have been functioning and they are associated with 571 unions. The registered partners of cooperatives are 7.845.509 (ticaret.gov.tr). Motor Carrier Co-operatives, Tradesmen and Craftsmen Co-operatives, Carriers Co-operatives, Consumers' Co-operatives, Agricultural Sales Co-operatives, Supply and Delivery Co-operatives, Production of Renewable Energy Co-operatives, Childcare Services Co-operatives are among those cooperatives that carry out their activities in Turkey.

Especially in developed countries, cooperatives contribute to the economy significantly. Based on the data provided by the International Co-operative Alliance (ICA), 2032 cooperatives from across 56 countries had a turnover over USD \$2.164 billion (ica.coop).

Cooperative managers and partners should adopt the principles of cooperatives and carry out their activities accordingly to keep the cooperatives alive, which are a business model based on win-win logic of partners and are significantly important for the business life. This can be achieved only by offering educational programs which can be accessed from anywhere anytime and by anyone. Another way is to adopt and disseminate the cooperative culture throughout the society. Lack of education, awareness and research activities were stressed as existing issues in Turkey by Turkish Cooperative Strategy and Action Plan (ticaret.gov.tr). Based on this need, an awareness in the society should be raised with the help of cooperative education that is designed to improve, adopt and sustain cooperatives in Turkey. In this study, the design, preparation process, structure, learning environments, support services, examination and the certification processes of Cooperative, which is conducted through open and distance education, is investigated by reviewing the cooperatives educations both in Turkey and all around the world. In addition to this, the experiences, problems and their solutions during the execution of the program are mentioned and suggestions for the future were presented.

Methodology

The aim of this study is to investigate current problems within the scope of a lifelong learning program conducted through open and distance learning, and to present some solutions. For this purpose, answers to the following questions were sought:

- Which studies have been conducted in the field of cooperative education around the world and Turkey?
- What are the components and learning environments of the Cooperative e-Certificate Program that is designed for lifelong learning and conducted through open and distance learning? How does the program run?
- What kind of problems are encountered during the design and execution of the program, and what type of solutions are being produced to these problems?
- What should be done to improve the implementation of the program?

The research dimension of the study is designed as a literature review in which theoretical and empirical discussions are addressed (Baumeister & Leary, 1997). To achieve that, paper review, observation and data that are obtained from individual experiences are given. With the findings and the results obtained, suggestions for the future are presented.

Cooperative Education Around The World And Turkey

The cooperative movement is based on the cooperation of people who come together on the basis of volunteering and mutual solidarity to find solutions to their common financial problems. There are three features that reflect the nature and characteristics of this movement (Yıldırım, 2006, p. 42): 1) Self-protection, 2) Self-management, 3) Self-production. These main three structural features were also the determinants of the aims of the cooperative. For cooperatives to carry out their activities, to protect themselves and to create sustainability, cooperatives services should be managed and carried out successfully. This will only be possible with an education that is customized according to the need and has sustainability.

The cooperative education has emerged with the birth of the cooperative movement, and in time it has brought different implementations according to the needs, expectations and educational understanding of the countries. The general approach in cooperative education is to design an education program to appeal to the whole society, mainly the cooperative partners, elected and assigned managers and officers. The general scope is to introduce

cooperative effectively, to make sure an effective cooperative and its general culture is adopted. The cooperative education in literature is defined as a work of making a deliberate change and providing cooperative information to the society, especially to the cooperative partners, by using certain methods and techniques to fulfil their functional duties (Koç, 2001, p. 35).

The scientific cooperative founded by Robert Owen in 1844 is considered as the first educational movement in the field of cooperative (Koç, 1986, p. 7). This educational movement was carried out by workers in a partnership with its founder, Owen. After this first initiative, in which the foundations of cooperative education were laid, education in the field of cooperatives took notice in many countries around the world. It is believed that the cooperative education will be effective in ensuring that the cooperatives are managed effectively, in raising awareness within the society and the partners about cooperative, and in removing misperceptions about the cooperative within the society (Çıkın & Karacan, 1996, p. 121).

The cooperative education is given especially at university level in developed countries. Even though the duration and form of the education varies from country to country, generally the history of cooperatives, principles of cooperatives, the social aspects of the cooperative movement, the events and organizational structure, philosophy of cooperatives and legal proceedings are covered. Cooperative is taught either as an elective or compulsory course at universities in almost all European countries, Canada and United States of America, Sweden, Brazil and Argentina (Çıkın & Karacan, 1996, p. 129).

The main cooperative schools around the world are as follows (Çıkın & Karacan, 1996, p. 129):

- The Co-operative College in United Kingdom,
- College Co-op and International Co-op College, Coop de France - Rhône Alpes, International Cooperative University in France,
- Raiffeisen Cooperatives School, Württembergische Genossenschafts - Akademie, Central Federation of German Consumer Cooperatives Academy, Karlsruhe Cooperatives Academy, DWA-Landesverband Hessen/Rheinland-Pfalz/Saarland, Hannover Cooperatives Academy,
- The Université de Sherbrooke, Canada Co-op College,
- Raynfanden Academy and Consumer Cooperatives School in Austria,
- Prag Cooperatives College in Czech Republic,
- Cooperatives School in Spain Zaragoza,
- Swedish Cooperatives College in Sweden,
- The Cooperative College in Iceland,
- The Inter-College Co-op in Japan,
- Cooperative School in Israel,
- Centrosoyuz Cooperative High School in Russia,
- University of Helsinki Co-Op Network Studies.

In addition to these academies and schools that entirely specialized in cooperatives, there are also educational institutions focusing on cooperatives (Çıkın & Karacan, 1996, p. 129):

- ICA (International Cooperative Alliance) in London,
- ILO (International Labour Organisation) in Geneva,
- IFAP (International Federation of Agricultural Producers) in Washington and Paris,
- International Council for Research in the Sociology of Cooperation in New York,
- ICWE (International Cooperative Women's Guild) in London,
- ICWE (International Cooperative Women's Guild) in London,
- IRU (International Raiffeisen Union) in Frankfurt,
- Deutsche Stiftung für Entwicklungsleender in Belgium,
- IFYC (International Federation Of Young Cooperators) in Hamburg, CICA (Confédération Internationale du Crédit Agricole) in Zurich

Based on all these, it can be said that in developed countries, institutions focus on cooperatives education, while in less developed countries these educations are carried out by the state. In the above-mentioned institutions, education is generally carried out through institutional field trips, meetings, events and internships. For example, the Cooperatives Association in North America organizes various educational programs for the development of in-store managers (Fındıkoğlu, 1970, p. 11). Local institution managers are also being invited to the educational programs to share experiences and ideas. Similarly, cooperatives education in Germany is run by the unions that cooperatives are affiliated with. The purpose behind this is to prepare an educational program that is not independent from each other, is holistic, continuous and practical.

To summarize, when we look at the developed countries around the world, associations and foundations, which are voluntary organizations, it is seen that they play a predominant role in the field of cooperatives education. In

these countries, the state does not interfere with cooperatives activities, but supports education, credit and the enforcement of protective laws for cooperatives. Educational activities are carried out by regional and national cooperative unions, which are the supreme organizations of cooperatives. Educational activities are carried out by the state in both developing and underdeveloped countries.

In our country, the roots of cooperatives education goes back to Ahmet Cevat, one of the lecturers of the Istanbul Teacher Training School (Gülpak, 1997, p. 61). However, his training did not achieve its goals. With the establishment of the Republic, great importance was paid to cooperative activities and education in this field. First cooperative education was held in the field of agriculture. Between 1930 and 1934, Istanbul School of Economics and Commerce pioneered scientific studies in this field by organizing conferences on the cooperatives movement and training. After that, cooperative was taught as a course in Higher Schools of Trade opened in Ankara, Izmir and Eskisehir. Cooperative education started as an independent discipline in the Cooperatives Institutes established within the Higher Teacher Education Schools in universities, and cooperatives, experts and educators were educated on master's degree level. The courses taught in this context as follows: General Cooperative, History of Cooperatives, Consumer Cooperatives, Agricultural Cooperatives, Research Methodologies in Cooperative, Marketing in Cooperative, Accounting in Cooperatives, Small Business and Artisan Cooperatives, Agricultural Cooperative Movements in The World, Cooperatives Business Management, Cooperatives Finance and Credit Cooperatives.

Co-op schools were established in 1938 in order to include cooperatives in primary and secondary schools affiliated to the Ministry of National Education and to gain this culture. A cooperative was established within each school, and in 1948, the subject of cooperative was included in the curriculum in primary schools and village institutes (Kurtaslan, 2004, p. 3).

Educational activities of cooperative organizations also continued simultaneously. Ziraat Bank Cooperatives Directorate organized training on cooperatives for the managers and officers of the Agricultural Credit Cooperatives in Ankara and the provincial organization between 1942-1970. These face to face educations have been transferred to the education center of Ankara Agricultural Credit Cooperatives Central Union since 1970. Various publications such as newspapers and magazines were prepared by the association in the field of cooperatives, and the educational activities were carried out with these publications (Arman, 2004, p. 24).

With the Cooperatives General Law in 1969, the cooperatives were authorized to carry out educational activities by themselves or with the support of higher organizations. This law introduced The 1% Education and Promotion Fund and it was ensured that cooperatives were deposited in the account of the Ministries they are affiliated with and the relevant Ministry carries out these activities (Koç, 2001, p. 49).

In the 1970s, National Cooperative Education and Research Institute was established in order to gather all the educations offered by different institutions with different contents and features under one roof, to have all at one place and to provide more effective education by gathering the authority in one place. This institute was large enough to provide boarding education for 200 people, and it was designed and structured in a way that has facilities such as administrative buildings, classrooms, a library, a meeting and cinema hall, printing, painting, film washing and sound box. Between 1976-1984, it provided education to 7000 people. However, later on this institute was closed and transferred to the General Directorate of Rural Services (Arman, 2004, p. 30).

In 2000, the KOOPEP - 2000 Project, a training project for the trainers who would provide training in the field of cooperatives, was implemented by the Ministry of National Education. For the project, a series of training in the field of cooperatives were prepared and a training group of teachers and trainers in Ankara, Sanliurfa, Sinop, Istanbul, Erzurum and Izmir were gathered. Cooperatives and Business Knowledge and Cooperatives Knowledge courses were offered in formal and informal frame both as selective and compulsory courses in vocational-technical educational institutions under the Ministry of National Education. And again for the project, cooperative courses for adults have been offered in 920 public education centers across the country since 2000. However, KOOPEP - 2000 was not sustainable because of the political and bureaucratic reasons (Koç, 2012, p. 27).

Another important initiative worth mentioning in the field of cooperative education in our country is the establishment of Gazi University Cooperatives Research and Application Center in 2006. One of the main reasons of establishing Gazi University Cooperatives Research and Application Center (KOOP - MER), which started functioning with the regulation published in the Official Gazette on July 9, 2006, was to find solutions to the educational problems of cooperatives (Koç, 2014, p. 43). Numerous scientific papers were published and events were organized within the center, contributing to the development of awareness of cooperatives in the society.

Konya Food and Agriculture University was founded by Konya Seker, a subsidiary of Turkish farmers' beet producer cooperatives. Cooperatives and Agricultural Cooperation Application and Research Center started to function within the university on 9th April, 2020, which was established with the support of this cooperative-based structure. It had many establishment purposes including: to organize educational seminars, conferences, workshops, symposiums, congresses and similar events to contribute to the dissemination and development of cooperatives throughout the country, especially in the field of agriculture and food; to cooperate with other organizations working in this field; to provide training to farmers and food producers in the fields of agricultural cooperation, entrepreneurship and cooperative; to support individuals gather under one roof and cooperatives

activities; to promote; to provide information and training activities for the managers, staff and partners of the cooperatives in our country; to open courses and to offer consulting service (Resmigazete, 2020).

As a result of the studies conducted in the literature, it has been determined that many initiatives have been put into practice in our country for the adoption and dissemination of the cooperative movement and the formation of a cooperative culture in the society. On the other hand, it is seen that these practices were limited to central and provincial organizations, short-term and not sustainable at local level.

In fact, in order for the cooperative activities to be carried out in an efficient way, the active participation of the managers and partners in these activities matter a lot, and especially for the young people to recognize and adopt the cooperative movement, these training should be carried out continuously and be accessible to anyone anytime. This will only be possible with continuous cooperative education through open and distance learning. Based on this, the Cooperative e-Certificate Program was prepared within Anadolu University with the special request and cooperation of the Ministry of Trade.

Cooperative Education Through Open And Distance Learning: Anadolu University Cooperative E-Certificate Program

Open and distance learning with its features and opportunities is one of the most important approaches affirming learning as a process throughout the life of an individual. Open and distance learning applications completely or partially eliminate obstacles in education such as quota limitations in traditional higher education institutions, education level and age limit. All open and distance learning implementations, starting from extension courses to computer mediated systems, aim to provide lifelong learning opportunities to individuals with the help of their features formed by the principle of clarity (Kip Kayabaş, 2020, p. 33). Cooperative education offered through open and distance learning brings with many opportunities in terms of flexibility and accessibility compared to the courses conducted face to face by different institutions in the past, in terms of reaching people from all classes, ages and professions.

Since 1982, Anadolu University has been providing associate and undergraduate degrees with the help of Open Education by using distance education technologies and in 2007, it started to offer e-Certificate Programs through open and distance learning (esertifika.anadolu.edu.tr). Anadolu University e-Certificate Programs are three months long certificate programs, each consisting of one, two or three courses, in which the learning process is conducted online and exams are conducted under supervision. Anadolu University e-Certificate Programs, which launched for the first time in Spring 2007, aim to provide continuous education and up-to-date academic content for three terms a year (Mutlu et al., 2014, p. 30). Besides helping individuals who aim for personal development and a better career, e-Certificate Programs offer solutions to the in-service training needs for businesses that want to work with more qualified personnel.

As of 2020, Anadolu University e-Certificate Programs have 121 programs with 14 categories. The programs are accessible each year three times: during spring, summer and fall. From 2007 to 2020, a total of 209,234 people have enrolled in e-Certificate Programs and 86,239 of them have been successfully certified. e-Certificate Programs which are designed according to the distance education methods, are carried out online via the Anadolium eKampus System. By that, everyone is offered the opportunity to learn and develop individually, at any time, in any environment. e-Certificate Programs are carried out in all 81 provinces of Turkey, Cyprus and Azerbaijan in exam centers under supervision.

Efforts have been made to create collaboration with e-Certificate Programs and many public and private sector organizations that want to benefit from the knowledge, organizational capacity and experience spread across the country. One of them is the cooperation protocol regarding the implementation and development of the Cooperative e-Certificate Program signed between Anadolu University and the Ministry of Trade on May 21, 2015. The purpose of this collaboration is to increase the education level of those who directly or indirectly serve the cooperative sector, especially the youth, and to raise awareness of cooperatives in the society.

With the Cooperative e-Certificate program prepared in cooperation with Anadolu University and the Ministry of Trade, it is aimed to extend cooperatives which are an important and great power in economic and social terms, to help existing ones to sustain their activities in a more efficient and active way, to provide education related to cooperatives and to certify this education.

According to protocol, Anadolu University is responsible for

- producing the content for the e-certificate program,
- preparing and offering the e-learning materials,
- determining the academic calendar and quota of the prepared e-certificate program,
- conducting the education, preparing exams, following the success of the participants after the exam, informing the Ministry with a report at the end of the year regarding the organized training activities,
- encouraging its students and graduates to participate in activities such as cooperative activities, programs, trainings and seminars in the field of cooperatives, and providing updates and relevant information.

Meanwhile, Ministry of Trade is responsible for

- supporting the preparation and production of educational content in cooperation with Anadolu University,
- providing the necessary announcement and updates regarding the participation in the activities, programs, trainings and seminars cooperated in the field of cooperatives within the framework of the protocol,
- contacting other institutions and organizations to cooperate with, and supporting them for the effective execution of their activities.

For the project, a study group consisting of officials from both institutions was formed and the Cooperative e-Certificate Program was designed under the coordination of Anadolu University in cooperation with the relevant topics. In the preparation of the program, a team of Open Education Faculty managerial members, Faculty of Economics and Administrative Sciences faculty members, Faculty of Law lecturers, instructional designers, graphic designers, e-learning experts, exam experts and technical experts from the information technologies center were gathered together by Anadolu University. Another team was established by the Ministry of Trade, consisting of managers and experts of the General Directorate of Cooperatives, officials from the higher units of cooperatives and non-governmental organizations operating under the Ministry. The Cooperative e-Certificate Program was designed under the coordination of Anadolu University by the study group combined with these two teams.

The Cooperative e-Certificate Program is aimed to contribute to a wide target audience such as lawyers, accountants, cooperative directors, employees, partners, public officers working on topics related to cooperatives, members of cooperative management, audit and liquidation board. Additionally, everyone over the age of 18 who has interest in this field has been given the opportunity to participate in the program and access education. With the help of this opportunity Anadolu University Cooperative e-Certificate Program clearly distinguished itself from any other prepared cooperative education so far. As can be seen in the case studies examined in the literature, the educational programs targeted a specific occupational group, a specific age group and even a specific educational level. However, Anadolu University Cooperative e-Certificate Program was designed as a result of the delicate work of expert instructional designers and content production teams in a way that would appeal to people of all ages, professions, and all educational levels. Considering this, it can be claimed that this is the first educational application that appeals to such a broad audience in Turkey.

Learning Environments

The learning environment of the programs are

- the Cooperative textbook designed according to distance learning techniques,
- e-learning materials offered through the E-Campus Portal.

Participants who enroll in the Cooperative e-Certificate Program prepare for the certification exam by using the printed textbook designed according to the distance learning methods, watching the lessons conducted online and using e-learning materials designed according to the self-study methods, sent to them by mail for 12 weeks.



Figure 1. Cooperative Textbook

Among the cooperatives functioning in our country are Motor Carriers Cooperative, Tradesmen and Craftsmen Cooperatives, Women Entrepreneur Production and Operation Cooperative, Pharmacists Cooperative, which include partners and managers with a wide range of education levels from primary school to doctorate. The Cooperative textbook has been prepared to appeal to all members of the cooperatives, with the meticulous works of expert lecturers and instructors. A comprehensive, easy to read with a simple narrative content and a very detailed design in terms of teaching techniques has been made. The content of the textbook consisting of 13 units are as follows:

1. Introduction to Cooperative
2. Establishment and Articles of Association of Cooperatives
3. Partnership and Termination of Partnership
4. Rights and Obligations of Partners; Cooperative General Assembly
5. Cooperative Board of Directors
6. Cooperative Supervisory Board
7. Disintegration and Liquidation of Cooperatives
8. Supreme Organization of Cooperatives
9. Duties and Authorisations of Ministries
10. Document Order, Commercial Books, Declaration and Taxation in Cooperatives
11. Accounting, Reporting and Auditing in Cooperatives
12. Budgeting in Cooperatives; Analysis of Financial Statements and Annual Report

In the textbook, which includes economic, legal and financial aspects of cooperatives, each unit starts with a case study that is carefully selected from the field within its scope. Students are expected to examine this case study and then answer the questions. The answers to the questions are discussed on the e-learning platform e-Campus Portal under the mentorship of the instructor. Case studies are generally prepared to cover the most common issues and solution suggestions within the cooperatives.

In order to emphasize the important points, some of the brief information is enriched with visual elements and presented in a way to spark attention and provide clues. Additionally, in the section of Through Life at the end of each unit, case studies that the members of the cooperatives may need to create a link between real life practices and the topics covered within units. Another learning environment of the program is Anadolu University e-Learning Platform <https://ekampus.anadolu.edu.tr> (Figure 2). The Study Platform is accessed through the e-Government Gateway. When students login to the e-Campus portal, they can access every e-learning material of the Cooperative course.

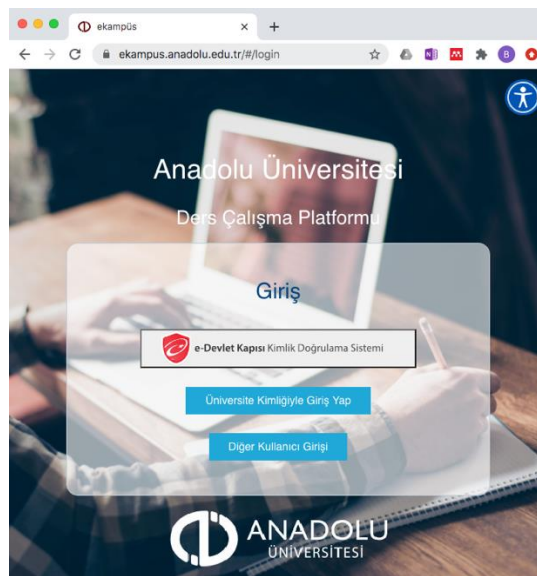


Figure 2. Anadolu University e-Learning Platform

The e-learning materials of the program are as follows: Textbook, Unit Abstracts, Lecture Videos, Let's Learn with Questions and Exercises. The e-Campus study portal offers both an electronic version of the Cooperative textbook in EPUB and PDF formats, and hardcopy which is sent to the students by mail. Thus, students can access the learning resource from anywhere without the need to carry the printed book with them. In the Unit Summary section, a 4-5 page summary of each unit in the textbook is offered in PDF format. After reading the textbook thoroughly, it is recommended to review the important points from the summary section to repeat them. Another e-learning material the Lecture Videos section houses audio-visual elements and therefore it is one of the most preferred learning materials by students. These videos are prepared by the lecturer of the course in professional studios. Video presentations are video lectures that are prepared in a way to summarize the structure of the units, explaining the important points that are difficult to understand and include tips and tricks, instead of presenting the information exactly as in the textbook. In the Let's Learn with Questions section, there are questions and answers prepared according to units. The Exercises section consists of multiple choice tests. The students can either answer these questions in the form of a pilot test or view as PDF with all of the questions and answers, and save them. The Let's Learn with Questions and Exercises sections are recommended as materials to be used for the preparation of the exams.

Support Services

Support services are provided by phone and e-mail to students enrolled in the Cooperative e-Certificate Program. Students can send an e-mail to esertifika@anadolu.edu.tr about any topics that they need to consult. Those e-mails are answered as soon as possible. Students are informed via e-mail and SMS throughout the process from the beginning of the courses until the announcements of the exam results. They receive reminder e-mails from time to time in order to keep them motivated and active. In addition to e-mails, students can get support by calling the call center number 0850 200 46 10 on weekdays between 09:00 and 18:00.

Exam and Certification

The last step of the Cooperative e-Certificate Program is the exam and it is carried out three times in 81 provinces with online supervision. During the enrollment to the program, the students are asked to choose the exam center and determine in which province they would like to take the exam. The examination organization is done by Anadolu University and is conducted either in computer labs of agreed universities all around Turkey under the supervision of someone in charge or online. Students are expected to get 50 points out of 100 points to be regarded as successful. Those with a score of 50 and above are entitled to receive a "Cooperative Certificate". 5 days after the exam, the "Exam Result" demonstrating the success of the candidates is published online and the printed certificates are sent to the students by mail (Figure 4). Exam results are also reported to the General Directorate of Cooperatives, the Ministry of Trade.



Figure 4. Certificate of Cooperative

Problems And Solutions

In this section, the problems encountered during the organization of the Cooperative e-Certificate Program and the possible solutions are discussed. Starting from the application and enrollment to the Cooperative e-Certificate Program, almost all of the steps related to the course is carried out by using computers and internet technologies, carrying out the course online on the platform, including receiving the exam entrance document, the certification exam, learning the result of the exam, a huge part of support services. Although it is not stated as a prerequisite at the registration stage, students enrolled in the program must have sufficient digital literacy skills in order to benefit from the services provided at the maximum level. Studies show that as individuals' competence to use computer and internet technologies increase, their anxiety level decreases and they use these environments more active (Akkoyunlu and Kurbanoglu, 2003, p. 9; Aşkar and Umay, 2001, p. 7; Chou, 2003, p. 743; Doyle, Stamouli and Huggard, 2005, p. 7; Gordon et al., 2003, p. 292; Seferoglu, 2005, p. 100). As a supporting study, Gunawardena

(1991, p. 4) stated that students who do not have sufficient computer skills spend too much time interacting with the interface, and since they put all their attention and performance on figuring out the interface, they cannot concentrate well enough to generate ideas and engage in activities in the online learning environment. Thus, these students access less resources and tend to leave the environment because of boredom. Therefore, it is stressed that digital literacy skills are critical in open and distance learning. In order to minimize the possible problems in the context of digital literacy skills, e-Certificate Programs website has a user-friendly and easy to use interface with all its explanations and guidelines. It is made sure that the students have text descriptions for anything requiring technical skills, animations and sample videos as guidance. Live support service is provided to students who have difficulties in performing the procedures despite all the support materials. With the support services offered through different channels, an intensive support service is carried out to ensure students accessibility.

One of the top issues that the students face is accessing their personal e-mail account at the stage of completing the application process. In order to apply to the system, the students must first register to the system with a valid e-mail, and then with the password sent to this e-mail address and their national id code they must submit their application. Sometimes students cannot proceed because they cannot remember their password for their personal e-mail accounts. There are even candidates who do not have e-mail address until they apply. In such cases, the coordinator staff supports the candidates by phone to create a valid e-mail account. Then, information is given about the application process. Also, candidates must make a transaction with a credit card in order to pay the registration fee for the program. Candidates who cannot make transactions with or do not have a credit card can apply to the coordinators and request another payment option. In such cases, the candidates are informed by the coordinator staff and the necessary guidance is provided.

As it is known, the enrollment process to e-Certificate Programs is open three times in a year during spring, summer and fall. Application dates, education semester, exams period are announced on the Academic Calendar page at the beginning of each year. Applications are open for three weeks at the beginning of each term. When candidates miss these dates for any reason, they have to wait for the next semester's application dates. At this point, students who have problems request the application system to be reactivated. However, due to the fact that the exams are held in the centers under supervision and the education period cannot be extended, therefore applications can only be made within the specific dates in the academic calendar, not at any requested time. A solution to this problem has not been found yet.

There are some problems related to learning material choices during the teaching process. Some students study by using only the textbook, and they use the learning platform in a very limited way, since they do not choose other course materials or sufficiently examine. But, they can prepare themselves for the certification exam more effectively with e-learning opportunities prepared with rich materials. In order to solve this problem, samples of e-learning materials that may attract their attention are sent by e-mail at regular intervals during the education period. By doing so, they are informed about the materials that may attract their attention, preferences according to their characteristics, and other options that support their learning process.

Another problem is the issue of cargo shipments. Textbooks and certifications are sent by post to their addresses, and no additional fees are charged from students for these posts. Sometimes, mails return because people misrepresent their addresses or they cannot be found at their addresses. Students are requested to update their addresses to get the post without paying any extra charge. However, if the post returns to the center again, the student is informed and the coordinator staff keep the documents. During the whole process, students are informed at every stage by phone so that they do not experience unfairness, and the textbook and certificate is being sent until the student receives them.

Conclusion And Recommendations

In our country, many educational attempts have been implemented in order to adopt and spread the cooperative movement and to create a cooperative culture in the society. Cooperatives education have been carried out through educational programs structured with many examples but independent from each other, at local level and with non-sustainable organizations. These educational programs or courses are prepared according to a specific target audience or field of activity, and are short-term and accessible to a limited number of people. It is of a great importance that the educational programs are carried out continuously and being accessible to everyone from everywhere, in order for the managers and partners to participate actively in cooperatives activities and especially for the youth to recognize and adopt the cooperative movement, which are among the principles of cooperatives (ICA, 1995). This will only be possible through open and continuous education in cooperatives through distance learning. Based on this need, the Cooperative e-Certificate Program has been prepared within Anadolu University with the request and cooperation of the Ministry of Trade.

The Cooperative e-Certificate Program was designed under the coordination of Anadolu University by forming a study group consisting of officials from both institutions and by making sure of covering the relevant fields. The Cooperative e-Certificate Program has been prepared for everyone over the age of 18 who are interested in this field, cooperative partners and managers. This educational program has been designed as a result of the delicate work of experts in the field of instructional and content design in a way that will appeal to people of all ages,

professions and all educational levels. A comprehensive, easy to read with a simple narrative content and a very detailed design in terms of teaching techniques has been made. Therefore, it can be claimed as being the first lifelong learning implementation appealing to such a broad audience. Although the audience consists of different ages, and educational levels, no problems or difficulties have been experienced in terms of accessing or benefiting from the content. It can be considered as an indicator of the success of the instructional design approach and certification organization of the whole program. Lifelong learning opportunities can be increased by preparing educational programs in different fields within the structure of the Cooperative e-Certificate Program.

Students who enroll in the Cooperative e-Certificate Program prepare for the certificate exam by using the printed textbook sent to them by mail and made according to the distance education methods, and by taking advantage of online courses and e-learning materials designed according to the self-study methods throughout 12 weeks. The Cooperative e-Certificate Program exam is held three times in a year in 81 provinces under supervision. The examination organization is done by Anadolu University and is conducted either in computer labs of agreed universities all around Turkey under the supervision of someone in charge or online. Students are expected to get 50 points out of 100 points to be regarded as successful. Those with a score of 50 and above are entitled to receive a “Cooperative Certificate”. Throughout the program, students are offered e-learning courses through a portal that contains various e-learning materials. Especially when designing lifelong programs for a large audience, communication environments should be enriched with different technologies and media options in order to enable students with different learning styles and experiences to choose and use the most suitable environment (Kip Kayabaş, 2020). Thus, students will be able to benefit from the course materials for printed, visual and audio materials by choosing the environment that fits their preferences and learning habits. The variety of learning materials should be increased by conducting research on students’ material preferences. Additionally, the most preferred learning materials should be determined and new options should be offered by increasing the existing options.

On the other hand, individuals need to have sufficient digital literacy skills to be able to benefit effectively from open and distance learning implementations where information and communication technologies are used extensively. Studies show that as individuals’ competence to use computer and internet technologies increase, their anxiety levels decrease and they use these environments more actively (Akkoyunlu and Kurbanoğlu, 2003, p. 9; Aşkar and Umay, 2001, p. 7; Chou, 2003, p. 743; Doyle, Stamouli and Huggard, 2005, p. 7; Gordon et al, 2003, p. 292; Seferoğlu, 2005, p. 100). Digital literacy skills of students are important especially during online supervised exams. Although it does not require a high level of computer skills, it can be claimed that taking the exam in a computer environment may cause anxiety in students. Therefore, it can be stressed that the online exam may have negative impacts on the students’ exam performance compared to the traditional supervised exams. To solve this problem, sufficient information should be given to the students before the exam. By sharing the documents with the exam conditions and rules, and providing a practical sample exam, students can be helped to decrease their stress level.

Individuals can be hesitant to participate in activities within the scope of lifelong learning, especially because of the responsibilities of an adult life. When it comes to the participation of individuals in an educational program, firstly it is expected that the education will aim a need to fulfill or it will obtain concrete practical outcomes at the end. The Cooperative e-Certificate Program is a lifelong learning activity with optional participation. However, cooperative education should be disseminated to raise more awareness in the society, to spread the movement, to help cooperatives sustain their activities more effectively and efficiently. If the people who will take part in the management or partnership of the cooperatives are required to receive a certificate from the Ministry, it will extend the education throughout the society.

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INTERNET RESOURCES

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- <https://www.ica.coop/en/cooperatives/cooperative-identity#cooperative-values>
- http://www.euricse.eu/wp-content/uploads/2017/11/WCM_2017web-EN.pdf
- <http://esertifika.anadolu.edu.tr>
- [http://koop.gtb.gov.tr/data/52ce773b487c8e3b38d8fa65/Koop-%C4%B0statistik%2010%2001%20\(2\).pdf](http://koop.gtb.gov.tr/data/52ce773b487c8e3b38d8fa65/Koop-%C4%B0statistik%2010%2001%20(2).pdf)
- <https://www.resmigazete.gov.tr/eskiler/2020/04/20200409-5.htm>
- https://ticaret.gov.tr/data/5d43d82d13b876433065528e/TurkiyeGeneliKoopVeBirlikDagilimi_KurulusTarihi_Ca_lisan.pdf

DATA MINING APPLICATIONS: THE SAMPLE OF SAKARYA UNIVERSITY LIBRARY AND DOCUMENTATION DEPARTMENT

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Abstract

Data mining is a tool that provides meaningful results from large data. It contains the most effective methods in converting data into information. Useful and understandable information that enables us to predict the future is obtained by applying various methods to data using computer programs. Data piles are formed with the constantly developing technology and it becomes difficult to obtain meaningful information. These data piles do not make sense on their own, but become meaningful when processed for a purpose. This study sets an example for data collection and meaningful information acquisition processes. In the study, book borrowing data belonging to Sakarya University Library and Documentation Department was obtained. With these data, it was aimed to obtain meaningful information on students; book buying behaviors. FP-Growth association rules technique was applied in the study and RapidMiner program, one of the data mining software, was used. The books taken based on department, faculty, subject and book groups were analyzed and investigations were made on the borrowing behavior of students. The aim of the study is to ensure the correct analysis of the books to be purchased by the university library in the future. In addition, the most preferred subjects were determined with the obtained data and the library was provided with the opportunity to organize shelves accordingly. In this way, it is aimed to increase the satisfaction of the people who borrow books from the library.

Keywords: library, data mining, association rules, FP-Growth algorithm

Introduction

The possibility of using information systems in the developing and changing world is increasing day by day. In the not distant past, we can see that any system has archived its data by writing on paper to store and process. Cheaper and widespread information systems make it possible to quickly save and access large amounts of data in this field. As the amount of data increases in the stored data, it becomes difficult to obtain a meaningful result. At this point, it is possible to benefit from methods such as data mining.

Data mining is expressed as revealing confidential, valuable, usable information from large amounts of data (Albayrak & Yılmaz, 2009). The purpose of data mining is to establish relationships and patterns between data and evaluate them using statistical and mathematical methods. Although statistics, machine learning and artificial intelligence are scientific methods with different purposes, it is possible to see them as tools that support each other for the same purposes. The periods when data are manually recorded and processed are left behind; With data mining technique, obtaining meaningful, valuable and usable information from large amounts of data becomes common and its importance is increasing day by day.

The data mining process develops as follows; Defining the problem, preparing data, setting up and evaluating the model, using and monitoring the model. The data mining system consists of database, data warehouse and other data stores, database or data warehouse server, knowledge base, data mining engine, pattern evaluation module. Data mining techniques are applied in descriptive and predictive models. In the predictive models, a model is established based on the known data and the values of the data sets whose results are unknown are tried to be estimated through this model. Descriptive models, on the other hand, offer the opportunity to explore the relationship and pattern between the data set for decision making and to examine the information. The patterns obtained at the end of the data mining process are expressed in the form of rules. These rules are obtained by repeating a certain technique (algorithm) on the data for a finite number of times (Tiryaki, 2006).

Association rules are the discovery of relational rules of attribute values that are seen together with high frequency in a particular database (Tiryaki, 2006). Association analysis is based on discovering effects such as being taken, made, occurring spontaneously, frequently, together or in the same period in a data set (Tiryaki, 2006). The most common area where association rules are used is in determining the purchasing tendencies of customers in retail sales.

The application of data mining provides more efficient use of time and workforce in businesses, and as a result, it also brings an increase in profitability. It ensures that preventive measures are taken and service improvement in many sectors such as education, health and security. With the data provided from Sakarya University Central Library, it is possible to apply the data mining technique in this study, which is carried out to provide more efficient and higher quality service to the users who benefit from the library. It provides support for the development of unmanned systems without the labor and time required to carry out this work. It creates an increase in speed and efficiency in scientific research. Budget expenses are reduced in book investments to the library.

In the age of technology that is developing and constantly changing, data is no longer in large piles, and the process of transforming data into meaningful information has been started rather than managing data manually. Data mining enables effective use of information from these piles. With data mining, which enables to obtain meaningful data within data piles, making future predictions easier makes the process easier and provides efficiency. In the process, library data also contains a large amount of data. In line with this process, the problem of purifying the Sakarya University Central Library from non-preferred resources has emerged. Non-preferred resources are purified, and the most preferred resources are determined and the resources determined in the future are preferred by the library.

Methodology

Considering the data mining application steps, first of all, the data set must be in a format that can be processed. Data files, which are generally found in different sources and in different formats, can be brought together and analyzed. The fact that the data set includes all the desired factors increases the estimation accuracy rate. In addition, most of the time the problem is not due to the small size of the data set, but to the weak representation of the very large data set. If the data set is highly representative, several thousand observations are sufficient for data mining. Data mining implementation steps are presented in Figure 1.

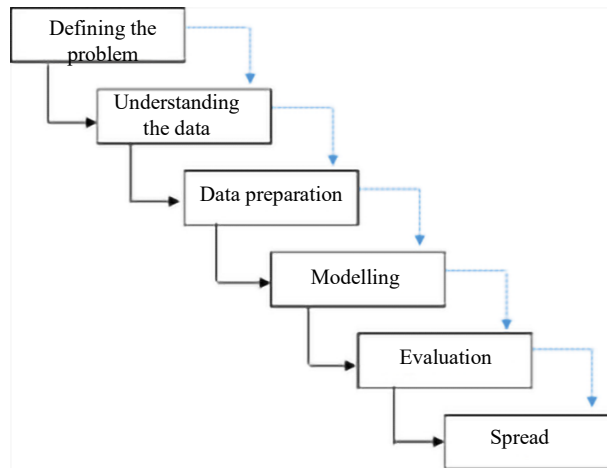


Figure 1. Data Mining Implementation Steps

Defining the problem is the most important of the data mining processes. At this stage, what the problem is, the evaluation of the situation, what is the purpose and the steps of the planning process have been carried out. Data preparation consists of five stages. These stages are collecting data, combining collected data, cleaning unnecessary data, sample selection and transformation (Savaş et al.2012). These stages indicate the process from the initial state of the data to the final usable and meaningful data can be obtained.

- Collecting data is reaching the data to be used in the study.
- Combining data refers to combining multiple data sources.
- Cleaning unnecessary data is cleaning noisy and inconsistent data.
- Sampling selection is the selection of appropriate data for analysis.
- Conversion is making data suitable for summarization and consolidation processes.

One of the important stages of the data mining process is the selection of the model. In this process, researches are made to select the most suitable model for the data to be analyzed. Several attempts can be made to find the appropriate model in data mining. Alternative models are tried with the data obtained. These trials are repeated until the suitable model is found. As a result of the evaluation, the most suitable model is determined. Another most important step is the use of the model. At this stage, the most suitable alternative among the evaluated alternatives is installed and used after its reliability is tested. The model used may change as the data changes over time. For this reason, it is important to observe the model for its sustainability (Akpınar, 2000). Changes occur over time in the created models. Changes occurring in the data created cause to obtain incorrect results. Therefore, the model must be constantly monitored and controlled.

Implementation

In the study, firstly, the data set to be analyzed was made suitable for data mining studies by clearing the data that created noise in the process of data preparation. All factors to be analyzed are included in the data set. The data size required for data mining work was provided with the library data. It is aimed to provide a solution to the problem of determining the most preferred sources in the library by obtaining the borrowed book data from Sakarya University Central Library. In this way, it is aimed that the results to be obtained from the study will be guiding in determining the resources to be obtained in the future.

In this process, the processes of collecting, combining, cleaning, sample selection and transformation of borrowed book data were applied. The collection of data was carried out by obtaining the borrowed book data from Sakarya University Central Library. It is ensured that the empty, undefined data in the data set that cannot be used in the analysis are cleaned. As an example of this data, clearing columns with the data in the raw state; record entry date, ReturnName, borrowDate, borrowReturnTime, borrowReturnDate etc. can be given. Then, the different versions of the same row, which is also found in the department and faculty columns, were determined and made suitable for analysis. As a result of these processes, the analysis is saved from noisy data. Then, the codes of the books in our data set and the DEWEY decimal classification system were used to determine the subjects and groups of the books (Yıldırım, 1974). The academic calendar week was determined according to the date of loan in the data. As a result of the researches and evaluations made, RapidMiner program, one of the data mining methods, was used in the model to be created with association rules.(Hofmann & Klinkenberg, 2016).

Nominal to Binominal conversion procedure and FP-Growth association rules, which are frequently used in the literature, were used in the study. The nominal data in the nominal to binominal algorithm has been converted into the binomial form that required for analysis. FP-Growth algorithm is an association rule extraction algorithm that uses system resources efficiently (Ranjan & Sharma, 2019; Wu & Zhang, 2019; Hossain et al. 2019). With the Create function, a set of association rules based on the FP-Growth algorithm is created from the frequent item sets. While comparing subject and faculty, the minimum support value for the FP-Growth algorithm is 0.001 and the minimum confidence value for the Create function is 0.01. In the study, subject-faculty and department-language comparisons were made. The model created for the functions and rules used in the RapidMiner program of the comparisons is presented in Figure 2. The support and confidence interval values resulting from the comparison of subject and faculty duo are shown in Figure 3.

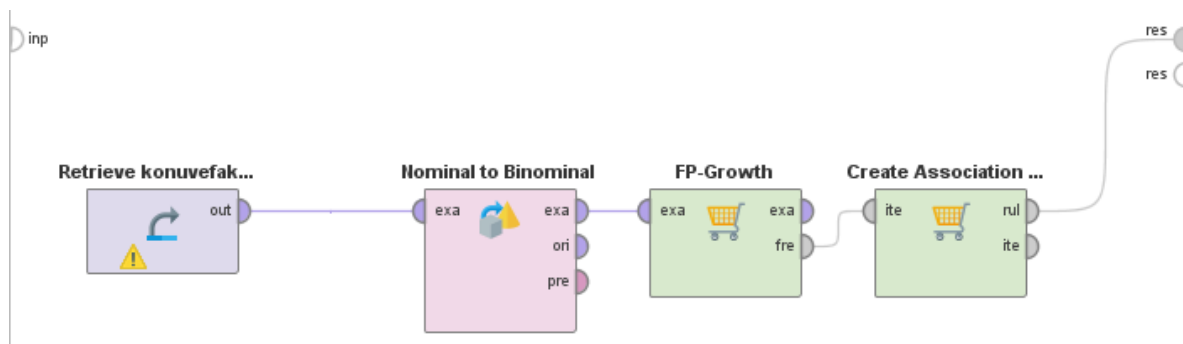


Figure 2. Subject and Faculty Comparison Model

No	Premises	Conclusion	Support	Confidence ↓
368	Subject = Topology	Faculty = FACULTY OF ARTS AND SCIENCES	0.001	1
367	Subject = Environmental Protection Engineering	Faculty = FACULTY OF ENGINEERING	0.002	0.918
366	Subject = Geometry	Faculty = FACULTY OF ARTS AND SCIENCES	0.002	0.867
365	Subject = Ancient, Medieval, Eastern Philosophy	Faculty = FACULTY OF ARTS AND SCIENCES	0.001	0.857
364	Subject = Standard Usage	Faculty = FACULTY OF ARTS AND SCIENCES	0.001	0.851
363	Subject = Modern Western Philosophy	Faculty = FACULTY OF ARTS AND SCIENCES	0.001	0.844
362	Subject = Heat	Faculty = FACULTY OF ENGINEERING	0.003	0.843
361	Subject = Manufacturing	Faculty = FACULTY OF ENGINEERING	0.002	0.818
360	Subject = Criminal Law	Faculty = LAW FACULTY	0.006	0.806
359	Subject = Folklore	Faculty = FACULTY OF ARTS AND SCIENCES	0.003	0.795
358	Subject = General Principles	Faculty = FACULTY OF ENGINEERING	0.006	0.737
357	Subject = International Trade (Foreign Trade)	Faculty = FACULTY OF BUSINESS	0.002	0.722
356	Subject = Biology	Faculty = FACULTY OF ARTS AND SCIENCES	0.003	0.716
355	Subject = Public Finance	Faculty = FACULTY OF POLITICAL INFORMATION	0.004	0.703
354	Subject = Germany and Austria	Faculty = FACULTY OF ARTS AND SCIENCES	0.003	0.698
353	Subject = International Economics	Faculty = FACULTY OF POLITICAL INFORMATION	0.001	0.696

Figure 3. Subject and Faculty Comparison Analysis Results

If 368th line is evaluated as an example as a result of the Department and Faculty comparison; All people who borrow books from the library with Topology subject, are in the Faculty of Arts and Sciences. With another example, when the 362nd line is evaluated, it is concluded that 84.3% of the people who borrowed the book from the library with the subject of "Heat" are in the Faculty of Engineering.

Comparison of department and language RapidMiner image is presented in Figure 5. The analysis results of the comparison are given in Figure 6. According to the results of the analysis; When the 63rd line is evaluated, 19.5% of the people borrowed books from the library and whose department is Translation (German), borrowed German books. With another example, the language of the book that 82.9% of the people whose part is Ceramic and Glass is Turkish.

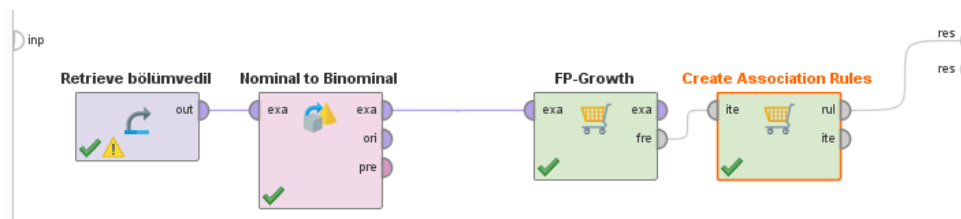


Figure 4. Department and Language Comparison Model

No	Premises	Conclusion	Support	Confidence
58	Department = COMPUTER ENGINEERING	Language = eng	0,006	0,126
59	Department = ELECTRICAL ENGINEERING	Language = eng	0,009	0,126
60	Language = eng	Department = ELECTRICAL ENGINEERING	0,009	0,131
61	Department = HUMAN RESOURCES	Language = eng	0,002	0,155
62	Department = ARCHITECTURE	Language = eng	0,001	0,155
63	Department = TRANSLATION (GERMAN)	Language = ger	0,001	0,195
64	Language = ger	Department = TRANSLATION (GERMAN)	0,001	0,220
65	Department = GERMAN LANGUAGE AND LITERATURE	Language = tur	0,003	0,433
66	Department = GERMAN LANGUAGE AND LITERATURE	Language = ger	0,004	0,535
67	Language = ger	Department=GERMAN LANGUAGE AND LITERATURE	0,004	0,549
68	Department = MIDDLE EAST STUDIES	Language = tur	0,002	0,721
69	Department = TRANSLATION (GERMAN)	Language = tur	0,005	0,741
70	Department=MEDIA AND COMMUNICATION STUDIES	Language = eng	0,003	0,777
71	Department = PHYSICS	Language = tur	0,001	0,780
72	Department = CERAMIC AND GLASS	Language = tur	0,001	0,829

Figure 5.Department and Language Comparison Analysis Results

As a result of the Department and Language comparison of Sakarya University, which has books in 13 different languages in its library, it is seen that the most preferred books are Turkish when the confidence interval is ranked from the highest to the lowest. The subject and numbers of the books preferred in Turkish were calculated by SQL substitution process using the Access database and are presented in Figure 6.

Subject	Subject Number
General Management	1411
Middle East (Near East)	1300
Applied Physics	1193
Physics	839
Computer Programming and Programs	825
Analysis	784
Engineering and Related Jobs	774
Various Works in English Literature	706
Political Science	609
Mathematics	538
International Relations	495
British Novel and Story	479
Algebra and Number Theory	419
Constitution and Administrative Law	406
Civil Engineering	401
Use of English	398
Probabilities and Applied Mathematics	396
East Indo-European and Celtic Literature	395
Economy	384
Production	347
Social Interaction	326
Private Law	318
Sociology and Anthropology	318
Information	315
Accounting	305

Figure 6. Subjects of Borrowed Turkish Books

4. Results And Discussion

A data mining study was carried out with book borrow data obtained from Sakarya University Central Library. Data mining application steps were applied to the received data set and the data set was cleared of noise data. The association rules were applied in the RapidMiner program with the data adapted to the data mining process. Support and confidence values were entered in FP-Growth and Association Rules algorithms in the program and analysis results were obtained. With the study, the department, faculty, education level etc. comparisons are given. As a result of these comparisons, the most preferred topics were determined and it was aimed to contribute to the library to make the right analysis for book investment in the future. In this way, budget efficiency will be achieved and the satisfaction of people who borrow books from the library will be maintained. In addition, the subjects of the most preferred books were determined and a shelf arrangement was made possible for the library to be easily accessible by the users.

Another aim of the study is to provide the shelf layout by taking the substitution data into consideration. Placing the most preferred books in easily accessible places on the shelves will positively affect the satisfaction of those who borrow books from the library. Users of the library may not always be able to access the books they need or desire. It will ensure that the books in the library meet the needs of the people and make more use of the library and fulfill the objectives of the library. It is thought that the budget to be allocated for the books to be taken into the library will be economically efficient when the users who benefit from the library are determined in the area they prefer and need more.

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DEVELOPING VOCATIONAL SCHOOL STUDENTS' LEARNING MOTIVATION IN MATH

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Abstract

In this study, we focused to develop the learning motivation of the students using some special tasks. The main perspective of the study hypothesis is students' personal view that plans to clarify the research question of the study. The general approach of the study is to have idea on the context of competitive and creative students' personality during to all education than social life. The main critters of this education model are expressed as motivation, focusing (or interest) or ability. We give the ways of model for special tasks in math lecture by focusing on the developing of students' learning motivation. In this context, we present three types of mathematical tasks that algorithms, tasks based on problem searching and tasks having creativity.

Keywords: learning motivation, mathematical task, vocational school

Introduction

The Author's educational life as a lecturer in a vocational school in Turkey has resulted with the examining of students' mathematics learning motivation. According the meaning of education, it is the essential goal to provide active motivation for students in order to reach conceptual learning. In different countries, it was conducted some researches on the providing of learning motivation in different lectures such as mathematics and physics (Serikow, 1999; Markova, 2010; Anderman, Maehr, 1994). One of the main common point stressed in these papers was that the learning motivation problem of the students turned out to be a serious obstacle of their understanding of the concepts. They also noted that students usually didn't have enough self-organization because of the abstract way of the concepts taught in the mathematics classes. These negative situations usually resulted with the lack of motivation for the lecture, and the anxiety problem rising from the motivational weakness (Ryan, Deci, 2016; Elliot, McGregor, 1999; Cameron, Pierce, 1994; Oakes, Lipton, 1990).

Nasibullov, Konysheva, and Ignatovich (2015) have presented the wide used definition of learning motivation as that interest of students to a subject, willingness of students to spend time on a scientific situation because of developing their academic level, abilities and knowledge. Zimnyaya (1999) stayed that categorization of students according to some special critters could provide positive effect on the learning motivation of students, and on the developing of mental functions of students at university level. Teplov (1985) stressed that when students don't have the necessity motivation and enough interest in learning materials, they couldn't understand fully concerned subject. Moreover, he stayed that many different skills of students are directly connected with the motivational development of them. One of the basic results coming from the above studies about motivational development of students is that maximum level motivation and deep interest of students is needed for conceptual learning of any mathematical subject.

Motivation in Vocational School Mathematics

Effect of motivation in this study is eliminated and evaluated in vocational school mathematics lecture and students in this school. Because of the students specify coming from vocation school, it was determined three criteria for vocational school mathematics education.

- *Vocational school mathematics is an independent area with its special teaching and learning approaches:* Myshkis (2007) noted that one of the main goals of teaching mathematics is to give students methodological perspective of mathematical information. From this point of view, we can say that the learning of vocational school mathematics provides positive effect on the development of analytical thinking, imagination of abstract representation, algorithmic background, skills on creativity, and having of an intelligent perspective.
- *Vocational school mathematics is an applicational mathematics and vocational school students are able to apply the formal language of mathematics in the problems coming from this vocational area:* this approach could be exemplified with the expression "mathematization of natural sciences" used by Leontiyev (1996). He believed that this world could be expressed in the mathematical language, and every scientific phenomenon could be linked and explained in mathematics. In this perspective, we can say that every subject coming from any vocational area is connected, symbolized, formalized, and so solvable in vocational mathematics context. According to many mathematicians, learning of the connection between mathematical subject and its application to any scientific area is the best learning of mathematics (Bochkareva, 2006; Ramirez et al., 2018; Harackiewicz, 1997; Slavin, 1990; Borko, Aisenhart, 1986). The important of this correlation is vital for vocational school students that they are

aware of the reality “mathematics is not an unbeneficial subject, and it is directly effecting their vocational study area.

- *Students learning vocational school mathematics need be supported in their getting to professional future:* when vocational school students are good in mathematical application, they could be practice their mathematical background in all kinds of problem coming from their vocational study area. The main condition to get this level academically is that students always organize their learning in theory – practice context. Such a modification could be available when the integration of reach tasks into educational program is done.

Method

This study was applied as a diagnostic study in order to determine the level of vocational school students' motivation in basic mathematics. The experimental test was applied in a vocational school in Turkey. 125 vocational school students taught basic mathematics course enrolling in science-oriented departments such as computer, chemistry, machine, and electrics, participated to this study. In the first stage of the study, the students were asked in evaluation of vocational school program used in their education. For this reason, it was applied the task called the diagnostics evaluation of learning motivation created by Dubovitskaya (2002) and the task called learning motivation in vocational school prepared by the author.

In this study, it was used theoretical approach and empirical approach together to test the hypothesis of the study that the development of learning motivation of vocational school students in teaching basic mathematics if the necessity tasks are involved in the education system. The task in the activities could be accepted as simulated problems which are very important in the vocational school mathematics. Applied task are importance in the learning activities of vocational school students (Schunk, Pajares, 2002; Renninger, 2002; Wigfield at al., 1997). The learning activities are different ways of tasks coming from algorithmics activities, problem solving activities, and creative activities (Nasibullov, Konysheva, and Ignatovich, 2015).

Algorithmics activities were planned for using simple way of mathematical formulas, definitions, theory and axioms. With the abstract way of mathematics, vocational school students could be able to apply the logical techniques in the abstract context. Problem solving tasks provide meaning development of analytic thinking capacity. Creative tasks aim to make clarify of some unclear point coming from the complex and difficult activities. This kind of task only could be operated by successful vocational school students who are able to overcome difficult and abstract mathematical situations, and proof them using their reach background efficiently and coordinately. In order to make clearer the above categorization we note simple examples from the basic mathematics course of vocational school.

- Algorithmics activities: find the solution set of the inequality: $-2x + 1 \leq 6$. In algorithmics procedure, students must be aware of the concept inequalities, and its axioms. Students should operate calculating with negative numbers, and infinite set theory because of the finding solution set of the problem.
- Problem solving activities: any problem about construction an equation on social situations coming from the life as that age problems, speed problems, pool problems, and worker problems. In some problem solving, it could be needed to make coordination between mathematics knowledge and physical formulas, for example, $X = V.t$, to find the solution.
- Creative activities: find three consecutive integers whose sum is 1704. To solve this problem, students need to be construct, $n+n+1+n+2 = 1704$ algebraic model. So, any constructing of any mathematical solution model could be seen a creative activity in vocational school mathematics.

Findings

By using chart analysis, it is found that there was a high percentage of vocational school students with high motivation to take mathematics lecture in their program. These students were interested in the learning of mathematics. According to the students, the concepts taught in the school on the program is not directly connected with the life problems, and the problems coming from their study area.

The average level of the students' motivation was determined in 62.7%. According to their responds, basic mathematics lecture has a vital role in their education life. and in working life. Also, these students believe that mathematics continuously improve their logical abilities, and applicational skills. The high level of motivation was 11.3%. these students expressed that it is a professional activity to focus on mathematical task, and to reach a desirable result in mathematical success, like this subject is first and most important condition. 26% of the students showed low level motivation because of that abstract way of mathematics, no connection between mathematics and their future carrier, and difficult application problems.

On the task that learning motivation in a vocational school, students responded could be classified in 3 categories. The first group (79%) stayed that to have certificate is the most important aim of their education life. The second

group (14%) expressed that to have academical vision is the main criteria to come to this school. The rest of the students (7%) responded as they don't have any special idea to concentrate to their educational activities.

Conclusions

In this study it was conducted the development of learning motivation of vocational school students. More detailed study could be studied with a professional prepared task and a large group of students taught in different science programs. One of the main results of the experimental study on the motivation of vocational students is that they have high level of motivation in mathematics. According to our observation, we can say that the context of mathematics lecture, interaction between teachers and students, and an acceptable educational environment for students are most effective factor enhancing the learning motivation.

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DIGITAL WORLD, DIGITAL COMMUNICATION AREA, TRANSPARENT COMMUNICATION, DIGITAL COMMUNICATION AND LAW OF INTERACTION, DIGI-POLICE, DIGI-INSPECTOR, DEBITING THE UNIQUENESS OF INDIVIDUAL AFTER PANDEMIC PERIOD, DETERMINATION, ANALYSIS, INSIGHTS AND RECOMMENDATIONS

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Abstract

With the pandemic, the year 2020 has been a year in which the field of communication and interaction has been digitalized unintentionally. Some of the industries like education, media, public relations, health sector, even SMEs, etc. started to conduct their communication through digital platforms for many reasons such as to provide functionality to the works of private and legal institutions and organizations whose communication is suspended, to survive, to design the future, etc.

The objective of this article is to emphasize the consequences of the significance of digital communication in the new world order, the digitalization of the individual or its obligation for digitalization. This article focuses on introducing the ideal conditions, introducing 'Law of Interaction' and Interaction Degrees and preventing the exploitation of the brain of the individual who is forced to be digitalized and save it from being used as a digi-slave.

Keywords: Law of Interaction, Humanity, Good-Bad Person, Digital Communication, Transparent Communication, Control Tower, Chip, Faith, Personal Debit, Personal Data Rights Tracker

Introduction

On the existence of human... What is human?

A living species that has an eternal interactive dictionary, can speak, and can create civilizations. Eternal interactive dictionary: Brain. Unique minds and therefore civilizations created with eternal interactions. Some of them are very special, they may be few in number, but it doesn't matter because they have the potential to generate an infinite number of qualified thoughts, and this is what determines the true value of their existence. This content belongs to the author of this article, who has read the biography of scientists as the most precious fairy tale books when she was a child, and yet could not stop without asking countless questions even after knowing them well, and she wanted to include these naive thoughts in this article in a nostalgic way.

Man is a living creature that contains good and evil within itself. Dante's Divine Comedy, Faust's story, the inquisition courts, medieval darkness, Eighteenth century in the East and the West, and the Enlightenment... Did the light belong only to one specific part of the planet? Religions, languages, races and never-ending wars and; the pandemic period reminding of Decameron with the pandemic before completely articulating to the new world order and digital age and:

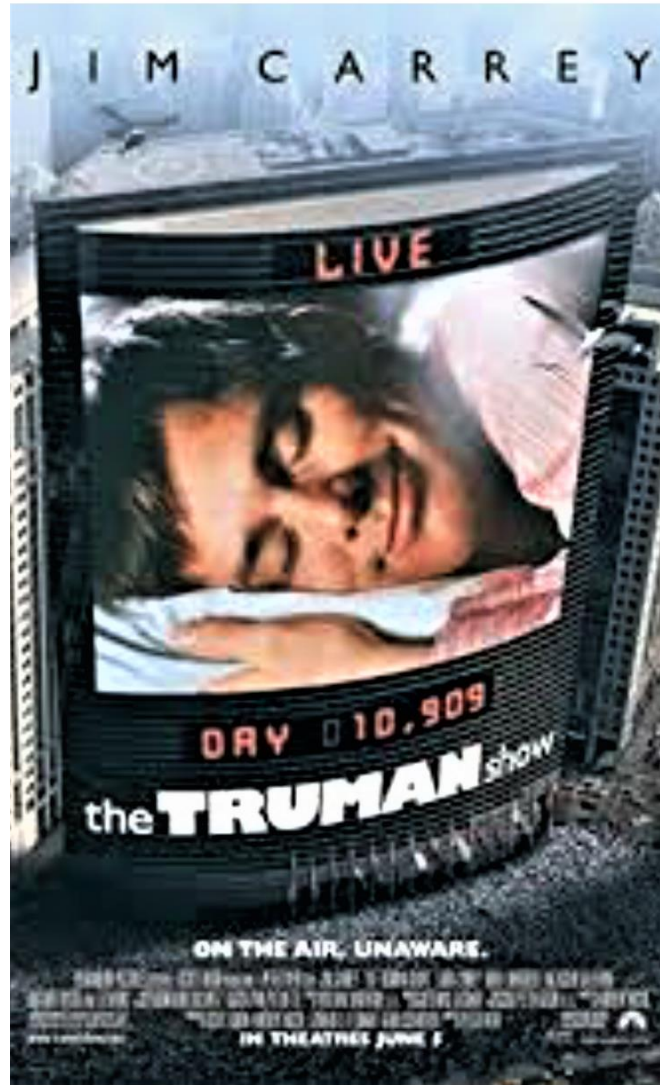
“As long as there is an obvious mask, there is nothing behind it; it is only a surface that hides nothing but itself; yet it still prevents us from thinking of it as a surface as long as it gives the impression that there is something behind it.” J.L. Baudry (Williamson, 2000:73) What will human beings transform into in a process that creates an irony with the current reality of the day, how will those who are not articulated to the system protect themselves in this new order?

Communication, Transparent Communication, Law of Digital Interaction and Its Degrees, Digi-police, Debiting the Uniqueness of Individual

Digital Individual, Digi-Cloud, Digi-Spy, Digi-Trackers, Debiting the Uniqueness of Individual

What does digital mean? Beginning from especially 2000 up to now, ordinary people in are in such a savage. According to dictionary: Digit(is a noun) 1. Any of the numbers from 0 to 9. 2. (Formal) A finger or toe. Digital (Adjective) Lit up numbers, e.g. 12.14.(Longman, 1983:168)

Together with the footsteps of the digital age, from the 90s onwards, some people may realize that they have been drifting like Truman (Truman Show) in a kind of one-sided transparent communication.



Visaul 1: <https://www.filmkovasi>

There are people with advanced artificial intelligence who are becoming more and more intelligent in a hurry about how to be protected from digital environments while trying to learn the content of laws such as KVKK (the law on the protection of personal data) and at the end of the day are struggling with the awareness that they are helpless. Since most of them are in a fight for bread, they may not be able to think about these because of their tiredness. The agenda changes so frequently that they may not know which one to think about, and in the meantime someone can steal the show (sorry, the brains) and take advantage of it. This is the state of the individual in the digital age and digital media...

What should be done?

Communication is the discipline that regulates the field of interaction because the most important factor in communication is interaction. Sometimes even the weakest link can be necessary for interaction. Mankind is a whole and while digital media are regarded positively as they pave the way for universal interaction, the unilateral flow of information carries the risk of creating digital-slaves (having already created), using a large database for the benefit of the powerholder. Reciprocity is a basic principle in interaction. This is also the core of communication. If there is no reciprocity, there is no communication either. In general, there is no feedback from the minds who are swindled by the digital media. That is why we cannot assume that communication has taken place. We can even crosscheck that humanity is a whole with "the working principle of the language learning center of the brain". To keep the mind in the attained science in its own hands and to use the mind produced by the general majority for the benefit of its own group and the point they have reached is an attitude that avoids the development of humanity. Creating many societies within one society and using them for gaining benefit, making this situation permanent and gaining benefit also mean disrupting the interaction. The general majority is not just

a 'Useless Crowd' or 'Nonsense'. In case those collaborating with this system suddenly become a member of smart (!) segment, then...

For the development of humanity, even the weakest ring is significant. This is essential for interaction. You cannot know what kind of intelligence will interact with the part that is thought to be the weakest ring and what kind of development may take place out of it, and this interaction is essential for development. You cannot know what the weak ring itself will transform into. Moreover, the problem of measuring and assessing the inborn talents such as intelligence, ability and competence... Bodies that were bought and sold as slaves in the past should not be used as both physical and cerebral digital slaves today. **The mind (!) that upholds this slave trade may still exist.**

What is the Meaning Attributed to Transparent Communication?

"God sees and hears everyone and acts justly." This must be a common view in almost all heavenly religions.

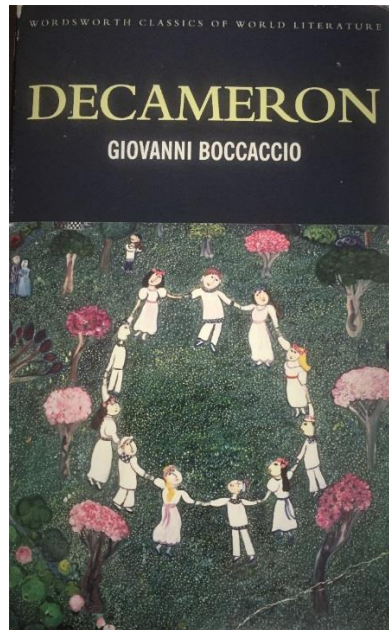
DigiCloud. If the world will be to transform to digital, it must become a situation where everyone just takes benefit of their own brain and heart. This can fairly be called configuring artificial intelligence that will cause even a slight right loss. Beyond and above religion, language, and race... It has to be free from dividing by religion, language, race, and then reunite, and must be built on justice, equality, goodness and righteousness.

On the way to this structuring, the individual in digital media can be taken under protection with digi-police, digi-spies; all the degrees of interaction they write to digital media can be put into use without waiting for the full artificial intelligence structuring. Especially the uniqueness of talented minds can be debited to themselves so that they will not be enslaved and exploited for a lifetime. An accurate and fair approach is a must for this. In the future, debiting the individual to himself will be able to done even using the atmosphere. That is, it should be configured in a guaranteed way for all digital media that will be saved by an organization contrary to the individual who is likely to be digitalized and used even today.

This means the use of unique language of the individual writing on digital media and the use of the versions of discourses and ideas that come from the brains it interacts are restricted by law. It means limiting the interaction of the person who interacts with an original idea with the law, and this interaction is graded and is asked to offer a moral or material price to the person whose idea is benefited. This is a kind of copyright. There is no such field in law yet. However, in order to protect the individual, it is obvious that the Field of Law of Interaction should be organized on a global/universal scale.

Conclusion

"Compassion for those who suffer is humanity, it is worthy of everyone, but it is an obligation for those who had once been in need of consolation and saw it in other people." (Boccaccio, 2017: 7)



Visual 2: Boccaccio; G. (2004). Decameron (1 st. copver page).

What will be the future of humanity, which contain both good and evil within itself? Will the system/systems of which life style and human perception are based on evil and exploitation win? Will the pleasure of sweeping the last human remains of man be tasted? How will humanism be positioned in the digital age?

Again by Decameron:

“.. If I turn back to the Guglielmo issue, which I have started telling but moved away more than I had hoped for because I rightly lost my temper, I must say that he was sincerely welcomed and respected by all the nobles in Genoese. When Guglielmo heard a lot about Ermino's niggardliness and stinginess after spending a few days in the city, he wanted to see him. Ermino had already heard that Guglielmo Borsiere was a precious man; so even though he was a stingy person, he greeted him with the words that he saved from the remnants of gentleness in him and a smiling face. He brought up various issues. While chatting on the one hand, he took Guglielmo and the other Genoese with him to his dazzling newly built mansion. After walking all around his mansion, “Messer Guglielmo, I want to have a painting made to hang in the living room of my house. You are a man of the world. Could you please tell me something unprecedented so that I can have a painting made of,” he asked. Hearing his tactless question, Guglielmo said, “I don't think I can suggest anything that has never been seen for you to make a picture, other than sneezing, but if you wish, I can recommend something that I am sure you have never seen before.” “Oh, please tell me what it is,” said Ermino, unaware of the answer he is going to get. “Make a picture of politeness,” Guglielmo replied immediately. After hearing this, Ermino was so embarrassed thanks to this shame that he abandoned the temperament he had sustained until that day and took on a completely opposite character... (Boccaccio,2017:73)



Visaul 3: Boccacio; G(2004). Decameron(pp.71).

This article can be described as a literary work or can be considered as naive because of being a little literary, and that may be true, too. All these evaluations may also be made in accordance with the solutions and suggestions. What is important here and the main point to be explained is that the uniqueness of the human being and his free will should not be endangered. This must be accomplished by passing beyond the current technological conditions without any external intervention into the human body. The digi-god could be equipped with a technology that would not touch free human will just like the understanding "God sees everything and is just" which is common in almost all of the heavenly religions. The crucial thing is that those who will establish this system, which are merely human beings, should establish this on equality, goodness, righteousness, justice and law, and do this order without intervening the cut of human being's jib, protecting the innocent, and not leave it to the mercy of evil and bad people. It cannot be said that the current legal system is indexed to technology yet.

There is no address for human, being a human, possessing human values, but since it has been the creator of the capitalist order and has been identified with it a for a long time, because the devil take the hindmost and they have been trying hard for being the foremost, all examples to remind of all the good, beautiful things that exist in their cores again are taken from the West due to genetic-cultural codes. This is due to the fact that goodness, righteousness and beauty are longed for and expected on the Earth...

“That which is for me through the medium of money – that for which I can pay (i.e., which money can buy) – that am I myself, the possessor of the money.” Karl Marx, Economic and Philosophical Manuscripts (Williamson, 200:19).

Human being, who has to become more individualized together with the pandemic period, will probably start to make production in a self-sufficient way in every sense, and this individual production will help the development of a more moral human nature. As it is known, a producer will bear the instinct to protect the goods he produces, try hard to ensure the necessary environment, and be respectful of both their own rights and the rights of others.

If the whole commercial point of view and understanding change, digital media will no longer be a nightmare for the individual; they may evolve into a very just system where everyone's brains take their right. Consequently, innocent and talented people will have no fear of being used as a digi-slave. Otherwise, slavery will continue in a much more brutal way and the world will turn into a real hell. Most people would not accept such a life.

Every organization and brain that interrupts the natural interaction inflicts a heavy blow on humanity. When you open the channels of knowledge, even the reproduction and living conditions on the planet will be comprehended. And at this point, justice is a must. The reasons for the war environment, the shamelessness, rudeness, stealing and theft we are in never end may be those who get benefit from this environment. If such an organization dominates the entire planet, the world will become uninhabitable for those who try to remain humane.

A digital legal regulation must be created that debits the uniqueness of the digital individual equipped with universal digital media to itself, the field of Law of Interaction must also be structured under this regulation, and all the Interaction Degrees provided by the digi-individual must be limited by digi-law and turned into a state that will provide a moral or material price to the relevant person.

"An indicator is what substitutes for something else for a person in terms of interest or capacity." C.S. Peirce (Williamson, 2000:19)

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EDUCATION OF SOCIAL WORKERS IN AREA OF INTERNATIONAL SOCIAL WORK

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Abstract

The aim of the article is to identify existing approaches to education in international social work. Furthermore, to understand the role of international social work in the education of social workers and to discuss the possible application of the approach of education of social workers in international social work to the Czech education system.

Keywords: International Social Work, Social Work, Education.

Introduction

In this text I will present my dissertation project entitled The concept of education of social workers in international social work (ISW).

International social work (ISW) is social work (SW) that faces the challenges of a globalized world. According to Healy (2001), SMEs are actually social work performed and studied around the world, interconnected and interacting. It includes “domestic practice and its promotion, international professional exchange, international practice, international policy development and enforcement.” Cox and Pawar (2006) place great emphasis on the global context of SMEs, which has a social, organizational, ideological and political dimension. The global concept of SMEs is based on an integrated approach, which must include human, social, economic and environmental components, as well as a huge cultural diversity. International social work often addresses the negative effects of globalization (such as climate change), which can manifest itself at the local level, for example in the form of long-term drought and subsequent famine. The solution to such a problem must then include all the above-mentioned components. The knowledge, experience and approaches of SMEs are then applied in the Czech Republic when working with migrants and minorities. Internationally, SMEs are involved in humanitarian and development aid, community development, student internships, research, professional and study exchanges.

Theoretical Context

In the next chapter I will focus on defining the key concepts of the dissertation and their theoretical conceptualization. The key is the concept of “international social work”. As with most terms, it is very difficult to create a uniform and always valid definition of this phenomenon. The concept of international social work is often discussed in the social work literature (Hokenstad et al., 1992; Healy, 2001; Cox and Pawar, 2006; etc.), however, there is no clear consensus on the exact definition of what should make it up.

In recent publications (Healy, 2008; Dominelli, 2010), ISW have been defined in the following ways. Healy (2008, p. 13) defined ISW as: “professional activity at the international level and competence for this activity performed by the social work profession and its members. International activity has four dimensions, including (1) internationally linked domestic methods and advocacy, (2) professional exchange, (3) international practice, and (4) international policy for the development and promotion of social work.”

Dominelli (2010, p.24) define it as follows: “International social work consists of promoting global and local social work education in order to create an integrated profession that responds effectively to both global challenges in education and practice. which have a significant impact on the quality of life of a large part of the planet's population.”

Social work is very closely linked to the values on which it was built. The same, of course, applies to international social work. Its roots in European culture are linked to antiquity, Judaism, Christianity and the Enlightenment. Values such as respect for human dignity, the right to self-determination, freedom, equality, which are enshrined in the code of ethics of the International Federation of Social Workers (IFSW) [5], are “Western” values. When social work within the United Nations was recognized as an international profession in 1951 (Crisp: 2017), social workers began to learn how to apply social work to UN goals, especially in the poorest, often postcolonial, countries, and social workers began to meet with other cultures and other value frameworks. When missionaries strive for a qualitative change in the local population, their efforts go hand in hand with evangelism, which in itself means spreading Christian values that largely overlap with the values of social work. In an SME that is secularized, the main “cornerstones” (which are still discussed today) are indigenization, universalism, and imperialism (Gray: 2005).

Research Objectives And Research Issue

The objectives of the article are divided into three areas. The symbolic goal of the thesis is to draw attention to the role of ISW in the education of workers and the lack of knowledge about approaches to education in ISW. Another, ie application goal is the effort to formulate knowledge that could help universities in the Czechia to realize how they educate social workers in ISW at relevant foreign schools.

Outline Of Research Design

The project will be realized via a qualitative strategy. To answer a research question, I need to know and understand the concepts and models of education in international social work. a methodological approach called a case study. Berg (2001) characterizes a case study as a methodological approach that involves gathering a sufficient amount of information about a particular individual, social environment, event, group, or organization. The goal of the case study is to help the researcher effectively understand how it works or works.

The terminology of the case study is not entirely stable, it is mainly due to different theoretical backgrounds. Hendl (2005) talks about realism, postpositivism, constructivism or interpretativism. There are two main directions in foreign literature, the first being Stake (1995), which is based on an interpretive socio-constructivist paradigm. The second direction was defined by Yin (2014) and is based on the post-positivist paradigm.

The typology of case studies according to the observed case will be used (Hendl, 2005), more specifically the study of organizations and institutions, as it best corresponds to the purposes of this research.

Stake (1995) describes three types of case studies: (1) an intrinsic case study - which deals with a case for its own sake, with the goal of a holistic understanding of a particular case; (2) instrumental cases - the aim is to understand the external theoretical questions of how and why the phenomenon works in its current form; (3) collective case study - means an in-depth examination of several instrumental cases on the basis of which a more general phenomenon or problem can be understood. I believe that the effort to identify approaches and concepts of education of social workers in ISW represents a corresponding more general problem, which I want to understand, so I propose to proceed in the form of a collective case study.

Yin (1994) further divides case studies according to their basic research task, ie depending on the required type of result into exploratory, explanatory, descriptive and evaluation. Closest to the nature of this research is a descriptive study to provide a description of the case under study.

For data collection will be used - especially semi-structured interview, document analysis and participatory observation. The chosen subject of research will be the applied approaches of education to the education of social workers within ISW and the chosen subject of research will be the relevant schools where these approaches to education are applied.

Conclusion

It is difficult to map schools in which international social work is taught internationally, because it is often taught as part of social work teaching. There was an effort to create a common international curriculum in social work (Crisp: 2017). Only schools of the same value group (EU and Australia) participated in the project, however, a common curriculum could not be created, which only confirms the absolute binding of SP and SME to the context (context bound). That is why the exchange of experience and international practice is absolutely essential for SMEs. In the Czech Republic, a bachelor's program in Social and Humanitarian Work was established at Caritas -VOŠ sociální in Olomouc in cooperation with the Faculty of Cyril and Methodius, where each year includes teaching Theory and Methods of SMEs, in which students are introduced to the international context of SP and the most important methods. and pitfalls. Part of the study is a three-month international internship, where students learn about social and community work in the countries of four continents.

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EDUCATIONAL COMPETENCE OF VOCATIONAL SCHOOL STUDENTS

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Abstract

The aim of this article is to give a systematic information about the academical competencies of vocational school students who are enrolling in science departments of the school as computer, electric and machine. The students participated to this study are selected from the successful parts of the departments who are able to solve critical and difficult problems from their study area. Data are collected in the systematic approach containing competencies, activities and abilities based on the academic perspective. The results do not give a sufficient level of academic performance for vocational school students.

Keywords: academical competency, abilities, scientific level, vocational school

Introduction

Turkish vocational school training aims the development of students' professional activity. Vocational school students' knowledge and experience for their next working life need be organize in a systematic environment they will enroll together. In the technological context, the professional vocational school students have to be able to modulate unusual situations in the theoretical perspective and able to design the necessity confirmations from the focused operation (Zhirkova and Absalyamova, 2013). In every area of modern working life, abilities for personal improvements and developments to reach the professional level that these necessities give his/her position as a worker or a staff in the social life. According to Pidkasisty et al. (2013), such a personal environment could be organized with the competency-based approach that has the essential practical plan of vocational school modernization in which it has educational modification and students' training model organization to prove its quality. These necessities should relate to students' development mathematical background. The examination of the literature has resulted that the vocational school students' competence requisites has not been analyzed and introduced at the theoretical, and so practical level.

In last decades, it has been conducted some research on the competency-based approaches in educational area (Ryndina, 2011; Latypov and Sabirova, 2013; Peter and Hoffman, 2014; Jun-you et al., 2015; Barry, 1994). According to these studies, it is not possible to reach a general and unique expression of the concept of competence while the papers present different approaches and commands about competence. Khutorskoi (2013) gives us a systematic perspective of the term competence that is "set requirement to a learner's educational training, and competency as already accomplished personal quality and the minimum experience in relation to the activity in the designated sphere". Moreover, the concept of educational competence is determined in some research papers as a quality level for personality or ability for operational activity (Erica, 1999). We can briefly say that there is a common way of the above approaches for student's competence which he/she should get the ability for independent operational activity in a special context. Levedev (2009) gives a classification for educational competence in three levels ordered approach: subject competence, all-subject competence and meta subject competence. He stated that meta-subject competence contains all ways of educational competences such as logic, thought and creative process of students' information. We believe that learning of some entities of competence in traditional vocational education system couldn't give the general context of competence to the students.

Yarullin and Tsyrukun (2015) determined some basic criteria on the educational competence development of students for the basic subjects of mathematics. According to the authors, the following items are essential to reach the educational competence development for the students taught mathematics in vocational education context:

- Analyzing of the current educational competence model to provide a systematic model.
- Constructing of the model for students' educational competences for their vocational program as that aims, responsibilities, plan, context, results.
- Adapting of technological materials to the teaching and learning program.
- Organizing educational methods to rich educational competence including students independent study activities.
- Determining of the evaluation steps to classify vocational school students' competence in this program.

On The Structure of Educational Technology Development

Bushmeleva and Razova (2014) figure a systematic model of educational competence development using mathematical logic. In this model, mathematics lectures are used to make simple students' educational competence such as designing of a task, analyzing of some difficult or abstract concepts, and to determine the problem-solving model. Their educational competence development model could be briefly expressed as below:

1. Motivational competence
 - cognitive activity
 - to manage cognitive difficulties
 - identity
 - self-orientation
 - attitudes for educational activity
2. Communicational competence
 - working capacity in a group
 - coordination ability
 - collaboration in a project team
3. Cognitive competence
 - ability to aware of the pure idea
 - ability to adapt the technology in the study
4. Operational competence
 - problem solving
 - constructing hypothesis
 - observing ability
 - classifying ability
 - doing experiment
 - analyzing of a material

From the above axiomatization of the educational competence, we can say that by using of several pedagogical components, the competence development is realizable at students' level. Many problems coming from social life or other area of the life could be expressed mathematically, and this ability plan an essential role on the developing of educational competence in vocational school students' educational activities. Moreover, having this ability could motivate students to focus on more effective, meaning, and important projects creating from their study area.

The motivational competence has the meaning that students' concentration to active study in the mathematical context and conducting of the study in this approach (Bushmeleva and Razova, 2014; Lepage and Kratochwill, 2004). According to the authors, the mathematical subjects that basic statistics and probability theory are basic tools to develop students' motivational competence. Showing daily practical applications, students be familiar with the mathematical symbols of the study, create statistical diagrams and check the hypothesis of the problem coming from their study area.

The communicational competence is the social way of educational competence for vocational school students (Greet et al., 2014; Morton, Dennis and Gray, 1972; Richard and Keith, 2007; Singh, P. and Manser, P., 2000). It contains the basic abilities such as working in a team mean that have ability to make dialogs with the member of the team, coordinating of some actions mean that ability to order and hold the processes in the study, collaborating with the members mean that ability to make beneficial dialogs needed for the study.

The cognitive competence development of students is the mean that using of basic course materials, be able to benefit from different connected sources, to establish relations between the objects, and to applicate the methods needed for the study activities. For this reason, students need to be taught with the basic area of mathematics that basic algebra, geometry in R^n system, and elementary calculus. Bushmeleva and Razova (2014) especially stressed that linear and non-linear equation solutions, game theory are important subjects in the development of educational competence of students.

The operational competency is the concrete and active way of the development of the educational competence because of its practical nature. In this step, students conduct practical studies to test the validity of the problem and to reach a correct solution of the problem.

Yarullin and Tsyrkun (2015) exemplified the above strategy in science context unifying the lecture concepts and technological activity as a correlation between secondary education and higher education in Russian education system.

- A. Components of connection between an effective secondary education and a successful higher education for students enrolled in basic science departments such as mathematics or computer sciences. The scores are composed of the following GPAs (Grand, Point, Average):
 - the school certificates
 - the humanitarian
 - the exact disciplines
 - the majors entering the university

- B. Dependency of a students' answers rate and rate of physical parameters of a student such as height
- C. Individual descriptions on the solution of quadratic equations
- D. Description of a game and presentation it with a matrix form:
 - describing all strategies of the game
 - constructing a table for the prizes of the players in the game
 - registering of all possible results for the prizes
 - configuring the players' strategies and express it mathematically
 - explaining of the model to find the real strategy
 - finding of the true person in the play
 - recommending of the valid solution of the strategical game

Students' Educational Competence

According to Yarullin and Tsyrukun (2015), educational competence could be categorized in seven module that are educational competence, communicational competence, cultural competence, information competence, social competence, self-improvement competence, and semantic competence. They briefly explained these components as below.

- educational competence: it means students' individual competences such as logical approaches, and methodological concepts when they conduct educational activity.
- communicational competence: this competence deal with students' interactions with each other, and their abilities to work together group members.
- cultural competence: in this competence, students must be well-informed about an educational activity, and they have to manage an experimental activity.
- informatics competence: it includes some scientific abilities such as that organizing and transforming of information, analyzing, and interpreting of information.
- social competence: it is similar to cultural competence that activities in social, public or civil arena at the mastering level.
- self-improvement competence: it relates to the self-confidence, able to develop individual capacity, and to have own personal interests and selections in the modern life.
- semantic competence: it is the most synthetic competence that serve to students as their abilities in order to understand the surrounding world.

On The Findings of an Experimental Study

This experimental study was conducted to determine the effect of the developed technology, and the students' motivational performance in the educational process (Yarullin and Tsyrukun, 2015). The authors first classified the level of educational competence, then applied them on the departments that Mathematics, Physics, informatics, and computer science in Russian higher education system. In this evaluation, educational competence was evaluated in seven abilities scored by the authors as that

- 1p. increasing of professional competence
- 2p. determining and expressing of the problems
- 3p. composing the program of conducted educational study
- 4p. applying of the technologies on the project
- 5p. interpreting of the results of the study
- 6p. generalizing of the results of the study
- 7p. extended reporting of the results

The experimental study conducted 60 university students, and the evaluation of the education competence development was made in four categories: 3-perfect mastery; 2-mastery; 1- weak mastery; 0- no mastery. Also, the authors leveled the correlation of the data as that: 100–75% = optimum; 74–55% = admissible; 54-25% = critical; 24-0 % = inadmissible. In table 1, the finding of the experimental study was presented (Yarullin and Tsyrukun, 2015).

Table 1. The educational competence development level (Yarullin and Tsyrukun, 2015)

		Abilities						
		1	2	3	4	5	6	7
Level of development	Perfect mastery	26.7	23.3	16.7	26.7	20.0	36.7	43.3
	Mastery	63.3	63.3	63.3	53.3	80.0	56.7	36.7
	Weak mastery	13.4	13.4	20.0	–	6.6	–	20.0
	No mastery	10.0	–	6.6	–	–	–	–

Conclusion

The data of this descriptive study is collected in the systematic approach containing competencies, activities and abilities based on the academic perspective. The results do not present a sufficient level of educational performance for vocational school students. According to us, the context of educational competence is a large based on the vision of high performance of vocational school students. Also, vocational school education also needs a large environment of education competence perspective in order to present the basic structure of education. The systematic approach expressed in this paper could be only a brief version of the subject, and students' educational competence at high education level.

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EFFECT OF DATABASE ORIENTED LEARNING (DBOL) IN DEVELOPING CONSTRUCTIVISM AT HIGHER EDUCATION LEVEL

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Abstract

Students at the undergraduate level are facing many challenges in higher education particularly in the subjects that are heavily based on problem-solving. The major challenges faced by the students are that they should remember, understand and use so many values, laws, basic principles, facts and phenomena frequently. The authors attempted to develop the software using database technology for assisting learners. This approach is called 'Database oriented learning (DBOL)'. Database Oriented Learning is based on the principles of constructing knowledge comprehensively. Constructivism emphasizes the need for acquiring new knowledge, understand it and linked it with the previous one. Based on this idea, the authors developed software using the database management system. This software can be used as a personalized repository for the learner. Students can store the facts, principles, phenomenon and values that they understand well. Students can retrieve it whenever and wherever required. Students can update and modify the data if required. The experimental method was used in this study. From the database, information can be retrieved anytime and anywhere. An attempt has been made in this paper to connect the constructivism with database-oriented learning. Two Group Experimental Design was used for the study. The results were analyzed with learning objectives like Remember, Understand and Application. The results provide statistical evidence of the association between database-oriented learning and constructivism.

Keywords: Database oriented learning, Constructivism, Higher Education, Cognitive variables

Introduction

Applying database technology in learning is an emerging interdisciplinary field also known as Database Oriented Learning. Learning at the higher education level should be a blend of learning and also acquiring skill in the relevant discipline. Both in the behaviourism and the cognitivism the learning outcome can be measured through performance and learning outcomes based on learning objectives. On the other hand, constructivism emphasized individualized learning and an open-ended learning experience. The conundrum that constructivism poses for instructional designers, however, is that if each individual is responsible for knowledge construction, how can we as designers determine and ensure a common set of outcomes for learning (Jonassen, 2005). A Learner can get learning experience through active engagement. Problem-solving will be a major task. They are encouraged in learning with concrete evidence. The ideas behind the cognitivism can be used in learning when it is incorporated with modern technologies. Purposeful knowledge construction may be facilitated by database technology.

A database is defined as a set of a logically coherent, organized collection of interrelated data. Databases are used to manage information as required by the user. The Database is primarily designed to provide more flexibility, speed and accessibility. The Databases are developed using designing and modelling techniques. Database technology is an emerging field that helps the user in managing data and information, Big data analysis, information processing and visualization. With the support of this database technology, courseware can be maintained by the learner based on their interest and ability. This will be helpful for learning complex areas in the syllabus easily. The software for this purpose can be prepared using the relational model of the database management system (DBMS). Constructivism suggests that learner should be practiced to solve real-life problems and to carryout activates and experiments on their own by means of incorporating with the previous knowledge. This approach will be helpful in learning when it is incorporated with modern technologies. In order to study the effect of database-oriented learning, achievement test was conducted and the results are analyzed in all the domains of learning objectives.

Theoretical framework

The content knowledge does not necessarily impact general scientific reasoning. Conceptual understanding and problem-solving skills are important to the students. (Mashood K.K. And Vijay A. Singh, 2019). Through the use of a critical research model proposed by Skovsmose and Borda, the development process was formed as close cooperation between academics and researches in both the constructivism of the pedagogical changes and the responses to a particular educational problem during the process. (Carolx Hernandez, Ole Ravn, Shelton M, 2014). Students are interested in using computers for their learning. Technology-enabled learning is the application

of digital technology in the educative process (Kirkwood, A., & Price, L, 2016). It is important to adopt technology in learning and evaluate the performance of learners under the support of technology. (Aditi Avasthi, 2019). Data mining is an advanced system through which one can easily analyze the knowledge pattern of an individual as well as problems faced in acquiring new knowledge. (Ananthi Sheshasayee and Nazreen Bee M, 2018).

Operational Definitions

Database oriented Learning (DBOL) is a learning approach through which a learner can store, analyze, link previous knowledge and present the information to others. The term **cognitive** is connected with thinking or the conscious mental process involved in knowing, learning and understanding things. Cognitive variables are used to process information. These variables are used to describe why one learner is lacking in learning ability, yet exhibits high competence in a specific area. In this study, cognitive variables associated with learning such as Remember, Understand and Application is applied. **Effectiveness** in this study refers to the ability to produce the desired result. It means it has an intended outcome and produces a deep, vivid and vibrant impression.

Development of Tool for Database Oriented Learning

The authors developed a tool for database-oriented learning by using the following software tools.

- MySQL 5.5.60 / MariaDB
 - Apache 2.4.6
 - Web Development language: PHP 5.6.38
 - Front –end frame work: Bootstrap 4, HTML5/CSS3/JavaScript/Ajax/Slim REST API
- Relational Database Model is used for this purpose.
The major components of the database software include
- Home page
 - Admin Page
 - Notes page
 - Central repository
 - User domain

In the first page called Home page, the designers used the LOGO of the software and particulars about the designers. Login credentials should be provided to the user so that they could enter into the main section of the software. The main objectives of this software are to store the content, update the information, and retrieve the information from the repository. The database repository is established to store learning materials. This is called memory allocation.

Memory allocation is carried out by means of following steps

- a. Checking the memory location needed for the task
- b. Selecting the suitable memory allocation model
- c. Executing the memory map

Linking is another process used in the software for binding an external reference with the link-time address

Objectives of the study

- To study the effect of Database Oriented Learning Approach in learning at the higher education level
- To find out the extent of Database Oriented Learning at higher education level in realizing the educational objectives in the following dimensions.
 - Remember
 - Understand
 - Skill

Hypotheses

- Database oriented learning has its impact on learning based on constructivism at the higher education level
- Database oriented learning is an effective one for remembering, understanding and acquiring skill at the higher education level

Experimental Design

The researchers used the experimental method for this study. Two group experimental design was used to test the learning outcome of the learners in experimental as well as control group. This design was used to compare the status of a group that has received an experimental treatment with one that has not. The sample was divided into two different groups. The Pre-test was conducted at the beginning of this study with the same question paper for both the groups. All the questions are problem-oriented and open-ended. Questions were prepared based on the blueprint in which marks were distributed to various kinds of questions such as remembering oriented,

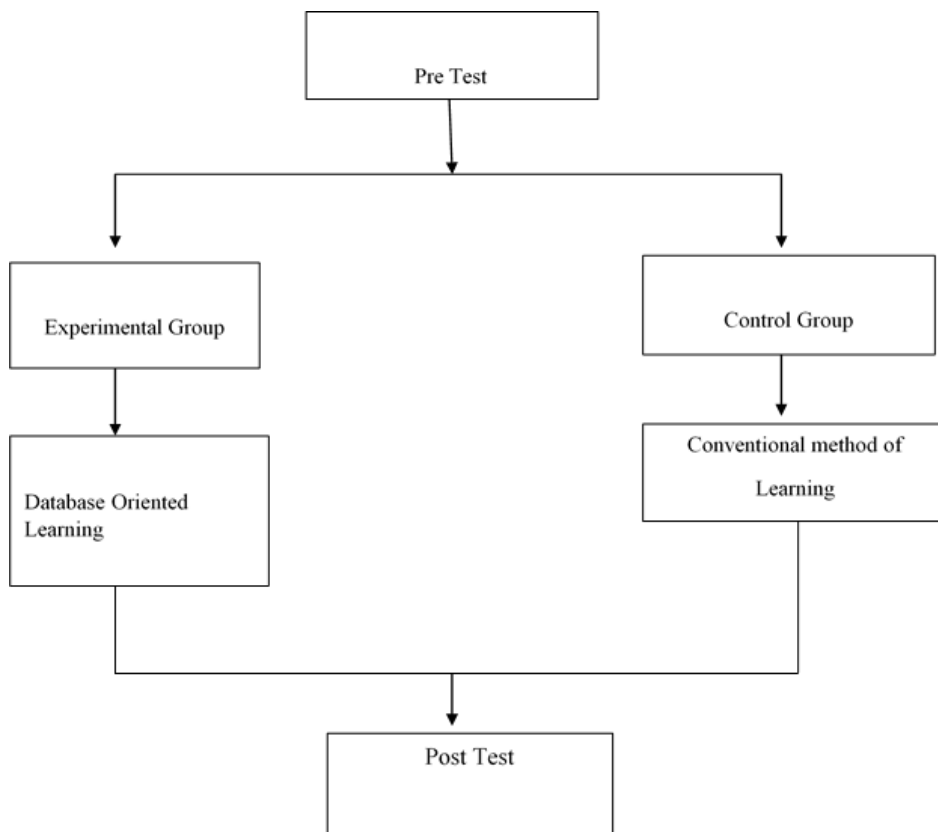
understanding oriented and skills oriented. Equal weightage was given to each instructional objective. The students who preferred the database oriented learning was trained with the newly developed database software using the relational model of the database management system. Technical and operational support was provided to the students. The students who preferred conventional method was attended their regular classwork. The teacher conducted the class for these students and they are provided with necessary learning resources. They have visited the library to search the content from books, journals and encyclopedia. Peer group discussion was allowed to both groups. After 48 days, Post-test was conducted for both the groups at the same schedule. The same question paper was used for the posttest also but the questions were shuffled. The results were analyzed statistically. The mean scores were analyzed for both the groups. t-test was conducted. The results were tabulated.

Sample Technique

The students at the undergraduate level in the Bharathidasan University, Tamilnadu, India formed the universe of the study. 84 students studying UG programmes in four Arts and Science colleges were selected as sample for this purpose. Purposive sampling method was used for sample selection. Groups were divided based on the preference by the student. Students were asked to suggest their preference. 46 students preferred the database oriented learning and 38 students preferred conventional learning. The treatment variables were the learning strategies namely

- (a) Database oriented learning
 - (b) A Conventional method of learning.
- The dependent variable was “Achievement of students”.

The flowchart for the conduct of the experiment is given below.



Analysis and Interpretation

The data were analyzed and interpreted in a systematic way.

- **Hypothesis 1: Database oriented learning has its impact on learning based on constructivism at the higher education level**

Table -1 Mean gain scores between the experimental and control group

Group	Size (N)	Mean gain score	SD	t – value	p - value	Remark
Experimental	46	11.21	4.66	9.04	<0.00001	Significant at 0.05 level
Control	38	3.32	1.21			

The calculated t value 9.04. Since the p-value is less than 0.00001, the difference in mean scores is significant at 0.05 level of significance. Thus the mean score differs significantly. The higher mean gain score of the experimental group prove that students who have exposed with the database oriented learning have performed better than the students who preferred the conventional learning. Hence it is emphatically be said that the Database oriented learning was superior to that of the conventional learning

. The hypothesis is accepted at 0.05 level of significance

Hypothesis 2: Database oriented learning is an effective one for remembering, understanding and acquiring skill at the higher education level

Table -2 Mean gain scores between the experimental and control group with respect to ‘remember’ dimension.

Cognitive variable	Group	Size (N)	Mean gain score	SD	t - value	Remark
Remember	Experimental	46	8.28	3.74	9.09	Significant*
	Control	38	2.43	1.50		

The above table reveals that the mean gain scores between the two groups are significant at 0.05 level of significance. The higher mean gain score of the experimental group proves that the students who were exposed with the database oriented learning performed well in the remember dimension. Thus the knowledge is effectively constructed with the help of the database oriented learning.

The hypothesis is accepted at 0.05 level of significance

Table -3 Mean gain scores between the experimental and control group with respect to the ‘Understanding’ dimension.

Cognitive variable	Group	Size (N)	Mean gain score	SD	t - value	Remark
Understand	Experimental	46	1.85	1.98	2.74	Significant
	Control	38	0.87	1.07		

The above table reveals that the mean gain scores between the two groups are significant at 0.05 level of significance. The higher mean gain score of the experimental group proves that the students who were exposed with the database oriented learning performed well in the understanding dimension. Thus the understanding of the concept on the basis of the new knowledge is effective. The scores secured by the students who are exposed with the database oriented learning is moderately better than the students who opted the conventional learning

The hypothesis is accepted at 0.05 level of significance

Table -4 Mean gain scores between the experimental and control group with respect to the ‘Skill’ dimension.

Cognitive variable	Group	Size (N)	Mean gain score	SD	t - value	Remark
Skill	Experimental	46	1.20	1.54	2.55	Significant
	Control	38	0.47	0.69		

The above table reveals that the mean gain scores between the two groups are significant at 0.05 level of significance. The higher mean gain score of the experimental group proves that the students who were exposed with the database oriented learning performed well in the Skill dimension. The scores secured by the students who are exposed with the database oriented learning is moderately better than the students who opted the conventional learning

The hypothesis is accepted at 0.05 level of significance

Findings of the study

Based on the descriptive analysis it is observed that the mean gain score of the experimental group is higher than that of the control group. As far as the 'Remember' variable is concerned, there is a huge difference between the mean gain scores of the experimental group and control group. But when we compare the mean gain scores of 'Understand' and 'Skill' variables, the difference between the mean gain scores are significant but it is marginal. Thus the effect of database oriented learning is high in the case of remembering whereas the effect of database oriented learning is moderate in the case of understanding and skill.

Conclusion

Interactive database software was developed to measure the effect of database oriented learning at an undergraduate level against the conventional method of learning. The present investigation is on the effect of DBOL on learning at the higher education level. The findings of the study reveal that Database oriented learning with respect to the knowledge domain is high. Today, many students are comfortable with the technologies and they acquire and remember knowledge with the help of technology. The importance of database oriented learning in helping students develop their understanding and skill cannot be overemphasized. As educators, we have an important role in helping students at higher education level as they learn with database technology and in guiding our students in the safe, responsible and ethical use of database technology.

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EXAMINATION OF PRE-SERVICE MATHEMATICS TEACHERS' OPINIONS ABOUT PROBLEM SOLVING AND REASONING ACCORDING TO THEIR MATHEMATICAL THINKING LEVELS

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Abstract

Mathematical thinking can be defined as solving the problem encountered as a result of mental activities supported by mathematical knowledge. Mathematical thinking is systematic, correct and quick approach that individuals encounter in their lives. Reasoning is essential to understanding mathematics. Reasoning is correlations and inference of relationships. This ability is revealed as combining, distinguishing, understanding implications, making inferences, reconstructing, changing and improving knowledge. The problem is a situation that the learners face, requires a solution and the solution is not directly known. The purpose of this research is to examine the views of pre-service elementary mathematics teachers on problem solving and reasoning skills according to their mathematical thinking levels. In this study, qualitative and quantitative research approaches are used together. In the quantitative part of the research, correlational survey model was used and the mathematics thinking levels were examined. The qualitative part of the study was designed as a case study. The study group, which belongs to the quantitative part of the research, consists of 107 pre-service teachers who study at the elementary mathematics teaching department of the education faculty of a public university. In the qualitative part of the research, 12 pre-service teachers were selected among 107 pre-service teachers according to certain criteria. According to the research findings, the mathematical thinking levels of pre-service teachers were determined and presented in detail. Qualitative findings were obtained using content analysis. It was determined that pre-service teachers with a high level of mathematical thinking have more comprehensive and broader views than middle and low pre-service teachers.

Keywords: Mathematics education, pre-service teachers, mathematical thinking, problem solving, reasoning.

Introduction

With the developing technology, there is a need for individuals with advanced mathematical thinking skills who attach importance to mathematics and can solve the problems they encounter (MEB, 2018). There is a close relationship between problem solving and mathematical thinking. As a matter of fact, problem solving improves mathematical thinking. However, solving problems alone is not enough development of mathematical thinking. Besides, mathematical disposition is also required in individuals (Schoenfeld, 1992). Mathematical tendency can be defined as knowing the value of mathematics (Kilpatrick, Swafford & Findell, 2001). According to Stacey (2006), although mathematical thinking is a very complex process, it occurs when solving problems. Mathematical thinking is challenging goals of mathematics teaching. Mathematical thinking can be defined as solving the problem encountered as a result of mental activities supported by mathematical knowledge (Lim & Hwa, 2006). Yeşildere (2006) states that if the solution of a problem that requires higher order thinking skills like privatization, generalization, making predictions, constructing hypotheses and proving the established hypotheses, mathematical thinking takes place. At the same time, mathematical thinking occurs not where there are abstract mathematical concepts such as numbers, but also in daily life. Mubark (2005) stated that mathematical thinking includes intuitive thinking as well as analytical thinking. According to Sevgen (2002), mathematical thinking is defined as the systematic, correct and quick approach that individuals encounter in their lives. Mathematics uses reasoning and provides rich opportunities that bridge the fundamental links between mathematical thinking and basic reasoning skills, new insights, and literary traditions (Morsanyi, Prado & Richland, 2018). Mathematical thinking is a basic skill that is predicted to be gained especially in mathematics in the 21st century. Teachers/pre-service teachers need to create effective teaching environment and have the competencies to make arrangements to improve students' mathematical thinking skills (Çelik & Özdemir, 2020) and reasoning. In order to learn and be successful in mathematics, mathematical thinking and mathematical reasoning come to the fore in this process (Öz & Işık, 2017). Thinking mathematically is not a different kind of mathematics, but a broader and more up-to-date (though not infrequently) perspective on mathematics (Devlin, 2012). Effective teaching includes incorporate students' prejudices and build on existing knowledge, both formal and informal (Kilpatrick, Swafford & Findell, 2001). Judgment, reasoning, or in other words reasoning, is the task of reaching conclusion with considering all factors

(Umay, 2003). Reasoning, which is a feature of mathematical thinking (Alkan & Güzel, 2005); it is to adopt a method of thinking, a way of thinking, and making claims with reaching results (Lithner, 2008). Reasoning is the decision or idea forms based on facts, understanding and thinking ability (Kaur, 2009). Reasoning is the process of drawing conclusions from information. Reasoning is essential to understanding mathematics (NCTM, 2000). Reasoning is correlations and inference of relationships. This ability is revealed as combining, distinguishing, understanding implications, making inferences, reconstructing, changing and improving knowledge (Yeşildere & Türnüklü, 2007). Reasoning inductive and deductive thinking, perception, performance speed, comparison, association, grasping, combining, distinguishing, etc. basic abilities is a process that covers. Reasoning is affected by hereditary factors and it is a process that can be developed until the age of 20 (Wood, 2003). Mathematical reasoning is the mathematical thinking that enables the individual to reach a logical result through his thoughts and the relationships he establishes (Artz & Yaloz-Femina, 1999). It is necessary for an individual to make some generalizations about mathematical reasoning, to reach certain results and to develop (Russell, 1999). Thanks to mathematical reasoning, students will be able to both acquire new information based on their own experiences and reshape the obtained information according to changing situations.

In the literature, the term mathematical reasoning is often used implicitly to indicate that the reasoning is of high deductive logical quality (Lithner, 2003). Reasoning was identified as hypothesizing/conjecturing/predicting, analyzing, evaluating, generalizing, connecting, synthesizing/integrating, solving nonroutine problems, and proving/justifying (TIMSS, 2019). The ability to develop reasoning skills has performance indicators such as understanding the importance of mathematical reasoning, organizing activities related to this, using mathematical models, rules and relationships, making predictions, inferences and generalizations, integrating reasoning in life and other disciplines (Berkant & Kandirmaz, 2018). Some indicators that should be taken into account in providing students with reasoning skills are as follows (MEB, 2013: 5);

- a) Defending the accuracy and validity of inferences,
- b) Making logical generalizations and inferences,
- c) Explain and use mathematical patterns and relationships while analyzing a mathematical situation,
- d) Making predictions about the outcome of transactions and measurements using strategies such as rounding, grouping the appropriate numbers, using the first or last digits, or strategies they have developed themselves; and
- e) Making an estimate of the measurement by considering a specific reference point.

Mathematical reasoning is the process of drawing conclusions from information. (NCTM, 2009: 4). Reasoning requires important mathematical competences, such as explaining and discussing mathematical phenomena or expressing the meanings of ideas, concepts, operations, and processes as they develop in certain mathematical tasks (Segerby & Chronaki, 2018). Reasoning is a way of thinking adopted to make claims and achieve results in problem solving or a task (Lithner, 2008; Bergqvist & Lithner, 2012).

Purpose and Importance of the Study

Reasoning and mathematical thinking are essential elements of learning, teaching and learning through mathematics. An important aspect of motivated and enduring mathematics teaching is the ability to make a student's mathematical thinking explored and understandable for their peers (Anthony, Hunter & Hunter, 2015). Mathematical reasoning is defined as the process of obtaining new knowledge by using mathematics' unique tools and thinking techniques based on the available information (MEB, 2013). Mathematical reasoning is the mathematical thinking that enables an individual to reach a logical result thanks to his thoughts and relationships (Artz & Yaloz-Femina, 1999).

The purpose of this study is to examine the opinions of pre-service elementary mathematics teachers regarding their problem solving and reasoning skills according to their mathematical thinking levels. For this aim, these questions were sought.

1. What are the mathematical thinking levels of the pre-service teachers? Do mathematical thinking levels differ according to gender and grade?
2. What are the opinions of the participants selected according to their mathematical thinking levels about problem and problem solving?
3. What are the opinions of the participants selected according to their mathematical thinking levels about reasoning?
4. What are the opinions of the participants selected according to their mathematical thinking levels about relationship between reasoning and problem solving?

Method

Research Model

In this study, qualitative and quantitative research approaches are used together. Quantitative part of the research, correlational survey model was used and the mathematics thinking levels of pre-service teachers were examined. Karasar (2011) stated that correlational survey models can be realized by correlation and comparison. In addition, when looking for a change between two variables in correlation-type relationship searches; In comparison type

relationship searches, it indicates whether there is a differentiation according to the other variable based on the groups formed according to one of the two variables. The qualitative part of the research was designed as a case study. In the qualitative part, pre-service teachers were selected from the pre-service teachers whose mathematical levels were determined according to certain criteria and interviews were conducted. In this respect, phenomenology pattern has been used.

Research Group

This study was conducted with a total of 107 primary school mathematics teacher candidates, 63 female and 44 male, studying in the second, third and fourth grades of a state university's primary school mathematics teacher program in the Southeastern Anatolia Region in Turkey. In the qualitative dimension of the research, 12 pre-service teachers were selected among 107 pre-service teachers according to certain criteria. Criterion sampling technique was used in this study. Because the units of observation can be formed by persons, objects or situations with certain qualities in the criterion sampling method (Yıldırım & Şimşek, 2016).

Data Collection

In the quantitative part of the study Mathematical Thinking Scale developed by Ersoy and Başer (2013) was used to determine the mathematical thinking levels of pre-service teachers. The five-likert type scale consists of 25 items. The scores that can be obtained from the scale vary between 25 and 125. The scale has four sub-dimensions: mathematical thinking skill, reasoning, high level thinking disposition and problem solving. The reliability of the scale was calculated as 0.812 for this study. This result proves that the scale used is valid and reliable. In the qualitative part of the research, interviews were made with participants selected for certain criteria. The interview was carried out using semi structured interview form containing 3 questions. The interview form questions consisted of questions whose scope validity was reviewed by three expert academicians. In addition, the order of the questions in the interview form was changed with the opinions and suggestions of the expert academics. After these stages, the interview form took its final form and was applied to the participants. In addition, the opinions of the pre-service teachers, who obtained the codes and categories for the validity of the research, were quoted one to one.

Analysis Of Data

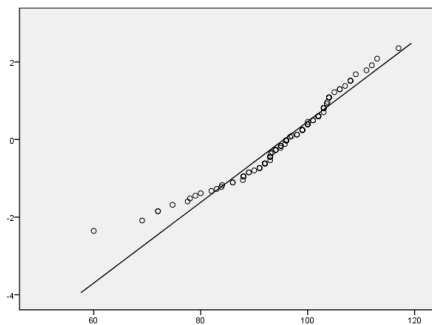
In the quantitative part of the study, statistical analysis methods were used. The descriptive statistics method was used in the analysis of the scores obtained from the scale in order to determine mathematical thinking level about descriptive and predictive. The arithmetic mean intervals were determined according to the formula "sequence width/number of groups to be made" (Tekin, 2009) the pre-service teachers' mathematical thinking levels were evaluated. Arithmetic mean ranges used in evaluation; for "Mathematical Thinking Scale": "1,00-1,80=Never", "1,81-2,60=Rarely", "2,61-3,40= Sometimes", "3,41- 4,20=Often" ve "4,21-5,00= Always". Estimally, independent samples t-test was applied to points obtained from the scale to determine whether the level of mathematical thinking and sub-dimensions of scale (mathematical thinking skill, reasoning, high-level thinking tendency and problem solving) changed according to the genders. In addition, One Way ANOVA was applied to examine whether there was a significant difference between pre-service teachers' grade levels, mathematical thinking levels, and mathematical thinking scale sub-dimensions. Data was analyzed with the SPSS 24. In the qualitative part of the research, the data were subjected to content analysis. Codes were determined by examining all of the data arranged according to the determined main themes and categories were created over these codes. The data were reviewed in detail, rearranged and described according to the determined themes, categories and codes. In addition, separate encodings were made by two different encoders on the data and the percentage of agreement between the encoders was calculated. It is stated that an adequate reliability value will be provided when the percentage of agreement between coders is %70 (Miles & Huberman, 1994). Result of the calculations, the accordance between the coders was found as %82, and this shows that the coding is sufficiently reliable.

Findings

It has been examined whether the data obtained from scales are normally distributed in order to determine the level of pre-service teachers' mathematical thinking. Normality of the data was tested following findings were obtained.

Table 1. Normality of Pre-Test Scores

	Kolmogorov-Smirnov ^a		
	F	df	p
Mathematical Thinking	1.171	107	0,129*



Graph 1. Distribution of Mathematical Thinking

As a result of analyzing the data obtained from the scales in order to determine the level of pre-service teachers' mathematical thinking, the p value was found to be $0,129 > 0,05$ for the mathematical thinking scale. The use of the Kolmogorov-Smirnov test is recommended when the number of samples is $n > 50$ (Büyüköztürk, 2017). This result is also seen in the point distribution graphs. (Graph 1)

The gender and class distributions of the pre-service teachers are presented in table 2. The standard deviation and arithmetic mean values of the points obtained by pre-service teachers from scales and sub-dimensions are presented in table 3.

Table 2. Gender and Class Distributions of the Participation

	Category	N
Gender	Male	44
	Female	63
Class Grade	2 nd Grade	32
	3 rd Grade	26
	4 th Grade	49

Table 3. Standard Deviation and Arithmetic Mean

	N	\bar{x}	Min	Max	Sd	Level of participation
Mathematical Thinking Skills	107	3.64	2.63	4.75	0.38	High
High-Level Thinking Tendency	107	3.98	1.67	5	0.55	High
Reasoning	107	4.11	2	5	0.59	High
Problem Solving	107	3.71	2.43	4.86	0.46	High
Mathematical Thinking Level	107	3.82	2.40	4.68	0.38	High

When the table 2 is examined, 44 of the pre-service teachers are male and 63 are female. On the other hand, when examining the grade levels, 32 pre-service teachers are studying at the 2nd grade, 26 pre-service teachers at the 3rd and 49 pre-service teachers at the 4th grade.

When Table 3 is examined, it has been found that level of the pre-service teachers' mathematical thinking is "high". According to this, mathematical thinking level of the pre-service teachers is upper the medium level. It was determined that the pre-service teachers were in the level of "High" in the all sub-dimensions of mathematical thinking scale. According to this, mathematical thinking skill, reasoning, high-level thinking tendency and problem solving level of the pre-service teachers is upper the medium level.

The independent samples t-test was applied points obtained from the scale to determine whether the level of mathematical thinking scale and sub-dimensions (mathematical thinking skill, reasoning, high-level thinking tendency and problem solving) changed according to the genders. The data obtained by the independent t-test are given in table 4. The mathematical thinking level of pre-service teachers was found to be at a level between high and intermediate level. Additionally, all sub-dimensions of mathematical thinking scale level of pre-service teachers were found high level. It can be said that participants have upper the intermediate level of mathematical thinking.

Table 4. Independent Samples t-test Results

	Gender	N	\bar{x}	Sd	t	p
Mathematical Thinking Skills	Male	44	3.59	0.41	1.225	.223
	Female	63	3.68	0.35		
High-Level Thinking Tendency	Male	44	3.85	0.68	1.878	.065
	Female	63	4.07	0.43		
Reasoning	Male	44	4.00	0.70	1.662	.100
	Female	63	4.19	0.48		
Problem Solving	Male	44	3.69	0.51	.370	.712
	Female	63	3.72	0.43		
Mathematical Thinking Level	Male	44	3.75	0.47	1.620	.108
	Female	63	3.87	0.30		

When Table 4 is taken into consideration, it was determined that the average points of female participations were higher than male participations in the points obtained from both mathematical thinking scale and all sub-dimensions of mathematical thinking scale except the scores obtained from data. This difference isn't statistically significant ($p > .05$). According to this, it can be said that the pre-service teachers' level of mathematical thinking doesn't depend on their gender. At the same time, pre-service teachers' level of sub-dimensions of mathematical thinking scale don't depend on pre-service teachers' gender.

ANOVA was applied to examine whether there is a significant difference between pre-service teachers' grade levels, mathematical thinking levels, and mathematical thinking scale sub-dimensions. The data obtained by the variance analysis are presented in table 5-9.

Table 5. Results of ANOVA of the Mathematical Thinking Skill Sub-dimension

		Sum of Squares	df	Mean Square	F	p
Mathematical Thinking Skills	Between Groups	0.018	2	.009	.060	.941
	Within Groups	15.426	104	.148		
	Total	15.444	106			

When the data in the Table 5 examined, the results of ANOVA showed that the scores of the mathematical thinking skill sub-dimension don't change according to grade levels ($F = .060$; $p > .05$). In other words, there is no significant difference between pre-service teachers' mathematical thinking skill levels and grade levels.

Table 6. Results of ANOVA of the High-Level Thinking Tendency Sub-dimension

		Sum of Squares	df	Mean Square	F	p
High-Level Thinking Tendency	Between Groups	0.683	2	.342	1.114	.332
	Within Groups	31.885	104	.307		
	Total	32.568	106			

When the data in the Table 6 examined, the results of ANOVA showed that the scores of the High-Level Thinking Tendency sub-dimension don't change according to grade levels ($F = 1.114$; $p > .05$). In other words, there is no significant difference between pre-service teachers' High-Level Thinking Tendency levels and grade levels.

Table 7. Results of ANOVA of the Reasoning Sub-dimension

		Sum of Squares	df	Mean Square	F	p
Reasoning	Between Groups	0.330	2	.165	.473	.624
	Within Groups	36.205	104	.348		
	Total	36.535	106			

When the data in the Table 7 examined, the results of ANOVA showed that the scores of the Reasoning sub-dimension don't change according to the grade levels of pre-service teachers ($F = .473$; $p > .05$). In other words, there is no significant difference between Reasoning levels and grade levels.

Table 8. Results of ANOVA of the Problem Solving Sub-dimension

		Sum of Squares	df	Mean Square	F	p
Problem Solving	Between Groups	0.116	2	.058	.267	.766
	Within Groups	22.546	104	.217		
	Total	22.662	106			

When the data in the Table 8 examined, the results of ANOVA showed that the scores of this sub-dimension don't change according to grade levels ($F = .267$; $p > .05$). In other words, there is no significant difference between Problem solving levels and grade levels.

Table 9. Results of ANOVA of the mathematical thinking level

		Sum of Squares	df	Mean Square	F	p
Mathematical Level	Between Groups	0.118	2	.059	.394	.676
	Within Groups	15.563	104	.150		
	Total	15.681	106			

When the data in the Table 9 examined, the results of ANOVA showed that the scores of the *Mathematical Thinking Levels* don't change according to grade levels ($F = 0.394$; $p > .05$). In other words, there is no significant difference between pre-service teachers' *Mathematical Thinking* levels and grade levels.

According to the mathematical thinking levels and mathematical thinking skill levels, a total of 12 pre-service teachers were selected, including low, medium and high (four pre-service teachers from each level).

Table 10. Participants according to their level of mathematical thinking

Mathematical Thinking Level	Participants
High	T1, T2, T3, T4
Medium	T5, T6, T7, T8
Low	T9, T10, T11, T12

According to table 10, high level participants T1, T2, T3, T4; medium level participants T5, T6, T7, T8 and low level participants T9, T10, T11, T12. Interviews were held with the selected participants and presented below.

Opinions about Problem and Problem Solving Skills

In order to reveal the views of the participants about the definition of the problem and to understand the meaning of the problem solving in mathematics, “What do you think is the problem?”, “How would you describe it?” and “What does problem solving in Mathematics mean to you?” questions were asked. The answers received in the interviews with the participants and the categories reached as a result of the interviews are presented below.

Problems and Problem Solving Opinions of High Level Participants

T1: The problem is the events we encounter and seek solutions in daily life and school. Problem solving in mathematics makes me think about problems in our daily life. It allows me to follow alternative methods and steps.

T2: The problem is the statements waiting to be solved. If mathematics is problem solving, we can think of it as expressions waiting to be solved mathematically.

T3: Problem; I think it's annoying things like difficulty or disability. Problem solving is the ability to resist difficulties.

T4: The problem is statements with unknown results. They are expressions that need a solution. Problem solving in mathematics teaches to look at problems with a mathematical perspective.

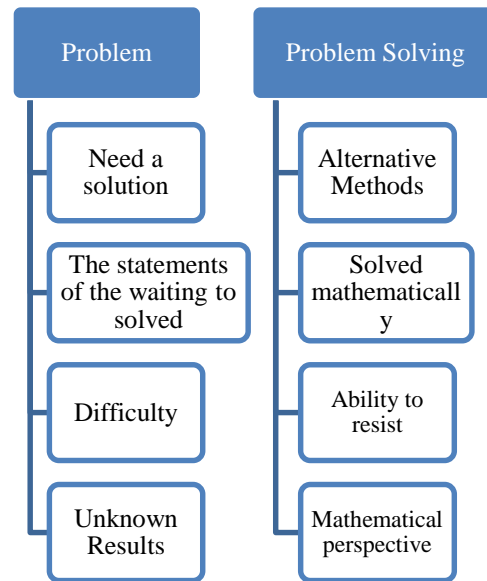


Figure 1. Categories of opinions about the high level pre-service teachers' problem and problem solving skills

When Figure 1 was examined, it was determined that the opinions of the high level participants were in 4 categories for the problem and 4 categories for problem solving. The opinions of the participants about the problem; need a solution, the statements of the waiting to solved, difficulty and unknown results. The opinions of the participants about problem solving are alternative methods, solved mathematically, ability to resist and mathematical perspective.

Problems and Problem Solving Opinions of Medium Level Participants

T5: The problem is a trouble faced by people in their lives. The problem in mathematics is the desired outcome. The problems in mathematics, we are asked to give certain ways and reach the result.

T6: The problem is the situations we need to solve in our daily lives. If we look at problem solving in mathematics, we try to solve this problem by using math knowledge to calculate the situations we encounter in daily life, for example, the gram and price of a product that we will buy from the market.

T7: The problem is a phenomenon whose cause is valid for all kinds of subjects. If we look at problem solving, this is a positive situation for mental development. Because the answer to many questions in mathematics can be found by solving the problems for me. It can be clarified in the brain by connecting it with daily life.

T8: I think it is the questions we carry to the mathematics lesson under the influence of the environment. In other words, the problem is to bring real life to the school environment using mathematical concepts. I think problem solving is very important, at least, the student increases the interest and attitude towards mathematics by associating real life with mathematics. I think that when a student understands what he sees in real life is related to mathematics, he will be more curious about mathematics.

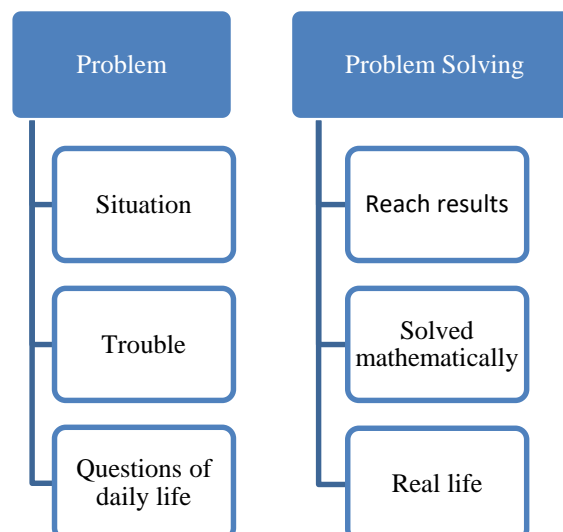


Figure 2. Categories of opinions about the medium level pre-service teachers' problem and problem solving skills

When Figure 2 was examined, it was determined that the opinions of the medium level participants were in 3 categories for the problem and 3 categories for problem solving. The opinions of the participants about the problem; situation, trouble and questions of daily life. The opinions of the participants about problem solving are reach results, solved mathematically and real life.

Problems and Problem Solving Opinions of Low Level Participants

T9: What is the problem? There is a trouble. It can be called the way to solve it. Mathematical problem solving is the problem required to find things with numerical confusion.

T10: The problem is a trouble we encounter. Problem solving means me: Happiness. It gives me pleasure, makes me happy.

T11: To me, finding the answer with scientific methods is the question that needs to be solved with theorems and rules. Improving problem-solving skills is an important part of primary mathematics lessons. Problem, what is problem solving, behaviors shown in problem solving process, learning and teaching activities to be done to develop problem solving skills are emphasized.

T12: The problem for me is the flaws that arise in the operation of a mechanism. Problem solving in mathematics is to solve big data with a practical solution.

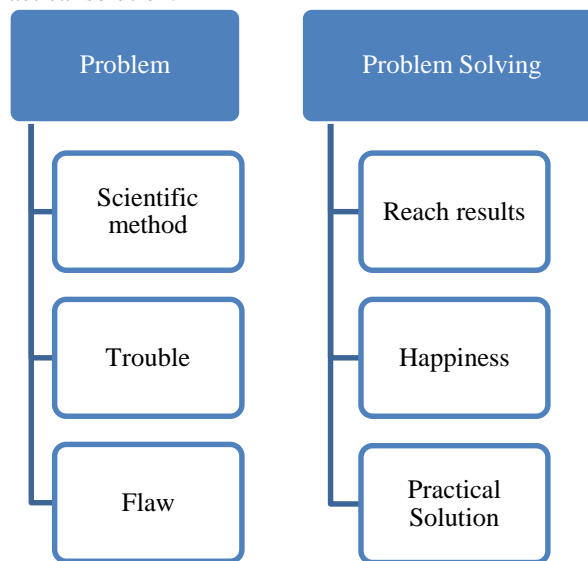


Figure 3. Categories of opinions about the low level pre-service teachers' problem and problem solving skills

When Figure 3 was examined, it was determined that the opinions of the low level participants were in 3 categories for the problem and 3 categories for problem solving. The opinions of the participants about the problem; scientific method, trouble and flaw. The opinions of the participants about problem solving are reach results, happiness and practical solutions.

Opinions about Reasoning Skills

In order to find out what meaning the participants attributed to reasoning skills, the question of “What does mathematical reasoning mean to you through the eyes of a mathematician?” was asked. The answers received in the interviews with the participants and the categories reached as a result of the interviews are presented below.

Opinions on High Level Participants' Reasoning Skills

T1: Mathematical reasoning allows us to progress more systematically and solve logically while solving problems.

T2: Mathematical reasoning means thinking about something mathematically and producing solutions.

T3: Reasoning is, in my view, systematic and logical thinking. An ability to analyze events and situations.

T4: When looking for a solution to the problems we encounter, mathematical reasoning is to put the problems through the filter of our mathematics knowledge.

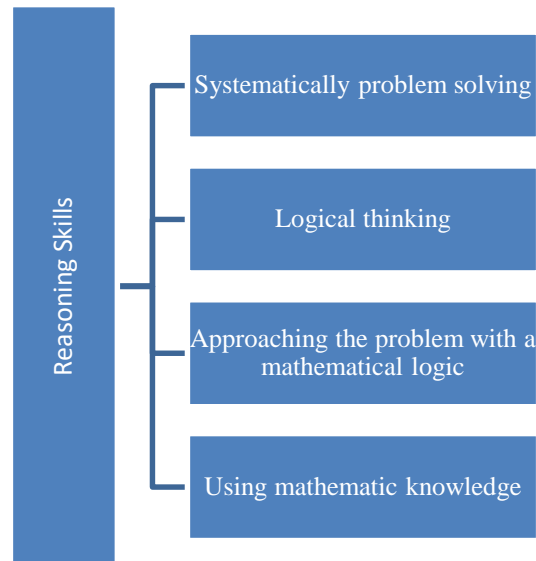


Figure 4. Categories of opinions about the high level pre-service teachers' reasoning skills

When Figure 4 was examined, it was determined that the opinions of the high level participants were in 4 categories for the reasoning skills. The opinions of the participants about the reasoning skills; systematically problem solving, logical thinking, approaching the problem with a mathematical logic and using mathematic knowledge.

Opinions On Medium Level Participants' Reasoning Skills

T5: The given events are to create a short cut of the problems. It is also about linking events with daily life. In addition, it is to make mathematics more understandable by connecting it with daily life.

T6: It is mathematical reasoning that the information we use to solve the problems encountered is mathematical information.

T7: Reasoning is to think from a slightly different and complex perspective rather than thinking straight.

T8: Mathematics is such that I consider the concepts we learned as an application to real life. In other words, to find answers to the problems we face in life with mathematics is to reason.

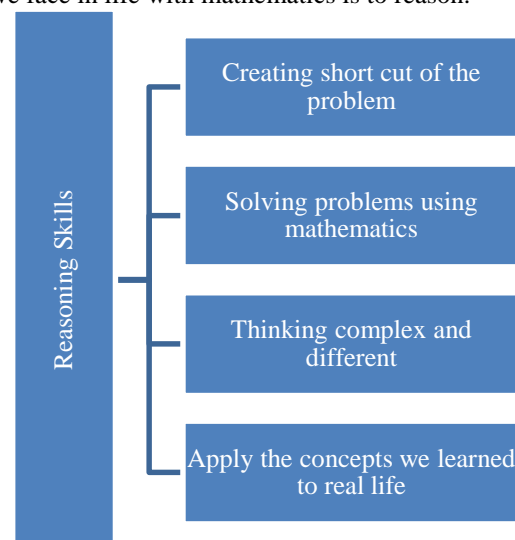


Figure 5. Categories of opinions about the medium level pre-service teachers' reasoning skills

When Figure 5 was examined, it was determined that the opinions of the medium level participants were in 4 categories for the reasoning skills. The opinions of the participants about the reasoning skills; creating short cut of the problem, solving problems using mathematics, thinking complex and different and apply the concepts we learned to real life.

Opinions On Low Level Participants' Reasoning Skills

T9: Mathematical reasoning is to reason the problem encountered in mathematical terms.

T10: What does it mean to me? It seems to me to be able to bring comments to the problems we face.

T11: In mathematics, the facts are reached only by reasoning, not by experiment, by observation. Process priority is associated with reasoning assistance.

T12: Hmm. What is mathematical reasoning, I think it is seeking solutions with data in a statistical and systematic way.

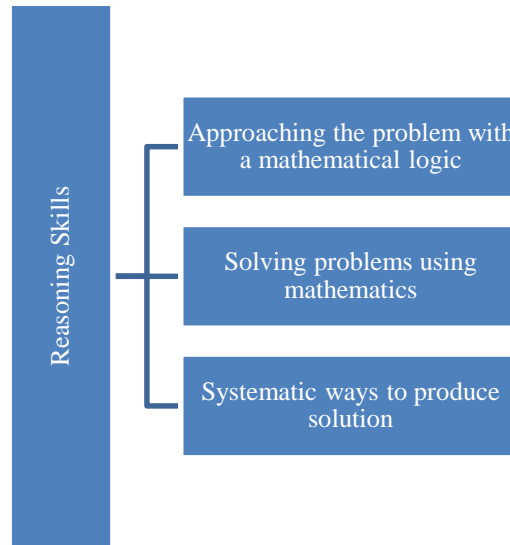


Figure 6. Categories of opinions about the low level pre-service teachers' reasoning skills

When Figure 6 was examined, it was determined that the opinions of the low level participants were in 3 categories for the reasoning skills. The opinions of the participants about the reasoning skills; approaching the problem with a mathematical logic, solving problems using mathematics and systematic ways to produce solution.

Opinions About The Relationship Between Reasoning And Problem Solving Skill

In order to understand the opinions of the participants about the relationship between mathematical reasoning and problem solving, the question of “What do you think is the relationship between Problem Solving and Mathematical Reasoning?” was asked. The answers received in the interviews with the participants and the categories reached as a result of the interviews are presented below.

Opinions On The Relationship Between High Level Participants' Reasoning And Problem Solving Skills

T1: Mathematical reasoning allows us to try many methods for problem solving and to apply them systematically.

T2: Mathematics is actually a problem solving process by reason.

T3: Mathematical reasoning ability plays an important role in systematically solving the problems encountered.

T4: We use mathematical reasoning when solving problems.

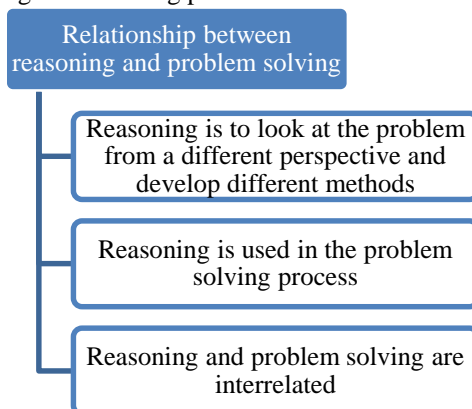


Figure 7. Categories of opinions about the high level pre-service teachers' relationship between problem solving and reasoning

When Figure 7 was examined, it was determined that the opinions of the high level participants were in 3 categories for the relationship between reasoning and problem solving. Opinions of the participants about the relationship between problem solving and reasoning; reasoning is to look at the problem from a different perspective and develop different methods.

Opinions On The Relationship Between Medium Level Participants' Reasoning And Problem Solving Skills

T5: In my opinion, a person who cannot think mathematically cannot solve a problem. One has to reason to solve problems. So you should understand what your math is so that you can solve the problem.

T6: Mathematical reasoning and problem solving are related issues. In other words, if I describe it in its simplest form, it is necessary to reason mathematically to solve the problem in the most accurate and easy way.

T7: If we perform mathematical reasoning successfully, we can solve problems faster and get positive results. In other words, mathematical reasoning and problem solving skills are interrelated.

T8: There is real life for everyone. I summarize the relationship between reasoning and problem solving skill as follows: Moving mathematics to the outside and outside to the classroom explains this relationship.

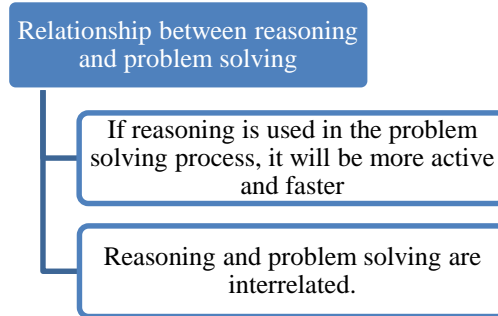


Figure 8. Categories of opinions about the medium level pre-service teachers' relationship between problem solving and reasoning

When Figure 8 was examined, it was determined that the opinions of the medium level participants were in 2 categories for the relationship between reasoning and problem solving. The opinions of the participants about the relationship between reasoning and problem solving; if reasoning is used in the problem solving process, it will be more active and faster, reasoning and problem solving are interrelated.

Opinions On The Relationship Between Low Level Participants' Reasoning And Problem Solving Skills

T9: There is a relationship between them. It brings success.

T10: In order to solve problems, we can comment and solve the problem with mathematical reasoning. I think there is such a relationship and it will help in solving this problem.

T11: As such, mathematical reasoning is actually a problem solving as a mental process. So I would say that the title of problem solving is reasoning.

T12: By reasoning we can solve problems by using less energy in a short time. So for me, this is the relationship briefly.

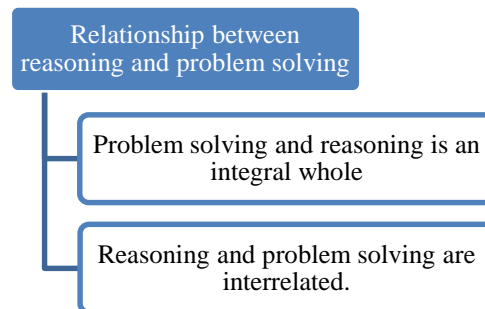


Figure 9. Categories of opinions about the low level pre-service teachers' relationship between problem solving and reasoning

When Figure 9 was examined, it was determined that the opinions of the low level participants were in 2 categories for the relationship between reasoning and problem solving. The opinions of the participants about the relationship between problem solving and reasoning; problem solving and reasoning is an integral whole, problem solving and reasoning are interrelated.

Conclusions

In this study, the views of pre-service primary school mathematics teachers on problem solving and reasoning skills according to their mathematical thinking levels were examined. According to the mathematical thinking levels and mathematical thinking skill levels, a total of 12 pre-service teachers were selected, including low, medium and high (four pre-service teachers from each level). The following conclusions were drawn from the study which aimed to reveal the levels of the mathematical thinking.

As a result of the survey to find the answer to the first question of the researcher, it was determined that the level of the pre-service teachers' mathematical thinking is "high". According to this, mathematical thinking level of the pre-service teachers is upper the medium level. Similar results were reached in the study conducted by Arslan and İlkörücü (2018). Arslan and İlkörücü (2018) found the mathematics thinking levels of pre-service mathematics teachers above the middle level. In this study, it was determined that the pre-service teachers were in the level of "High" in the all sub-dimensions. According to this, mathematical thinking skill, reasoning, high-level thinking tendency and problem solving level upper the medium level. It has been demonstrated through various studies that pre-service teachers' mathematical thinking levels are weak (Cai, 2003; Lutfiyya, 1998; Mubark, 2005; Alkan & Güzel, 2005; Ovayolu, 2010; Umay, 1992). However, in this study, it was found that mathematical thinking levels were high. Updated education and training programs may have been effective in the occurrence of this situation. The development of mathematical thinking, which has an important place in understanding mathematics, depends on environmental-cultural factors (Song & Ginsburg, 1987). Among these factors, classroom practices and teacher attitudes and skills have an important role. It can be stated that there is a need for applications such as mathematical thinking-oriented teaching application for develop the teaching performance of pre- service teachers that will enable mathematical thinking. Also in the study, the average scores of female participations were higher than male participations both mathematical thinking scale and all sub-dimensions except the scores obtained from data. This difference was not statistically significant. According to this, the pre-service teachers' level of mathematical thinking does not depend on their gender. Lutfiyya (1998) found no significant difference between the mathematical thinking skills of female pre-service teachers and the mathematical thinking skills of male pre-service teachers, so Lutfiyya's study and the results of this study are similar. In the studies conducted by Kocaman (2017) and Mubark (2005), it was concluded that mathematical thinking levels didn't differ according to gender. At the same time, pre-service teachers' level of sub-dimensions of mathematical thinking scale do not depend on pre-service teachers' gender. On the other hand, it was examined whether mathematical thinking levels differ according to grade levels. In the analysis, it was concluded that mathematical thinking levels do not change according to the grade level. At the same time, no differentiation was found in mathematical thinking sub-dimensions according to grade level. There is no study in the literature that examines whether the levels of mathematical thinking and its sub-dimensions differ according to the grade levels. Çelik and Özdemir (2020) stated that the highest mean score of the pre- service teachers was in the reasoning dimension and the lowest mean was in the problem-solving dimension. Similar results were obtained in our study. Teachers aware of development of mathematical thinking skills, which are among the goals of the developed curriculum. For this reason, it will be useful to open undergraduate elective courses on how to prepare and apply mathematical thinking activities so that pre-service teachers can gain experience in mathematical thinking processes.

As a result of the analysis of the second question of the research, it was determined that pre-service teachers who have high mathematical thinking levels have more comprehensive and broader views than middle and low pre-service teachers. It has been determined that the number of codes and categories obtained from pre-service teachers with high mathematical thinking levels is higher than the number of codes and categories obtained from pre-service teachers at other levels. According to the results of the study, the pre-service teachers' opinions about mathematical reasoning and problem solving skills were more comprehensive and more developed than the pre-service teachers whose mathematical thinking levels were intermediate and low. In this study, it was determined that the opinions of the high level pre-service teachers about the problem; need a solution, the statements of the waiting to solved, difficulty and unknown results. The opinions of the participants about problem solving are alternative methods, solved mathematically, ability to resist and mathematical perspective. Considering these categories obtained from high level pre-service teachers, it can be seen that pre-service teachers describe the problem in accordance with the literature with a high frequency. Also, pre-service teachers who have medium and low mathematical levels expressed their opinions in accordance with the literature. However, these opinions are less in number and quality than the opinions of pre-service teachers who have high level mathematical thinking. Taşçı's (2005) view stating that the most general meaning of problem solving is individuals' reaching the goals for their problems parallels the views of pre-service teachers. In the study conducted by Çelik, Obay and Özdemir (2020), it was found that similar results were obtained in problem and problem solving. Seferoğlu and Akbıyık (2006) stated that problem solving includes the skills of overcoming a defined challenge, determining the data to be collected about the challenge, generating solutions, and testing the solutions produced.

As a result of the analysis of the third and fourth question, pre-service teachers who have high mathematical thinking levels have more comprehensive and broader views than middle and low pre-service teachers. In terms of the relationship between reasoning and problem solving, pre-service teachers with a high level of mathematical thinking provided more comprehensive and more developed views than those with a medium and low level. The opinions of pre-service teachers who are at a high level are closer to the results of the studies conducted in the literature. It has been determined that the number of codes and categories obtained from pre- service teachers with high mathematical thinking levels is higher than the number of codes and categories obtained from pre-service teachers at other levels. The opinions of the pre-service teachers about reasoning are systematically problem solving, logical thinking, approaching the problem with a mathematical logic and using mathematic knowledge.

At the same time, the views of medium pre-service teachers are compatible with the literature. Considering these categories obtained from high and medium level pre-service teachers, it can be seen that pre-service teachers describe the reasoning in accordance with the literature with a high frequency. These results are consistent with the results of some studies in the literature (Çelik, Obay & Özdemir, 2020; Erdem, 2015; Herbert, Vale, Bragg & Loong, 2015; Öz & Işık, 2017; Brodie, 2010). This study shows that the differentiation of learning environments affects mathematical reasoning. In the study conducted by Çelik, Obay and Özdemir (2020), it was found that similar results were obtained in reasoning. The importance of reasoning not only in mathematics but also in other branches can be explained to teachers and the importance of the subject can be explained with in-service trainings. Opinions about reasoning can be considered as a situation that shows that pre-service teachers have developed a positive knowledge about mathematical reasoning in their educational life up to now and are aware of this information. In this respect, it can be said that it is based on individual interest as a result of their educational experiences (Çelik, Obay & Özdemir, 2020). As stated in the study by Özdemir, Duran and Kaplan (2016), the pre-service teachers stated their opinions in parallel with the statement of solving the problem by running reasoning processes and using the necessary information in the definition of problem solving in the mathematics literature.

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EXAMINING THE MOTIVATION TO TEACH IN PHYSICAL EDUCATION PRESERVICE TEACHERS STUDYING AT KOCAELI UNIVERSITY

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Abstract

The aim of this research is to determine the teaching motivation levels of physical education preservice teachers studying at Kocaeli University. Measured motivation levels were analyzed with variables such as gender, age, income, grade level, whether or not to participate in any out-of-school activity, the year of doing sports, the engagement in professional sports and profession preference order in university entrance exam to find any correlations. Simple random sampling was employed in the study which was conducted with the permission of Kocaeli University Faculty of Sport Sciences Dean's Office. Participants were informed about the research after their permission was attained. 144 preservice teachers who volunteered after being informed were surveyed with Motivation to Teach survey developed by Kauffman, Yılmaz Soylu and Duke (2011) and adapted to Turkish by Güzel Candan and Evin Gencil (2015). Data was analyzed using a t-test and one-way variance with the margin of error was accepted as $p = 0.05$. Analysis revealed that motivation to teach total scores, levels of intrinsic and extrinsic motivation were not significantly correlated with age, grade, income level, professional sports, participation in out-of-school activities, and the order of preference for teaching profession. Only external motivation levels were significantly correlated with engaging in sports for 5-7 years. Preservice teachers' motivation to teach was found to be at a medium level. From these results we would recommend that studies to uncover the cause of the medium motivation and practices to raise their motivation to be employed throughout their education. Lastly, we would recommend a comparison study of motivation to teach between the Physical Education preservice teachers and other preservice teachers.

Keywords: Sports, Motivation to Teach, Intrinsic Motivation, Extrinsic Motivation, Physical Education and Sports Teacher, Preservice Teachers

Introduction

Motivation is defined as an internal event that causes and activates a behavior towards a certain goal (Akbaba, 2006; Akioka & Gilmore, 2013). To act with motivation, there must be a goal and that goal must make sense for the individual. It should not be forgotten that the goal of the motivation is personal, as it varies from person to person. As a matter of fact, it has been stated in the literature that the state of being motivated is also a personal one (Aktan, 2012). In fact, it has been stated that cognitive evaluations are important according to the free will theory, one of the motivation theories. According to the cognitive evaluation theory, it has been suggested that a person has internal motivation if they have the ability to control when they perform an action and feel good while performing the action (Mandigo & Holt, 2000). Motivation is a state that leads to action. When taking any action to achieve a task or goal, some internal or external factors are needed. Studies report that if a person acts of their own free will without any external stimulus, intrinsic motivation is at play, but if they act because of an external effect, they have an external motivation (Akbaba, 2006; Vlachopoulos, Karageorghis, Terry, 2000). Apart from intrinsic and extrinsic motivation, if the person does not enjoy the activity they are engaging in and experience some sort of loss of control as they are engaging, then amotivation; meaning lack of motivation, may occur. Looking at the definitions, it can be said that intrinsic motivation is more personal than extrinsic motivation. As explained by Vallerand et al. (1993) amotivation is the inner motivation to know; It is explained as it involves taking pleasure from actions that include learning, curiosity, explanation and taking action towards understanding something (Kazak, 2004). It is observed that the concept of motivation is studied the most in areas that require a performance, businesses, sports and education. Studies, regardless of the field, emphasize the importance of being motivated for being efficient in any task one engages in.

Teacher's motivation is as important as the student's motivation for success in education. Teachers take on important tasks which play a guiding role in the individual's education, development and vocational prospects. In order for teachers to be efficient in their work, their motivation for work should be kept high. Considering the role model, educator and instructor roles of teachers in their duties; Highly motivated teachers are important for their position as a role model and for an efficient and productive education and training which yields results. Teaching,

which is one of the core duties of teachers; Is defined as an act of helping another individual to learn by facilitating the learning process such as providing information and creating a suitable environment (Alkan, 1987). Professional knowledge and skills acquired in university are also important for teachers to perform these duties. Undergraduate education where teachers gain professional competence; encompasses gaining knowledge and skills about how to do effective teaching and how to teach (Avşar, 2012). It is extremely important that preservice teachers are motivated to teach so that they can develop their competence to pass on their knowledge. When the literature is examined, it is seen that there are a limited number of studies on teacher's motivation to teach, especially physical education preservice teachers. In the literature, it is seen that sports are considered as a starting point in social development, academic development, personality development and even dealing with emotional problems (Bataş & Baltaş 2008; Basso & Suzuki, 2017; De Vries 1981; Erden & Gürdil 2009; Karagün, 2016; Müftüoğlu 2005; Penedo & Dahn, 2005). In light of the information provided by the literature, we questioned the level of motivation to teach that is present in the physical education preservice teachers who will give physical education and sports lessons, which are considered important in the acquisition of sport habits in schools, as they are in the process of gaining professional competence. In this respect, based on the main purpose of examining the teaching motivations of the preservice teachers studying in the department of physical education and sports education, answers were sought for the following questions.

Do preservice teachers' total motivation to teach scores vary according to their socio-demographic characteristics and their involvement in sports?

Do preservice teachers' intrinsic motivation and extrinsic motivation to teach sub-dimension scores differ significantly according to their socio-demographic characteristics and their involvement in sports?

Method

Study Group: The universe of the research consists of 400 physical education and sports preservice teachers studying at Kocaeli University School of Physical Education and Sports, Physical Education and Sports Education Department in the 2019-2020 academic year. The sample group consists of the preservice teachers from the research universe who volunteered after being briefed with 43 from the 1st grade, 38 from the 2nd grade; 31 from 3rd grade, 32 from the 4th grade for a total of 144 students.

Data Collection Tools

Information survey: In order to determine the socio-demographic characteristics of the physical education preservice teachers, a 9-question information questionnaire prepared by the researchers in the light of the information from the literature.

Motivation to Teach Scale: Developed by Kauffman, Yılmaz Soylu and Duke (2011) and adapted to Turkish by Güzel Candan and Evin Gencil (2015). Motivation to Teach Scale is a 6-point Likert type scale with 12 questions and scored as follows: "1: Strongly disagree; 2: Disagree; 3: Sometimes disagree; 4: Sometimes agree; 5: Agree; 6: Strongly agree" The lowest score that can be obtained from the scale is 12 while the highest score is 72. High scores mean a high level of motivation to teach and low scores mean a low level of motivation to teach. The reliability coefficient of the scale was found to be .86 for intrinsic motivation and .76 for extrinsic motivation. In this study, the reliability coefficient Alpha value was found to be .80 for intrinsic motivation, .71 for extrinsic motivation and .72 for the total score.

Data Collection: In line with the purpose of the study in which simple random method was used, research permission was obtained from Kocaeli University Faculty of Sport Sciences Dean's Office. After the approval, students were informed about the research. 144 preservice teachers who voluntarily chose to participate in the research after being informed were surveyed using The Motivation to Teach Scale with 12 questions developed by Kauffman, Yılmaz Soylu and Duke (2011) and adapted into Turkish by Güzel Candan and Evin Gencil (2015) and a 9-question Information questionnaire.

Data Analysis

The data were analyzed in the SPSS 21.0 package program, independent group-t test was used for pairwise cluster comparisons and one-way analysis of variance (ANOVA) was used for three or more cluster comparisons. The margin of error has been taken as 0.05.

Findings

In this section, preservice teachers total scores from the motivation to teach scale and their intrinsic and extrinsic motivation sub-dimension scores are analyzed in accordance with the research questions and presented in tables. Descriptive data are given with comparison of the means.

In Table 1, the motivation scale was evaluated over the total score. The table shows physical education and sports education preservice teachers; 20.8% of whom are female and 79.2% of whom are male. In motivation to teach

total scores there was no significant difference in terms of gender ($p = 0.924$, $p > 0.05$), whether they participated in any activity during leisure time ($p = 0.255$, $p > 0.05$), involvement in professional or amateur sports ($p = 0.317$, $p > 0.05$) [Table 1].

Table 1: T-test results regarding the total scores of students' motivation to teach according to Gender, Leisure Time Activities and Involvement in Professional Sports.

Variables		N	%	Mean±Sd	F	P
Gender	Female	30	20.8	43.63±9.75	3.63	0.924
	Male	114	79.2	43.42±12.31		
Leisure Time Activities	Yes	98	61.1	44.22±12.02	0.004	0.255
	No	46	31.9	41.86±11.25		
Involvement in Professional Sports	Yes	18	12.5	45.9±10.81	0.714	0.317
	No	126	87.5	43.1±10.93		

In Table 2, preservice teachers' motivation to teach scale was examined in terms of intrinsic and extrinsic motivation scores. Table shows preservice teachers having no significant difference in terms of both intrinsic and extrinsic motivation levels according to gender, participation in leisure activities and their involvement in professional sports [Table 2].

Table 2: T-test results for students' intrinsic and extrinsic teaching motivation scores according to Gender, Leisure Time Activities, Involvement in Professional Sports and Age.

Variables		N	%	Intrinsic motivation Mean±Sd	Extrinsic motivation Mean±Sd
Gender	Female	30	20.8	26.77±6.43	16.87±4.40
	Male	114	79.2	25.67±7.97	18.22±7.49
P Value				0.487	0.346
Leisure Time Activities	Yes	98	61.1	26.33±7.76	18.38±7.87
	No	46	31.9	24.98±7.61	17.00±4.32
P Value				0.327	0.270
Involvement in Professional Sports	Yes	18	12.5	27.33±7.35	18.61±4.23
	No	126	87.5	25.69±7.72	17.84±7.28
P Value				0.397	0.663

Table 3 shows the averages of total score attained by the preservice teachers on the motivation to teach scale. As can be seen in the table; There was no significant difference in motivation to teach scale results and the grade level of the participants ($p = 0.852$, $p > 0.05$), the years of sport practice ($p = 0.102$, $p > 0.05$), their income status ($p = 0.965$, $p > 0.05$), profession preference order in university entrance exam ($p = 0.080$, $p > 0.05$) and age groups ($p = 0.100$, $p > 0.05$) [Table 3].

Table 3: Analysis of variance results regarding the total mean scores of the participants' motivation to teach according to their socio-demographic characteristics.

Variables		N	%	Mean±Sd	F	P
Grade	1. Grade	43	29.9	42.4±9.16	0.264	0.852
	2. Grade	38	26.4	44.2±14.57		
	3. Grade	31	21.5	44.5±10.91		
	4. Grade	32	22.2	42.8±12.48		
Years of Sport Practice	2-4 years	5	3.5	48.80±10.66	2.498	0.102
	5-7 years	3	2.1	56.66±10.01		
	8-11 years	7	4.9	43.28±5.93		
	11 years and above	3	2.1	36.66±14.64		
	2000tl and below	37	25.7	43.72±10.63		
	2001-4000tl	60	41.7	43.45±13.08		

Income	4001-6000tl	46	31.9	43.04±11.14	0.035	0.965
Profession Preference Order In University Entrance Exam	1.-5. Choice	116	80.6	44.2±11.24	2.134	0.080
	6.-10. Choice	3	2.1	52.7±7.63		
	11.-15. Choice	9	6.3	43.2±10.94		
	16.-20. Choice	8	5.6	38.6±16.94		
	21. Choice or above	8	5.6	34.3±12.73		
Age	18-20-year-old	69	47.9	42.23±11.90	1.986	0.100
	21-23-year-old	64	43.1	44.51±10.87		
	24-26-year-old	5	3.5	52.20±9.75		
	27-29-year-old	3	2.1	31.00±18.79		
	30-year-old and above	3	2.1	47.66±18.61		

In Table 4, preservice teachers' motivation to teach scale was examined in terms of intrinsic and extrinsic motivation scores. As the table shows, no significant difference was found in terms of both intrinsic and extrinsic motivation levels according to the order of preference for the teaching profession.

However, while there was no significant difference in intrinsic motivation according to the year of doing sports ($p = 0.256$, $p > 0.05$), it was observed that significantly higher scores were obtained especially in those who participated in sports for 5-7 years ($p = 0.045$, $p < 0.05$) in terms of extrinsic motivation levels [Table 4].

Table 4: Results of variance analysis regarding the intrinsic and extrinsic teaching motivation mean scores of the participants according to their socio-demographic characteristics

participants according to their socio-demographic characteristics					
Variables		N	%	Intrinsic motivation	Extrinsic motivation
				Mean±Sd	Mean±Sd
Years of Sport Practice	2-4 years	5	3.5	28.80±8.04	20.00±2.82
	5-7 years	3	2.1	33.67±7.76	23.00±3.60
	8-11 years	7	4.9	25.71±2.92	17.57±3.82
	11 years and above	3	2.1	22.33±11.50	14.33±3.78
	P Value			0.256	0.045
Profession Preference Order In University Entrance Exam	1.-5. Choice	116	80.6	26.23±7.34	18.39±7.22
	6.-10. Choice	3	2.1	31.33±4.04	21.00±3.60
	11.-15. Choice	9	6.3	26.11±7.20	17.11±5.34
	16.-20. Choice	8	5.6	23.75±11.05	15.88±5.69
	21. Choice or above	8	5.6	20.88±9.12	13.25±5.28
P Value				0.216	0.240

Table 5 shows that when examined in terms of the intrinsic and extrinsic motivation sub-dimension scores of the motivation to teach scale, there was no significant difference in terms of both intrinsic and extrinsic motivation scores by class, income level and age groups [Table 5].

Table 5: Variance analysis results regarding the intrinsic and extrinsic motivation to teach scale mean scores of the participants according to their socio-demographic characteristics

Variables				N	%	Intrinsic motivation	Extrinsic motivation
						Mean±Sd	Mean±Sd
Grade	1.	Grade	43	29.9	24.56±6.75	17.88±3.98	
	2.	Grade	38	26.4	26.71±9.26	19.34±11.25	
	3.	Grade	31	21.5	27.87±6.35	16.74±5.22	
	4.	Grade	32	22.2	24.81±7.74	17.50±4.60	
	P Value				0.220	0.465	
2000tl and below			37	25.7	26.71±5.92	17.54±4.59	
2001-4000tl			60	41.7	25.93±8.41	18.48±9.54	

Income	4001-6000tl	46	31.9	25.20±7.67	17.59±4.10
	P Value			0.674	0.748
Age	18-20-year-old	69	47.9	24.99±8.11	18.3±9.00
	21-23-year-old	64	43.1	26.45±6.43	17.48±4.35
	24-26-year-old	5	3.5	31.40±6.38	20.80±3.56
	27-29-year-old	3	2.1	17.33±12.74	13.67±5.50
	30-year-old and above	3	2.1	28.33±14.36	19.33±5.77
	P Value			0.095	0.653

Discussion and Conclusion

In this study, the teaching motivation of preservice teachers who were studying at Kocaeli University Physical and Sports Education Department; It was evaluated whether it changes according to age, gender, class level, income, the order of preference for the teaching profession, whether they participated in an activity in leisure time, the years sports practiced and their involvement in professional Sports.

As can be seen in Tables 1 and 2, analysis showed no significant difference in terms of motivation to teach total scores and intrinsic and extrinsic motivation sub-dimensions of physical education of preservice teachers according to their gender, whether they have leisure time activities and whether they are involved in professional sports. When the literature is examined one can see that; While there isn't sufficient research on the subject, researched areas have been the attitude and general motivation levels towards the teaching profession. Although the attitude towards the teaching profession has not been studied in this study; When the attitude towards the teaching profession is positive, motivation to teach increases (Ayık & Ataş, 2014; Kara, 2010; Zembat et al., 2018) and the findings obtained in this study on motivation to teach were interpreted with the results of studies on attitudes and motivation. In studies evaluating teachers' motivation and attitudes towards physical education and sports education, no significant difference was found between male and female teachers' attitudes towards the teaching profession (Bulut, 2009; Bulut & Doğar, 2006; Demirtaş, Cömert & Özer, 2011; Zembat et al., 2018). While the results of the study above did not find any difference, there are also studies which found that female teachers' attitudes towards physical education and sports education being more positive than male teachers (Hussain et al., 2011; Üstün, Erkan, & Akman, 2004). Although the motivation to teach in the findings of this study does not show a significant difference, studies have shown students lacking in intimate knowledge of the teaching profession have a more negative attitude towards the profession (Kahyaoğlu, Tan & Kaya, 2013) therefore low preference for the teaching profession may lead to negative attitudes due to going in to the field without a conscious decision to do so. The negative attitudes may cause mediocre scores in teaching and compulsory engagement in sports during mandatory practice lessons may also have a worsening effect in this regard.

As can be seen from the analysis and tables; Total scores for motivation to teach were found to be moderate. Although the average score obtained from intrinsic motivation was higher than extrinsic motivation, it was still found to be moderate. When the studies in the literature is examined, it can be seen that similar results are obtained (Ayık & Ataş, 2014). However, in some studies, the motivation of preservice teachers was found to be high (Dereli & Acat, 2010). We would recommend more detailed studies in order to get definite results on the subject. Research shows that participating in any activity in one's leisure time is important for providing motivation (Bilgili, 2019). In our results, most of the preservice teachers stated that they participated in leisure time activities. The fact that most of the preservice teachers participate in leisure time activities, and even if they are not involved in any leisure time activities, the number of practical sports lessons they attend during their education for their profession is important and as sports are also the basis of motivation; One can argue that there was no significant difference between the ones who attend in leisure time activities and the one who don't since positive thinking, problem solving skills, etc. increased their emotional states positively due to their mandatory involvement in aforementioned activities. This interpretation also supports the conclusion that their involvement in professional sports does not affect their motivation to teach.

Total motivation to teach scores are given in Table 3, and variance analysis of the intrinsic and extrinsic teaching motivation subscales are given in tables 4 and 5. Variance analysis results in the tables given show motivation to teach total scores and intrinsic and extrinsic motivation scale scores. Teaching motivation total scores and intrinsic and extrinsic teaching motivation scores did not show a significant difference according to age, grade level of education, income level and profession preference order in university entrance exam. Considering the literature, there are studies reporting that the profession preference order in university entrance exam also affects motivation (Çeliköz, 2009). While there was no significant difference between the total scores for motivation to teach and the intrinsic motivation sub-dimensions according to the years of involvement in sports, a significant difference was found in terms of extrinsic motivation. When the average scores are examined, it is determined that the average score of those who were involved in sports for 5-7 years is higher when compared to others. In the literature, it has been argued that the people who chose to teach are open to learning and have higher expectations from being

educated (Aktürk, 2012). When interpreted on the basis of this information, the preservice teachers whose professions will be sports teaching tend to do sports practices outside of the school voluntarily shows that they perform their duties while enjoying them. One can argue that engaging in sports as an activity to be enjoyed strengthens their interest as the years of involvement in sports increases, and their motivation to teach improves as a result of their experience in their preferred professions.

As a result, the preservice teachers studying in the Department of Physical Education and Sports Education; Motivation to teach total scores, intrinsic and extrinsic motivation levels did not show a significant difference according to age, gender, class level, income, profession preference order in university entrance exam, participation in an activity in leisure time and involvement in professional sports. While, years of involvement in sports, showed that there was no significant difference in terms of motivation to teach total scores and the intrinsic motivation sub-dimension, however the level of extrinsic motivation was found to be significantly higher in those with 5-7 years of involvement in sports. There are no similar studies in the literature to interpret these data. Meanwhile, it was observed that preservice teachers' motivation to teach mean scores were at a medium level. When the preservice teachers' motivation to teach is examined in terms of the variables specified in the purpose of the research; Intrinsic motivation mean scores were found to be higher than extrinsic motivation, but at a medium level. It was determined that the extrinsic motivation average was higher than the intrinsic motivation when years of involvement in sports is taken into account. This situation demonstrated the necessity of planning more detailed studies examining intrinsic and extrinsic motivational factors according to the years of involvement in sports. After all; It is important to plan and test the results of studies that increase the motivation to teach in physical education preservice teachers. In addition, it was considered appropriate to plan studies with physical education teachers who teach sports in schools, which have positive effects on the healthy development of the individual, the protection and improvement of health in terms of psychological, physical and social aspects, to follow up the results given here.

Again, we would recommend studies to be conducted comparing the teaching motivation of physical education preservice teachers and other preservice teachers for a better understanding of the differences in motivation to teach among the different fields of education.

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FACTORS AFFECTING SOCIAL MEDIA LITERACY OF FARMERS IN THAILAND

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Abstract

Thailand is a developing country where farmers have potential to expand the agricultural output. Social media provide a powerful source of information. Thus, social media literacy influences the development of farmer literacy regarding agricultural technology and productivity. The research aims to study: 1) demographic factors and economic factors; 2) social media behavior; 3) media literacy practice; and 4) factors affecting the social media literacy practice of farmers in Thailand. A questionnaire was used to collect data from the sample of 385 farmers in Thailand. Statistical analysis was based on frequency, percentage, mean, maximum, minimum, t-test and F-test. The research results indicated that most of the farmers were female with an average age of 45.42 years and had attained a bachelor's degree or higher with an average annual income of THB 138,992 and average annual expenses of THB 127,518. All the sampled farmers had a smartphone and used it to connect to social media for searching and seeking information on agriculture. The farmers had a moderate level of media literacy. Hypothesis testing showed that gender, age and knowledge were factors affecting the social media literacy of farmers in Thailand.

Introduction

Media impact can influence members of society, especially when it is used by the business sector to arouse desire to consume products and services. This can be worse for a sensitive target. The media literacy is the consumer's ability and skills to transform information by encode and decode the symbol transmitted by using media. It is a process that builds up understanding of communication. Thus, media literacy is essential for children and adolescents who will grow up to be the country's driving force in the future (Wattanasin, 2016). Media literacy is a platform for social inclusion, especially in the new digital environment era, includes the extensive interactions made possible by social media that challenge youngsters to become even more involved as participants in their communities. Media literacy has been identified as a necessary source for social inclusion as well as a platform that facilitates the development of citizenship participation in pluralistic societies (United Nations Alliance of Civilizations, 2010).

Media literacy skills are defined as the abilities to access, analyze, evaluate, create and act using all forms of communication (National Association for Media Literacy Education, 2010). In general, media literacy work can be evaluated in three ways: 1) based on how well the student understands the key concepts of media literacy and the specific concepts and ideas being explored in the lesson or assignment; 2) based on the depth and quality of the student's inquiry and analysis of the questions raised in the lesson or assignment, as well as the student's thoughtfulness in identifying issues and questions to examine; and 3) based on how well the student applies specific technical skills associated with either the medium being studied (movies, TV, video games, etc.), the medium used in the evaluation tool or both (Mediasmarts, 2020).

The agricultural sectors in Thailand have a long played an important role in terms of serving global demand for both basic and processed agricultural products. Agriculture has undergone a series of revolutions that have driven efficiency, yield and profitability to previously unattainable levels. However, a characteristics of Thai farming is it's a small scale since most farms are owned and operated by family members and are inherited from one generation to the next generation. Market forecasts for the next decade suggest the 'Digital Agricultural Revolution' will be the newest paradigm shift which could help to ensure agriculture meets the needs of the global population into the next future (Food and Agriculture Organization of the United Nations, 2019). Thus, social media are the web-based tools of electronic communication that allow users to personally and informally interact, create, share, retrieve and exchange information and ideas in any form (text, pictures, video, etc.) that can be discussed, archived and used by anyone in virtual communities and networks, such that social media is expected to shape the way people interact, share information, form their opinions and also lead individual and collective actions. In the world where social media etiquette is now probably more important than table manners, it cannot

be ignored by the development sector, especially for agricultural extension and advisory services. Moreover, the major activity on social media is searching for news and events and sharing information. In the agricultural sector, social media have gained in popularity; professionals use these media to form networks and farmers are adopting social media to communicate with peers and consumers. The major events in agriculture—new technology or innovations, seminars and meetings, workshops and training, reports, publications—are Tweeted or Hashtagged, with Facebook, Twitter, YouTube and Blogs being the major platforms for agricultural information dissemination. The use of socially integrated messaging apps is also increasing in rural areas, but there is a difference in the intensity of use between developed and developing countries (Suchiradipta Bhattacharjee and Saravanan Raj, 2016).

In agricultural sectors in Thailand, using national technology, generates around 8.4% of the country's GDP and employs 40.0% of the country's labor force, making like a part of the backbone of the Thai economy. The primary agenda of the Thailand 4.0 development plan is focused on 10 targeted industries, one of which is efficient agriculture and biotechnology. Thailand agriculture 4.0 aims to make the most of the abundant national resources and to add more value to products through the adaptation and adoption of the advanced technologies and innovations in farming, in order to increase quality, uniformity and efficiency. Nowadays, most Thai farmers earn THB 132,000 per household annually, according to the Office of Agricultural Economics (OAE). The smart farmers in Thailand should be able to increase annual income over THB 180,000 per household, equivalent to the minimum wage of fresh graduates. However, super-smart farmers should make annual profit of more than THB 500,000 per household (Suvanvitit, 2020). Bangkok has the largest number of active Facebook users, 41 million LINE users and a current annual user growth rate of over 30%. Thailand is ranked 2nd in the world with the most LINE users after Japan (Jantavongso & Daenglim, 2017). Once consumers know what is going on in the media, they have an advantage by being able to explore more information and get access to a variety of quality sources. They can be a part of making better media by protesting about inappropriate sites and articles. Consequently, the receiver can decode the message effectively, which should benefit society as a whole (Wattanasin, 2016).

Thus, the objectives of factors affecting the social media literacy of farmers in Thailand were to study:

- 1) demographic factors and economic factors of farmers in Thailand
- 2) using social media behavior of farmers in Thailand and
- 3) media literacy practice of farmers in Thailand and
- 4) factors affecting social media literacy practice of farmers in Thailand.

The Study

This research calculates sample sizes by using Yamane (1967) provides a simplified formula. Thus, 385 farmers were selected as the sample size for a questionnaire survey used to collect data from farmers in Thailand based on stratified random sampling. Data were analyzed by using frequency, percentage, mean, standard deviation, maximum, minimum, and an independent sample t-test and an F-test at the 0.05 level were used to test hypotheses. The questionnaire applied opened-ended questions regarding demographic and economic factors and social media behavior and applied a Likert scale to evaluate media literacy practice by the farmers. The questionnaire was reviewed by three specialists having knowledge, skills and experience to measure its reliability and validity. Cronbach's coefficient alpha was used to test the reliability of questionnaire which was 0.940.

The criteria and meaning of media literacy practice of farmers were valued using the following scales:

Criteria

- 3= High
- 2= Moderate
- 1= Low

Meaning

- 1.00-1.66 = low level of media literacy practice
- 1.67-2.33 = moderate level of media literacy practice
- 2.34-3.00 = high level of media literacy practice

Findings

Part 1 Demographic and economic factors of farmers in Thailand

(n=385)		
Demographic and economic factors of farmers	Number	Percentage
Gender		
Male	159	41.3
Female	226	58.7
Age (years)		
18-37	131	34.0
38-52	122	31.7
53-83	132	34.3
Mean = 45.42, Minimum = 18, Maximum = 83		
Educational level		
Lower primary school	16	4.2
Primary school	101	26.2
Secondary school	133	34.5
Bachelor's degree or higher	135	35.1
Income (THB/year)		
0-45,000	131	34.0
45,001-120,000	122	31.7
120,001-1,000,000	132	34.3
Mean = 138,992, Minimum = 0, Maximum = 1,000,000		
Expenses (THB/year)		
1,000-45,000	121	31.4
45,001-108,000	134	34.8
108,001-1,000,000	130	33.8
Mean = 127,517.92, Minimum = 1,000, Maximum = 1,000,000		

Table 1 shows that almost of the farmers were female (58.7%) with an average age of 45.42 years, had attained a bachelor's degree or higher and had an average annual income of THB 138,992 and average annual expenses of 127,518. The results were consistent with Suvanvitit (2020) who indicated that the majority of Thai farmers earn THB 132,000 per household annually. This was further supported by a report (Food and Agriculture Organization of the United Nations, 2019) that the agricultural Gross Domestic Product (GDP) of Thailand was only (12.0%) whereas more than (30.0%) of the population were in this sector. Throughout the country, only 23.9 million hectares are arable land (68.0%) for field crops and (23.0%) for perennial trees with the limitation of the irrigation. The country currently has the average farming 5.71 and there have 4 members. Moreover, the average farm size is 4 hectares per household with 16.2 million in the labor force involved in agricultural activities. In the part of an individual, the level of cash income is as low as THB 0.24 million per year with about (60.0%) coming from farm income.

Part 2 Using social media behavior of farmers in Thailand

All the respondents had a smartphone and used it to connect to social media for searching and seeking information in agriculture, which was consistent with Watti and Tiwari (2015) who studied mass media literacy among Indian farmers reported that the majority (56.0%) of respondents accessed the internet from their mobile phones (48.0%). Khan (2019) studied the farmers' use of mobile phone for accessing agricultural information in Pakistan found that the farmers' use of a mobile phone to access agricultural information in Pakistan.

Part 3 Media literacy practice of farmers in Thailand

Table 2 Media literacy practice statistics for farmers in Thailand

(n=385)			
Media literacy	\bar{x}	S.D.	Level of practice
1. Access	1.96	0.595	Moderate
2. Analyze and evaluate	2.12	0.353	Moderate
3. Create and act	2.72	0.298	High
Overall	2.27	0.269	Moderate

\bar{x} 1.00-1.66 = Low, \bar{x} 1.67-2.33 = Moderate, \bar{x} 2.34-3.00 = High

Table 2 shows that the overall media literacy practice of farmers in Thailand was at the moderate level (mean= 2.27), the level of practice of media literacy to create and act was at the high level (mean = 2.72) and analyze and evaluate (mean= 2.12) and access (mean= 1.96) were at the moderate level, similar to Wattanasin (2016) who stated that most students understand how to learn and apply social media literacy at four levels: critically analyze, evaluate, share, and create social media contents. Furthermore, most of the students strongly agreed that the social media provide one of the communication tools for connecting people around the globe. This was supported by Rosnita et al. (2019) who investigated oil palm plantations as the potential commodity in Riau province in Indonesia. They reported that the literacy potential level of the oil palm farmers was at the medium level (average score = 1.72), another two aspects (technical skill and critical understanding skill) were at the medium level followed by communication skill was at the basic level, respectively.

Part 4 Factors affecting social media literacy practice of farmers in Thailand

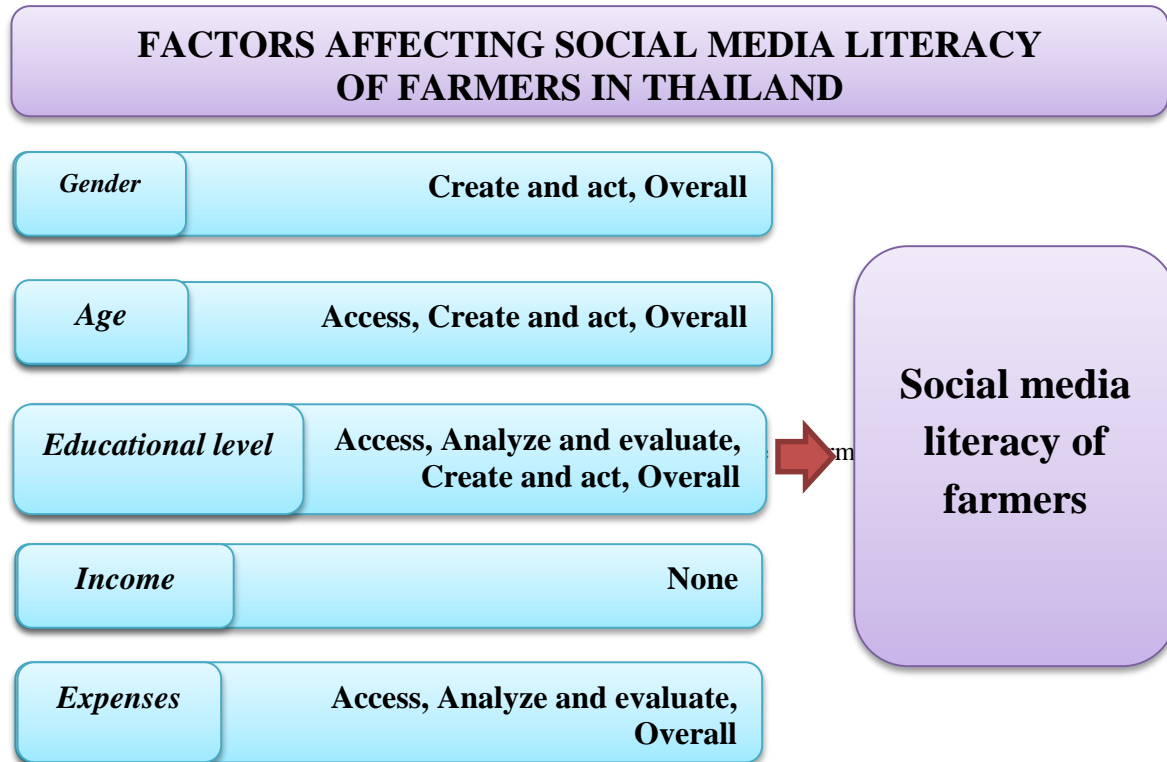
Table 3 Results of t-test and F-test of social media literacy practice of farmers by demographic and economic factors

(n=385)						
Media literacy by gender	n	\bar{x}	S.D.	t	P-value	Result of testing
Access						
Male	159	1.97	0.575	0.398 ^{ns}	0.691	Not significant
Female	226	1.95	0.610			
Analyze and evaluate						
Male	159	2.12	0.354	0.166 ^{ns}	0.868	Not significant
Female	226	2.12	0.353			
Create and act						
Male	159	2.70	0.342	-0.863*	0.389	Significant
Female	226	2.73	0.263			
Overall						
Male	159	2.27	0.250	0.033*	0.974	Significant
Female	226	2.27	0.282			
Media literacy by age (years)	n	\bar{x}	S.D.	F	P-value	Result of testing
Access						
18-37	131	2.18	0.472	22.638**	0.000	Significant
38-52	122	1.99	0.625			
53-83	132	1.71	0.589			
Analyze and evaluate						
18-37	131	2.17	0.357	2.439 ^{ns}	0.089	Not significant
38-52	122	2.11	0.309			
53-83	132	2.08	0.382			
Create and act						
18-37	131	2.68	0.277	12.744**	0.000	Significant
38-52	122	2.66	0.331			
53-83	132	2.82	0.259			
Overall						
18-37	131	2.34	0.235	9.232**	0.000	Significant
38-52	122	2.25	0.287			
53-83	132	2.20	0.267			
Media literacy by educational level	n	\bar{x}	S.D.	F	P-value	Result of testing
Access						
Lower primary school	16	1.34	0.363	36.766**	0.000	Significant
Primary school	101	1.57	0.430			
Secondary school	133	2.14	0.591			
Bachelor's degree or higher	135	2.14	0.539			
Analyze and evaluate						
Lower primary school	16	1.83	0.068	13.229**	0.000	Significant
Primary school	101	1.99	0.292			
Secondary school	133	2.15	0.345			

(n=385)

Bachelor's degree or higher	135	2.22	0.377			
Create and act						
Lower primary school	16	2.91	0.041	8.580**	0.000	Significant
Primary school	101	2.81	0.220			
Secondary school	133	2.64	0.354			
Bachelor's degree or higher	135	2.71	0.280			
Overall						
Lower primary school	16	2.02	0.105	23.847**	0.000	Significant
Primary school	101	2.12	0.204			
Secondary school	133	2.31	0.272			
Bachelor's degree or higher	135	2.36	0.264			
Media literacy by income (THB/year)	n	\bar{x}	S.D.	F	P-value	Result of testing
Access						
0-45,000	121	1.97	0.552	1.365 ^{ns}	0.257	Not significant
45,001-120,000	134	1.89	0.565			
120,001-1,000,000	130	2.01	0.659			
Analyze and evaluate						
0-45,000	121	2.08	0.299	0.826 ^{ns}	0.439	Not significant
45,001-120,000	134	2.13	0.374			
120,001-1,000,000	130	2.13	0.376			
Create and act						
0-45,000	121	2.71	0.294	0.606 ^{ns}	0.546	Not significant
45,001-120,000	134	2.71	0.297			
120,001-1,000,000	130	2.74	0.304			
Overall						
0-45,000	121	2.26	0.245	1.325 ^{ns}	0.267	Not significant
45,001-120,000	134	2.24	0.257			
120,001-1,000,000	130	2.30	0.300			
Media literacy by expense (THB/year)	n	\bar{x}	S.D.	F	P-value	Result of testing
Access						
1,000-45,000	130	1.83	0.491	9.814**	0.000	Significant
45,001-108,000	127	1.91	0.627			
108,001-1,000,000	128	2.14	0.620			
Analyze and evaluate						
1,000-45,000	130	2.02	0.298	8.016**	0.000	Significant
45,001-108,000	127	2.16	0.377			
108,001-1,000,000	128	2.18	0.361			
Create and act						
1,000-45,000	130	2.73	0.266	2.398 ^{ns}	0.092	Not significant
45,001-108,000	127	2.76	0.280			
108,001-1,000,000	128	2.68	0.340			
Overall						
1,000-45,000	130	2.19	0.203	8.885**	0.000	Significant
45,001-108,000	127	2.27	0.284			
108,001-1,000,000	128	2.33	0.296			

Table 3 shows that the respondent's gender with regard to create and act and overall had a significant effect on social media literacy and this supported by Nuansomsri and Jantavongso (2019) who studied social media literacy and awareness among the students in multidisciplinary programs in a Thai private university and reported that gender, year level and G.P.A. of the participating students had no impact on their knowledge of the social media, whereas gender, year level, G.P.A., and program had a significant impact toward students' awareness of social media literacy. In the current study, age with regard to access, create and act and overall had a significant impact on social media literacy. Furthermore, for every educational level, access, analyze and evaluate, create and act, and overall had a significant impact on the social media literacy. However, income at all levels had no significant impact toward social media literacy. Lastly, the annual expenses access, analyze and evaluate, and overall had a significant impact toward social media literacy.



Conclusions

Farmer's knowledge and skills of social media literacy are very important, the agricultural sector, especially with regard to the skills of access, analyze and evaluate, and create and act. The Thai government and related organizations should help to improve the social media literacy level of farmers in Thailand via extension workers and by the development of social media and digital technology utilizing developing the agricultural information and communication technologies such as smartphones. Furthermore, the policy implications should be examined of utilizing the true potential of these social media to solve problems in agriculture. Moreover, farmers who had even a basic educational level strongly agreed that social media impacted their everyday life as a communication tool for searching and seeking information in agriculture and this was a key factor.

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FINANCING PROBLEMS FACED IN PRIMARY AND SECONDARY EDUCATION INSTITUTIONS (SCHOOLS) AND POTENTIAL SOLUTIONS

Ali Çoban

Abstract

In our country, primary and secondary education is compulsory and provided free by the state. However, the schools face serious problems to get the necessary financing to be able to provide education services expected from them. The source and opportunity of income of state schools are varied. The most important factor that affects the income of the schools is the socio-economic status of the location and therefore the socio-economic status of the parents. School principals try different methods to increase the income of the school depending on the situation of the school. On the other hand, the population of our country increases each year and this increases the number of students; as a result, the financing of schools are becoming even more difficult. Therefore, this caused the state and the schools to look for new ways to decrease some expenses and also, increase their income.

Keywords: Primary Education, Secondary Education, Financing, School Incomes, School Expenses, Decreasing Expenses.

Introduction

There are 50.813 students at primary, secondary and high school levels in Turkish Republic of Northern Cyprus education system. 40,433 of these students go to state schools and the remaining 10,380 go to private schools. These numbers increased even more in this academic year. The government does not provide a budget for the state schools which provide education to more than forty thousand students. Despite the fact that the share of education in the overall budget is 12.62, the percentage that is distributed for increasing the quality of the education and development of schools is around 2. The item that has the highest percentage in the budget is “staff expenses”.

A school budget is necessary to be able to provide fundamental expenses such as to organise educational activities, to participate in visit-observe and sports activities, to provide materials for the students to have equal benefit, to utilise technology, to provide materials for arts activities, to have free internet, cleaning, and teacher assistant for elementary school teachers. Governments and Ministry of Education have not made a budget for schools for years. As a result, in order to meet the economic expenses of the schools, principals and parent teacher associations are forced to collect donations. In return of the requests of the school principals and teachers, such as materials and money, they are faced with parents.

One of the subjects that comes forth each year when the registrations start and causes great arguments is that whether or not parents will pay registration fee to the school or the school principals will collect registration fee from parents. Ministry of Education and every authorised personnel in departments announce and inform the parents to inform them about any school administrator who requests money from them to start the necessary proceedings (such as investigation or dismissal). As this warnings strengthen parents, school administrators are in a dilemma. As this arguments are going on, nobody considers another dimension of the subject. Why are school administrators requesting money from parents or could the state provide an adequate budget to these schools? Where does the school administrator spend the money collected from parents? As the public sector does not distribute the allowance set forth by the law and does not distribute monetary resources to education in line with the demand, serious financing problems have surfaced (Kurul-Tural, 2002).

The concept behind collecting money from parents is not comprehended by means of rationality in Turkish community. This is a result of the understanding that the state is responsible for everything and providing education services to citizens is also a fundamental responsibility of the state. This even goes so far that when school administrators and teachers ask parents to buy materials like books, notebooks, they can respond like: “We allow the kids to go to school, the state must do the rest.” In general, it cannot be stated that the importance of two essential factors in the life and development of a human, health and education is comprehended well and decisions are made accordingly. The investment the community or individuals put to education is in direct proportion with their future benefits. The benefits of investments made to education are not only economic development of a community but also causes decreases in social problems like poverty, robbery, human abuse, murder (Burrup, Brimley and Garfield, 1993). The financing of state schools is not a problem exclusive to our country; it is also a discussion subject in developed countries. Especially, the fact that economic status of the schools are related with the socio-economic situation of the area they provide services made us consider equality in education. Even voucher system is used to increase competition between schools (Elchanan and Geske, 1990). This approach is for the students to buy their cheque in return of their cost to the state and get education in schools they desire. If the price of the school is higher, the parents must pay the remaining amount.

It is a constitutional rule for the state to provide education to each TRNC citizen who are at school age. On the other hand, formal education of the majority of the population of our country is limited to this period. However, we face serious problems financing primary and secondary education schools in our country. Schools that have to sustain daily school life with the students have created their own special financing resources (Kurul-Tural, 2002).

We have made meetings with state school administrators about the income and financing status of the schools when conducting this study. Primary school principals and vice principals have put forth the differences in financing of schools in their statements about the income of the schools.

In short, in order for the education system of a country to achieve its goals, necessary and adequate education environments must be provided. Providing the quality conditions can be achieved by authorities who determine the education and financing policies and governors determining the right policies. In this context, school administrations that try to manage the budget with limited resources are faced with serious challenges. Therefore, it is important to specify the problems in education institutions based on financing, to take school based measurements and find solutions. It can be said that educational financing standards has become one of the fundamental variables of the concept of human development which has gained importance especially in late 20th century and early 21st century (Karakul, 2014). Compared to developed countries, in our country these standards are far from satisfying expectations on school level. Therefore, increase in scientific research results and resources on educational policies in general and on education financing in specific, will provide both politicians and implementers opportunity to develop a prediction.

According to Davis (1980), if we consider education planning approaches, the following can be listed; predicting community demand, manpower forecasting approach, rate of return analysis, etc. The manpower forecasting approach of production considers education as an investment tool that educates manpower demanded by the market. As a result of this investment, knowledge and skill capacity of people on production develops and in return this improves income of people (Tilak, 2002; Tonbul, 2016; Vila, 2005). The aim of education planning is to educate workforce required by economic and social development (Kurul, 2012). Another approach is social demand approach. This approach considers education as an essential human need. Education is the precondition of satisfying all needs. The purpose is to provide all members of the society equal education opportunities and improve their capacity to satisfy their needs. Therefore, individuals who have been through a quality education process are healthier, and this in return, increases their productivity by making them able to work; as a result, they relatively get better salaries (Tilak, 2002; Tonbul, 2016). Every aspect of people and resources must improve with education (Özdemir, 2011).

Another approach is investment approach. Extending education services is considered an investment (Hesapçioğlu, 1994; Kurul, 2012). Therefore, it is necessary to compare the costs and benefits while distributing resources and to prefer the one which will yield the most benefit (Aydın, 2000). Education is an investment made on human beings. Human capital, defines the whole of knowledge and skills of an individual on production. Similar to infrastructure investments, investments made on individuals also yield an income. This income is determined with the benefit that the individual acquires in the period he/she was a part of the production. Rate of return is calculated by dividing all benefits to the cost of Financing Problems Faced in Primary and Secondary Education Institutions (Schools) And Potential Solutions the investment. The education rate of return can be calculated by comparing the lifelong income and level of education costs of an individual who have taken a certain level of education and an individual who did not (Carnoy, 1995; Ergen, 2013; Tilak, 1977; Woodhall, 1974). Considering the schools and education requirements, none of these approaches are considered adequate alone. Education planning must be in the system (Education plans must be flexible, multidimensional, interdisciplinary, prepared in collaboration, based on scientific and valid-reliable objective information and data.) (Tonbul, 2016).

In light of these evaluations, it can be said that constitution and related laws, regulations, development plans and national education councils constitute the basis of the education financing. The financing resources that have constituted the basis of the education financing to date can be listed as follows; state incomes, annual income of special provincial administration budget, municipality incomes, a certain share of the annual village budget incomes, contribution and fee, credits, taxes etc. On the other hand, in Primary Education Law Date: 05.01.1961 and No: 222, National Education Fundamental Law Date: 14.06.1973, No. 1739, Apprenticeship and Occupational Education Law Date 05.06.1986, No: 3308, there are various financial provisions (Kurul, 2012; Saklan and Erginer, 2016). Thus, it can be said that work force approach is more prominent in education planning. The two main goals of education programs in the development plans are “training the workforce required by the economy” and “increasing the level of education of the community”. These goals are included in all development plans since the First Development Plan.

All around the world, there are three main financing methods when it comes to analysing education financing. The first education financing approach is “**direct financing method**”; with this method education expenses are compensated from public budget, public financing, in other words with taxes. The state supplies education resources with taxes like full public goods. The second approach is “**indirect (private) financing method**”; in this approach, monetary resources are financed by parents. The education goods are compensated with fees instead of taxes. The third approach is “**mixed financing approach**”; this approach is a “partial financing” approach that all parties, who take education directly or indirectly provide resources. Education resources are financed by public and private sectors. When the state is presenting the education good, it grants privilege to private sector and in other words, privatises education (Devrim and Tosuner, 1987; Güngör and Göksu, 2013; Kurul Tural, 2002; Tonbul, 2016).

It can be seen that education planning and financing method are centralised and in practice, localisation policies are in effect (Karakul, 2014). The development of financial policies of education programs in accordance with development plans continue to be in a similar approach that compulsory education is financed by state, education beneficiaries at other education levels contribute to expenses, decreasing education expenses as much as possible, transferring resources to be allocated to education to funds excluded from overall budget and increasing the share of private businesses' in education service (Küçük, 2010). The education financing method of a country can differ according to the determined education policy and planning approach. As a result of the mixed financing approach applied in Cyprus, private sector, voluntary organisations and beneficiaries provide financial support to education (Karakul, 2014).

Finance

Finance as a word means money. Money is needed in order to improve education system. Education, in general, is a crucial process that contributes to the development of the community, supplies economic development, improves material and nonmaterial values, can be transferred to future generation (Karaaslan, 2005; Gedikoğlu, 2005).. At this point, it is very important to manage this process carefully.

Studies show that communities who have taken a quality education are more successful economically (Kozlu, 1995). Currently, developed countries distribute serious resources to education expenses. According to Özçelik (2007); the amount of financial resources a country allocates shows the importance that country gives to education. Nowadays, undeveloped or developing countries cannot give adequate importance to education as they do not have enough resources. At this point, not allocating adequate financial resources affects the development of the country and does not satisfy the level of development. Therefore, individuals who did not take a quality education will not be able to contribute to the economic development of the country. In fact, education and level of economical development is much interconnected. It must be known that education has a function in of social, political, economical and individual development. In order to make these functions work, education must be given the necessary importance. This importance proves itself by allocating the necessary financial resources.

Income of Schools

The most common method public schools use to solve their financial resource problems is collecting registration fees from parents. They collect donations during registration with bills. This registration fee is determined by School Parent Association and School Administration. Same fee is collected from each parent that registers their child to the school.

The schools that face finance problems are the schools that are located in areas that the socio-economic level of the parents are low. In these schools, as the school-parent collaboration is not at the desired level, the contribution of the parents to the solution of the social and economical problems of the school is limited. In addition to the economical problems of these schools, some needs of the students are fulfilled by administrators and teachers. Parents do not even come to parent teacher meetings and especially fathers are generally more indifferent. Parents do not even care to get necessary stationeries for their children. As a matter of fact, some parents see the school as a source of income and can ask why the school not provides these. This situation was also stated by Kuru-Tural (2002). As the special financing resources of primary schools vary in accordance with the socio-economic level of the area of the school, there are significant equality in opportunities between schools. It is a fact that schools located in rural areas have limited incomes compared to schools located in central areas. This situation limits the opportunities of the schools in rural areas.

Another income resource of schools is the "School Yearbook" they publish at the end of the year. The school yearbook that is printed at the end of the year provides some income to the schools. On the other hand, it also provides an income with the advertisement included in it. Advertisements given by the local businesses, merchants and banks are printed for an amount determined by the school administration. Central schools have a great advantage in this subject. Local businesses, merchants and shopping malls located in central areas are a lot more. The advertisement income of central schools can be much better.

Also, the local businesses, merchants, banks, etc. located in the area of the school can, from time to time, make donations to the school. If the area of the school is a rich area and a live residential area, the school will have benefits. However, these businesses can expect something in return of their contributions to the school. The expectations of the environment of the school that contribute to the financing of the school are given in Table 1 below.

Table 1: The expectations of the environment of the school that contribute to the financing of the school

Themes	Sub-Themes	
Expectation of the school environment	Expectations from school administration	<ul style="list-style-type: none"> Expectation to see solid results

		<ul style="list-style-type: none"> • Presenting an interfering manner to the school • Giving their name to somewhere • Having commercial expectations • Trusting
	Expectations on students	<ul style="list-style-type: none"> • Grade expectations • Increase in academic success of the students

Another resource of income for schools is the “Book and Library Week” which is organised annually. During this week the school makes an agreement with a certain publishing house to sell books at the school for a certain amount of percentage of benefit. On the other hand, rent incomes from the canteens in the schools are also a financial resource for the schools.

Also, a certain amount of the income collected from the sales of the uniforms, physical training outfits are a financial resource for the schools. Occasionally, schools agree with some shops to sell the uniforms in return of donations or fulfilling some needs of the school. Elementary school classes are also another source of income for the schools. Four year old education is not compulsory in our country. Parents who register their four year old children to the school must pay a fee determined by the school administration each month. The socio-economic status of the area the school is located positively affects this. Other sources of income related with the location and opportunities of the school are: using the school garden as a car park after school hours, renting the school gym for weddings to collect some income.

Also, schools occasionally get services from municipalities and on some occasions municipalities buy things they need. This also is in parallel with the source of income and financial situation of the municipality. In other words, if the municipality has a lot of income, this will create financial support opportunities for the school.

Every year, at the end of the academic year the schools sell tickets and this is a serious source of income. Sales of these tickets are conducted by school administration, teachers and parent school association. Also, according to the demand in the school, teachers can provide courses to the students in accordance with the rules applied by the ministry. Certain amount of the income collected from this courses is paid to the teacher and the remaining amount is collected by the school. Fairs organised once or twice an academic year can also be considered a source of income.

Another source of income for schools is shows organised at the end of the year. Schools can collect a fee from the visitors. Occupational High Schools can be considered more advantageous in terms of school income. They can sell the materials students produce in the school related with their education. For example, furniture students can take orders under the supervision of their teachers and improve themselves and provide an income to the school. On the other hand, students of Machinery Department can service cars. Schools also try to contact with the foundations and associations in the area to satisfy their needs. Incomes collected from fairs and nights organised by the school parent association on behalf of the school can also be considered another source of income.

Expenses of Schools

School administrators have stated that they struggle to balance income and expenses in the distribution of financing resources and that the incomes does not meet expenses. Materials required for the cleaning of the school, toilet papers, soap and disinfectants are serious expenses for the schools. The ministry supplies these materials; but, they are not adequate. Another expense of the schools are the paper and ink used to print materials. Also, maintenance, service of the printers and photocopy machines and even, buying new photocopy machines are a serious expense for schools. In time, the physical structure of the school will decay. In order for the students to be happy and peaceful in the environment they take education, the physical structure of the building must be in good shape. Thus, the renovating and painting the school and classrooms is the most expensive expense for the schools. On the other hand, the food to be served to the sports athletes, matches and transportation expenses for the matches are also expenses in the school budget.

Internet is also another expense for the schools. In addition, maintenance and repairing of existing air conditioners and purchasing new ones are expenses in the budget of the schools. The allowances granted by the ministry does not meet the requirements. The items listed above are some of the regular expenses of the schools. Schools also face unexpected expenses throughout an academic year.

Distribution of Financing Resources According to School Administrators

The first sub-problem of the study is “What are the opinions of the school administrators on distribution of education financing resources?” Two categories emerged as a result of the analysis of the opinions of school

administrators on financing resources: incomes and expenses of the schools. There are “public and private” sub-categories in the income of schools category. There are “physical environment, service procurement and education expenses” sub-categories in the expenses of schools category. Table 2 shows the income and expense table distribution of a school.

Table 2 income and expense table distribution of a school.

2018-2019 EĞİTİM - ÖĞRETİM YILI AYDIN MESLEKİ VE TEKNİK ANADOLU LİSESİ OKUL AİLE BİRLİĞİ TASLAK BÜTÇE	
GELİR	
BAĞIŞLAR/YARDIMLAR	30.000,00
FAİZ GELİRLERİ	3.000,00
KİRA GELİRİ	21.600,00
YEMEKHANE	35.400,00
TOPLAM	: 90.000,00
GİDER	
BAKIM ONARIM GİDERLERİ	18.000,00
ENERJİ ALIMLARI	2.500,00
SABİT GİDERLER	1.500,00
YARIŞMA, PROJE, TANTİM, TEMSİL, AĞIRLAMA, ÖDÜL MALZEME ALIMI	6.000,00
KİRTASIYE VE BÜRO MALZEMESİ ALIMLARI	8.000,00
KURUMLARA YAPILAN AKTARIM VE ÖDEMELER	5.000,00
TEMİZLİK MALZEME ALIMLARI	7.000,00
YEMEKHANE İÇİN MALZEME ALIMLARI	20.000,00
PERSONEL GİDER VE ÖDEMELERİ	22.000,00
TOPLAM	: 90.000,00
Şenol ERDEM Başkan	Mustafa Asil KORYÜREK Başkan Yrd.
Ali AVCI Üye	Huriye TAŞKIR Muhasip Üye
	Ali AÇIKGÖZ Üye

As can be seen in Table 2, the annual income and expenses of the school are equal. This situation negatively affects schools when it comes to improving the education quality. “Expenses per individual student” which is regarded as an important indicator for education financing directly affects the quality of the education and is very important for a school. The amount spend on an individual student in OECD countries is at 10,493 level. Turkey is at 33rd place with 3,327 \$ spent on an individual student. There are studies conducted to keep the quality of the education fixed and decrease the amount spent on an individual student. (Kavak,& Ekinci, 1994 ; Sarıbaş & Babadağ, 2015 ; Tezcan, 2017; Kurban, 2018)

Decreasing Expenses

Considering the continuous increases in the expenses of the education and other social requirements, the fact that amount that can be allocated to education from the state budget is limited, every strategy that will decrease the expenses of the education must be taken into consideration. These strategies must be solutions that can provide the education service for a lower expense even if it will not be better. In other words, the goal is to providing education service to more students without sacrificing the quality of the education, with the same resources, without diverging from its goals or decreasing unit cost. This way, it is aimed to use the existing resources more efficiently. There are three ways to decrease costs in education:

1. Education administrators can have an influence on education costs without changing the existing structure and function of the education system by changing the amount, quality and ratios of inputs or by utilising existing inputs more efficiently.
2. Education administrators can increase the efficiency by bringing new elements and technology to the system and changing the fundamental design of the system. For example, team teaching, teaching with TV and language labs.
3. A more radical solution can be to design a new teaching and learning system.

The suggestions listed below, without a doubt, cannot be valid for every country. However, these are solutions used in different countries and must be evaluated for each countries exclusive conditions. Decreasing school time, starting to school at an older age, increasing the capacity of the classes, dual-trilateral education, using the whole facility, capital costs and teacher costs are summarised and defined.

Decreasing School Time

This option limits the amount of education that will be provided. Trials in Soviet Union and other countries show that it is possible to decrease four year school time to three years as a result of developments in education, psychology and education technology, etc. The basis of decreasing education period in an appropriate way is to utilise methods and techniques that are supported with encouragements that are required for the students to learn faster rather than organising and shortening the contents. For example, making students more curious. The important point here is not the period of school by the quality of the teaching.

As UNESCO stressed, if the goal is to acquire a proficient overall literacy and mathematical literacy, all these can be achieved in a four year period. However, not all authorities share the same opinion. For example, data from Tunisia show that a six year primary education is not adequate for the majority of the students to reach proficient level of reading and understanding. Results of reading tests from different countries also support these results. In adult school programs in Thailand, the primary education that is for four years normally can be completed in one year. In another program, adults and youngsters from outside of the school, can complete high school and secondary school programs in the half of the normal period. They can achieve this with only a fraction of the full time school costs. Decreasing education periods provides education opportunities to more people by decreasing costs and on the other hand, it also provides youngsters the opportunity to participate in the workforce in a shorter period.

Increasing the Capacity of the Classes

There is a common understanding that “less students mean better education” in the subject of classroom capacity which is one of the traditional education inputs. However, according to studies conducted in the USA and England, the classroom capacity alone has little effect on the success of the students. As a matter of fact, Harris and Coombs and Ahmed stress that despite the findings of many studies and applications conducted on small and large classrooms over the years which show that there is no significant correlation between the capacity of the classrooms and the quality of the education, a lot of teachers consider teacher-student ratio as a critical factor of education. In addition, it is stressed that as the planning and analysis of education process is more teacher centred, other variables are disregarded and teachers are blind for alternative technologies.

Studies conducted by World Bank on classroom capacity in Brasil, Chile, Porto Rico and Venezuela has shown that “the number of the students in a classroom can be increased without affecting the success of the students” and prove that students in a classroom with 25 students cannot learn faster than students in a classroom with 40 students. As the number of students per classroom can be increased without having a negative effect on the student performance, serious amount of savings can be achieved by increasing classroom capacities. Approximately 90% of the current education expenses of developing countries are spent to teacher salaries. Therefore, costs can be decreased by increasing the number of students in classrooms of existing teachers. A study conducted in Chile show that 15% increase in the size of an average classroom can create 5% decrease in the annual education budget.

School Periods

There are various applications of weekly or daily periods of schools. For example, with a 5 day (or 6 day) and 5 hour daily education, by only creating a small amount of increase in the teacher salaries, it can be possible to provide three different groups same opportunities in the same facility with same workforce or with a 6 day (one group 3 days 5 hour daily) education, more people can benefit from same education opportunities for a cheaper cost. Furthermore, it is a fact that there are countries which decreased education periods from 5 hours to 2,5 hours by limiting the education period to only crucial information and skills.

Decreasing Retaking Classes and Drop Outs

One of the problems developing countries faced in the 1990s was high rates of retaking classes and drop outs which have caused great inefficiencies. For example, overall class retaking ratios in Africa, Asia and Latin America are 21%, 9% and 11% respectively. Same ratios are 19% in Brazil and 21% in Iraq. Ratios in secondary education are close and ratios in some countries are as follows:

Colombia 20%, Iraq 27% and Turkey 26%. Furthermore, 93% of students who have registered to primary education in industrialised countries graduate without retaking a class; however, this ratio is 60% in developing countries. According to Coombs and Hallak, the rapid increase in number of students in 60s and 70s, has caused a rapid increase in number of students who retook classes and dropped out in developing countries. As a result, this caused a serious loss in limited education resources and increased costs per individual graduate. The example of Honduras given in Table 1, shows this situation clearly.

Optimal School Size and Areas

Keeping school sizes at a certain size has an important effect on the costs. In a lot of countries, number of students in rural areas are very low. This situation both increases the costs and decreases the quality of the education. In case the schools are merged, both economical and educational benefits can be acquired.

Method

Research Model

The study was conducted using literature review method. In this study, we have used phenomenology design which is a qualitative research design and an inductive analysis approach in order to analyse utilisation of political skills of the school administrators on education financing management in detail. Qualitative research is defined as an empirical research approach which is based on collecting qualitative data (data that are not quantitative like words, pictures, images). Phenomenology design sets its basis on defining a phenomena with experiences of individuals or a specific group. The goal is to determine the meaning, structure and basis of the experienced phenomena for a specific person or persons. In this context, qualitative studies can lead to new and unexpected findings. On the other hand, qualitative data can support researches to go beyond initial concepts and contribute to the conceptual infrastructure of the subject they work on (Miles and Huberman, 2016).

Design of the Study

In this study, “descriptive research” approach was used as the goal was to describe the education and teaching problems in teachers’ point of view. Descriptive research is a research method that describes an existing phenomena/case by quantitative and qualitative means.

Data Collection Tool

Related researches, books, articles, etc. in the literature were analysed in order to collect data. In the study, we have used open ended questions as data collection tool. Open ended survey form were used to collect opinions of participants in written.

Data Analysis

Qualitative data collected in the study were analysed with an inductive content analysis method. With the inductive analysis approach, data collected from teachers were first described in a systematic and open way and then, data was coded. After separating collected data to meaningful pieces and transforming them to data units (sentences), data was organised as template categories and themes. On the other hand, while analysing collected data and reporting findings we have quantised. Quantising qualitative data is to transforming written data that was collected with interviews, observations or document analysis in to numbers.

Validity and Reliability of the Study

In this paper, strategies such as getting expert opinions, announcing data analysis process, quantising qualitative data were utilised, and explain how the study group was selected and reflecting the data consistently. First, the collected data was transferred to computer environment and created codes related with data; then, brought the collected data together to create themes that would construct the main structure of the study findings. According to Merriam, validity and reliability of a study depends greatly on researcher ethics; therefore, we have paid attention to keep personal information of participants private and to ethical principles during data collection and analysis processes. As working on the collected data and results by showing them to participants increases the reliability and validity of the study, data collected by researchers and basic results found were brought to participants to affirm and we have utilised strategies such as announcing the choices and reflecting data consistently. First, we have transferred collected data to computer environment and created codes related with data; then, brought the collected data together to create themes that would construct the main structure of the study findings. According to Merriam, validity and reliability of a study depends greatly on researcher ethics; therefore,, we havepaid attention to keep personal information of participants private and to ethical principles during data collection and analysis processes. As working on the collected data and results by showing them to participants increases the reliability and validity of the study, data collected by researchers and basic results found were brought to participants to affirm.

Findings and Discussion

In this chapter, we have included the findings and discussions collected from the answers of the teachers interviewed.

Results and Suggestions

It is necessary to realise a school centred budget approach by allocating a budget to schools and providing that all shareholders (administrator, teacher, parent, expert, student, local administration) participate in the budget

planning process. A new law should be made to allocate a budget to the schools and a “budget to schools” item should be included in the overall budget of the state.

School principals face problems as the allowances granted to schools from the overall budget is very limited. On the other hand, school principals face problems as the ministry does not reply to their requests in time. We must be realistic towards the public schools’ financing problems. We must explain the situation to the parents and explain that these problems will be solved with their support. Parents support schools as much as their financial situation allows. Since, the beneficiaries are their own children. We have enough experience to understand that this problem cannot be solved by stating that administrators will not get money from anyone. We must question the reason behind why parents do not want to give money to the school and can send their children to private teaching institutions and pay a lot more money. Another way to increase the income of the school is to present the opportunities of the school to the public more. For example, opening the school gym to the public outside of the school hours. Financial income can be created by presenting social activities to the public (different skills courses and exam preparation).

One of the most efficient and systematic solution approaches to this problem is to allocate a certain amount of the taxes collected by municipalities to the local schools by a regulation on the law.

There are various ways to decrease unit costs significantly without affecting the success of the students. In other words, providing education opportunity to more people with same costs and keeping the quality same. Without a doubt, it cannot be expected from these applications to be valid at the same level for all countries. The important point is to develop models applicable to the conditions of the country and apply them. The main point here is that the necessity to develop new strategies to overcome financial problems in the education sector and benefit from international experiences.

In the study of Altunay (2017) that specified the opinions of the school administrators on financing methods, it is shown that school administrators supported the idea to pay school costs “with public resources” despite the limited school incomes and financing resources. According to the study of Özer, Demirtaş and Ateş (2015), there is an unbalance between the incomes and expenses of the schools and the incomes does not meet expenses. In the study of Saklan and Erginer (2016), it was stressed that school administrators take support from private persons, institutions and organisations along with public budget. Administrators already undertake the responsibility to create resources other than the public budget for elementary education. According to Hoşgörür and Aslan (2014), as the public resources and resources for education and teaching are inadequate to allocate to schools, school principals make restrictions in a lot of areas while trying to meet the schools’ requirements. In the study of Alpay (2011), it is stressed that school principals meet schools’ requirements with off-budget resources. According to Gümüşeli and Hacifazlıoğlu (2009), usually school financing is tried to be supplied with donations from parents and contributions. According to Altuntaş (2005), school principals consider that school financing should be supplied first by “state”, second by ‘parents’ and “state, municipalities, provincial special administrations, charitable organisations and parents, third by “provincial special administrations.” In the study of Ak (1997), it is stressed that the 4.61% allowance that is allocated from the public budget is very low and the share that is allocated to education from special administration budgets does not meet the investments made on education at province level (akt. Egen, 2013). In general, the fact that school administrators consider the economical role of education to be “stressed as human development centred and to improve all skills of individuals” can be related with the fact that they share a social justice approach or think that school financing should be supplied with public resources. On the other hand, the statements of school administrators on National Education Ministry can be related with the utilisation of mixed financing model. Therefore, participants consider their point of view on the relationship between education and economy different than general administration of the institution they work. The differences between the opinions of participants and MNE, makes it possible for some administrators to show effort to create resources for the school and some not.

Suggestions

Suggestions made in accordance with the findings of the study are divided into different categories for school administrators and school parent associations and future studies.

Suggestions for School Administrators

1. Creating necessary resources to meet the requirements of the school is considered a serious problem. Therefore, relations with MNE (Ministry of National Education) is very important. It can be suggested that keeping this relationship well will be always advantageous for creating financial resources.
2. Currently there is an increase in the number of projects financed by the EU. These projects provide support to the schools to meet various requirements. It can be suggested to benefit from these projects to fulfill needs of the school.
3. It can also be understood from the opinions that the relationship of the school administration with the environment of the school is important. It can be suggested that the school administrator being in good relationship with institutions and organisations in the local area can be very efficient in creating financial resources.

4. All financial processes of the school are undertaken by school parent association. Therefore, school administrator should be in collaboration with SPA.
5. It is very important for the school administrator to act according to administration process principles during all activities. This way, both teachers and SPA can function more efficiently
6. It can be suggested for the school administrator to improve himself/herself constantly and be a good example.

Suggestions to SPA

1. Financial resources of the schools are administered by SPA according to legal procedures. It is suggested to be in collaboration with the school administrator.
2. The role of good relationship with MNE is very important to create resources. It is suggested to always be in good relationship with MNE. These relationships are very important.
3. Opinions of teachers are very important to undertake the proceedings in the school. It can be suggested to take teachers' opinions for financial when making a financial process.
4. The environment of the SPA is important for creating resources. It is suggested to be in constant communication with this environment.
5. It can be suggested to spend the financial resources efficiently. This way, it can contribute to positively develop the school vision.
6. It is very important for the members of SPA to act together. It can be suggested to work in a harmony.

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HIGHER EDUCATION STUDENTS' KNOWLEDGE OF HUMAN PAPILLOMA VIRUS AND CERVICAL CANCER

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Abstract

Framework: Cervical cancer (CCU) is one of the world's leading causes of deaths due to cancer among women and is, as a rule, associated with human papillomavirus (HPV) infection. In most of the cases, this is a sexually transmitted infection. **Objectives:** To assess the level of knowledge of higher education students of CCU and HPV. **Material and methods:** This is a descriptive, quantitative, cross-sectional study using a non-probability sample composed of 301 students. Data was collected using a socio-demographic questionnaire and the "Human Papillomavirus and Cervical Cancer Scale", validated by Agostinho (2012). **Results:** 57.1% of the respondents are female participants whose age ranges between 18 and 56 years, which represents a mean age of 23.3 years, and who are, for the most part, single (90.4%). We found out that for 56.1% of the students HIV is the main agent responsible for the disease. 19.9% are unaware of the agent responsible for it and 53.2% are aware of the existence of a vaccine. The most cited sources of information are school (32.9%), television (27.2%) and health workers (25.9%). Data shows that 83.4% of the respondents have an active sex life that, according to the respondents, started when they were between 11 and 24 years old, which represents a mean age of 17.4 years. The answers provided by the participants showed that they had an average of 4.8 sexual partners. **Conclusions:** Evidence shows that knowledge of HPV and CCU is limited, which pushes us to consider new health promotion strategies in which the media and health care workers will come to play a major role in the promotion of health education and of young people's training.

Keywords: Human Papillomavirus and Cervical Cancer

Introduction

Cervical cancer (CCU) is one of the world's leading causes of death due to neoplasia among women and is usually associated with Human Papillomavirus (HPV) infection. These infections are often caused by unprotected sexual intercourse with an infected individual. Risk factors comprise any situation that predispose an individual to HPV infection and include the existence of multiple sexual partners, of other sexually transmitted infections, and the importance of genetic factors. People who are taking certain immunosuppressive drugs such as HIV patients, or who are undergoing corticotherapy, or chemotherapy treatments, among others, have to be included in those risk groups (WHO, 2010)

Castellsagué (2008) considers that factors such as cellular immune response, tobacco, genetic heritage, sexual behaviours and a long-term use of oral contraceptives contribute to the persistence of the infection and, ultimately, to the emergence of intraepithelial lesions. Agostinho (2012) mentions other factors that can hasten the progression of HPV infections and turn them into CCU. Those factors include patients' food habits (long-term ingestion of low levels of vitamin A and C and folic acid), their race, tobacco use, early sexual initiation, multiple sexual partners, high-risk sexual partners, high parity and the use of oral contraceptives. HPV is usually transmitted by

unprotected sexual intercourse with an infected partner, or by direct epithelial contact between the mucous membrane and the skin. Other cases of transmission, although less frequent, are described as well and include orogenital contact (National Advisory Committee on Immunization [NACI], 2007) and vertically transmitted infection during childbirth.

The incubation period of the virus varies between one month and two years. During this period of time there is no evidence of the symptoms but the individual may infect others. There may be genital warts invisible to the "naked eye", but that may transmit the disease to the partner (Sedicias, 2008). HPV is highly contagious and contamination is possible with a single exposure, and with any type of sexual activity, including genital contact. Although it is quite rare, the virus can also be transmitted through hand or skin contact, through direct contact with objects, towels or underwear.

According to Agostinho (2012), the highest HPV infection prevalence rate is found among young people, so it is essential to assess what they really know about HPV and CCU. Understanding reality is crucial to adjust each and every screening and health promotion measure to the kind of sexual activity and risk behaviours that characterizes the elements of said age group so that further spread of the virus and the development of neoplasia can be prevented.

The Study

We have developed a descriptive, quantitative, and cross-sectional study. We chose a non-probability sample for convenience comprising 301 students of higher education institutions located in the central part of the country. The data collection tool used was an online self-administered questionnaire titled "*HPV and cervical cancer*" (2012). The original version of this questionnaire was used and tested by Marisa Isabel Rodrigues Agostinho (2012). It was administered between March and May 2019.

The independent variables defined for this study are those used to characterise the sample: gender, age, marital status, course and school year.

The following are the dependent variables defined:

The *Knowledge of HPV* variable is assessed using the responses given to 31 statements focusing on the following areas:

Meaning of HPV (statements 11, 18, 26 and 33)

HPV transmission (statements 12, 19, 27, 34, 39 and 54)

HPV prevention (statements 12, 19, 27, 34, 39 and 54)

Age group with the highest HPV incidence (statements 14, 22, 30, 37 and 42)

HPV manifestations (statements 15, 23, 31, 43, 47 and 52)

HPV location (statements no. 17, 25, 32, 38, 44, 48)

The *knowledge of CCU* variable is assessed with the support of 25 statements focusing on 5 different areas:

Relationship between CCU and HPV (statements 56, 63, 78);

Incidence of CCU (statements no. 57, 70, 79);

CCU mortality rate (statements 59, 75 and 81)

Risk factors related to CCU (statements 58, 60, 62, 64, 67, 71, 73, 76, 80 and 83)

Rate of HPV presence in CCU (statement no. 61, 65, 68, 72 and 77)

And the statements that focus on the HPV subtypes protected by the HPV quadrivalent vaccine (statements 66, 74 and 82).

Findings

We found out that most of the participants are female, 37.2%, who are 23 years old or older, and who, for the most part, were living alone (93%). As far as overall knowledge and sources of information are concerned, we found out that 56.1% of the respondents consider HIV as the main agent responsible for the disease, and that 19.9% of them admit they have no idea of what can cause that condition. Female students show greater knowledge than males.

Most of them are aware that the virus and CCU are closely related (76.4%) and know that there is a vaccine (53.2%). We also found out that the female students' knowledge on that matter is greater than the male students'. The most commonly referred sources of information were school (32.9%), television (27.2%) and health workers (25.9%). Once again, female students lead the way. Most of the respondents (84.4%) consider that the dissemination of these topics is unsatisfactory. The way it is transmitted (84.4%), what the virus really is (82.4%), the kind of preventive actions taken to prevent its transmission (81.7%), how the virus manifests (70.8%), the consequences of HPV infection (67.4%), and the kind of relationship that exists between HPV and cervical cancer (62.8%) are issues that need to be extensively discussed.

Most of the respondents argue that schools (82.4%), health workers (67.4%) and television (61.8%) are the means of dissemination that should be prioritised. Most of them believe that the best way to achieve a suitable dissemination would be combining various means of dissemination that would include schools/education facilities, health workers, television and internet.

Table 1 – What people really need to know about HPV

What do you think people need to know about HPV?	Male		Female		Total	
	N	%	n	%	n	%
What is HPV						
Yes	107	35,5	141	46,8	248	82,4
No	22	7,3	31	10,3	53	17,6
Total	129	42,9	172	57,1	301	100
How it spreads						
Yes	108	35,9	146	48,5	254	84,4
No	21	7,0	26	8,6	47	15,6
Total	129	42,9	172	57,1	301	100
The preventive actions that should be taken						
Yes	102	33,9	144	58,5	246	81,7
No	27	20,9	28	16,3	55	18,3
Total	129	42,9	172	57,1	301	100
The way it manifests						
Yes	89	41,2	124	41,2	213	70,8
No	40	13,3	48	15,9	88	29,2
Total	129	42,9	172	57,1	301	100
How to diagnosis HPV?						
Yes	71	23,6	94	31,2	165	54,8
No	58	19,35	78	25,9	136	45,2
Total	129	42,9	172	57,1	301	100
How effective are the treatments?						
Yes	77	25,6	110	36,5	187	62,1
No	52	17,3	62	20,06	114	37,9
Total	129	42,9	172	57,1	301	100
What are the consequences?						
Yes	86	28,6	117	38,9	203	67,4
No	43	14,3	55	18,3	98	32,6
Total	129	42,9	172	57,1	301	100
The relationship between HPV and CCU						
Yes	75	24,9	114	37,9	189	62,8
No	54	17,9	58	51,8	112	37,2
Total	129	42,9	172	57,1	301	100
Information concerning the vaccine						
Yes	74	24,6	97	32,2	171	56,8
No	55	18,3	75	24,9	130	43,2
Total	129	42,9	172	57,1	301	100

93% of the respondents consider that the development of screening programmes and of workshops focusing on the matter is very important. We also found out that most of the respondents had already started their active sexual activity (83.4%) and that 66.8% of them started when they were 16-18 years old; data also shows that 54.1% had 1 or 2 sexual partners. 77.4% of the participants, mostly the female respondents, state that they regularly use contraceptive methods. Condom is the most commonly referred method (47.5%) and 10.6% of the students surveyed claim they use condoms and another hormonal method (dual-method contraception)

It should also be noted that most of the respondents do not attend and have never attended any sort of family planning consultations (67.8%),

Data clearly shows that gender has an influence on the *knowledge of HPV and CCU* dimensions since the highest mean scores obtained in any of HPV and CCU dimensions are given by female respondents. These scores are statistically significant ($p<0.05$); quite significant ($p<0.01$) and highly significant ($p<0.001$) in some dimensions. To understand the impact of the participants' age, we conducted a Kruskal-Wallis test that revealed the preponderance of the participants who were ≥ 23 years old or of the older ones in most of the dimensions; however, only the "*Meaning*" dimension of HPV ($p=0.005$) was statistically significant.

To analyse the relationship between the participants' marital status and the dimensions related to the different levels of knowledge (HPV and CCU), we conducted another Kruskal-Wallis Test that showed the preponderance of participants who were seeing someone at the time. These results are statistically significant ($p<0.05$); quite significant ($p<0.01$) and highly significant ($p<0.001$) in some of the dimensions.

Table 2 - Mann-Whitney and Kruskal-Wallis U-tests showing the relationship between socio-demographic variables and the level of HPV knowledge

Knowledge of HPV Dimensions	Meaning Ordena. Mean	Trans. Ordena. Mean	Prev. Ordena. Mean	Incid. Ordena. Mean	Manif. Ordena. Média	Locali. Ordena. Mean	Total Ordena. Mean	Test
Gender:								
M	140,8	137,19	138,31	132,88	130,80	136,50	131,84	Mann-Whitney
F	159,4	161,35	160,52	164,59	166,15	161,88	165,37	
(p)	Ns	0,015	0,025	0,001	0,000	0,008	0,001	
Age:								
≤20	144,6	145,01	150,83	145,72	145,60	144,76	144,65	Kruskal-Wallis
21-30	146,0	147,99	146,53	151,20	150,95	151,15	151,15	
31-40	207,4	196,04	168,19	156,19	161,65	158,58	158,58	
≥40	206,8	193,92	193,31	186,23	185,00	192,31	192,31	
(p)	ns	ns	ns	ns	Ns	ns	Ns	
Marital Status								
Partner	145,2	145,18	146,45	147,46	145,20	146,91	147,72	Kruskal-Wallis
No partner	214,9	210,15	225,50	174,65	230,12	196,15	224,96	
(p)	0,005	0,004	0,009	ns	0,001	ns	0,001	

*p<0,05 **p<0,01 ***p<0,001

To understand the participants' level of knowledge of HPV and its relationship with CCU in the dimensions under study we used a Mann-Whitney U-test. The results show that in the different dimensions there is a relationship between the knowledge of HPV and the knowledge of CCU, with significant statistical significance (p<0.05). In order to understand the impact of an early sexual initiation on the knowledge of HPV and CCU dimensions, we used a Mann-Whitney U-test. The results show that the respondents who claimed to be sexually active have a higher knowledge of both HPV and CCU, with statistical significance. The same goes for respondents who claim they use contraceptives and attend family planning consultations.

Table 3- Mann-Whitney U-tests relating sexual activity variables to the level of knowledge of HPV

Knowledge of HPV Dimensions	Meaning Ordena. Mean	Trans. Ordena. Mean	Prev. Ordena. Mean	Incid. Ordena. Mean	Manif. Ordena. Média	Locali. Ordena. Mean	Total Ordena. Mean	Test
Are you sexually active?								
Yes	156,68	154,04	155,81	154,34	155,95	154,23	156,11	Mann-Whitney
No	122,49	135,72	126,87	134,22	126,15	134,77	125,34	
(p)	0,008**	ns	0,028**	ns	0,021*	ns	0,022*	
Contraception								
Yes	155,43	152,50	156,29	155,96	154,77	154,72	155,41	Mann-Whitney
No	135,82	145,85	132,88	134,01	138,07	138,24	135,90	
(p)	ns	ns	0,045*	ns	Ns	ns	ns	
Family Planning counselling								
Yes	155,30	158,86	156,18	162,91	174,43	160,35	163,61	Mann-Whitney
No	148,95	147,26	148,54	145,34	139,86	146,56	145,00	
(p)	ns	ns	ns	ns	0,001**	ns	ns	

*p<0,05 **p<0,01 ***p<0,001

Table 4- Mann-Whitney U-tests relating sexual activity variables to the level of knowledge of CCU

Knowledge of CCU Dimensions	Relation	Incidence	Mortality rate	Factors	Presence	Total	Test
	Ordena. Mean	Ordena. Mean	Ordena. Mean	Ordena. Mean	Ordena. Mean	Ordena. Mean	
Are you sexually active							Mann- Whitney
Yes	152,44	149,95	151,48	153,25	151,07	153,15	
No	143,77	156,27	148,61	139,70	150,63	140,22	
(p)	ns	ns	ns	Ns	ns	ns	
Contraception							Mann- Whitney
Yes	153,96	151,57	150,13	153,81	152,56	154,11	
No	140,85	149,05	153,97	141,37	145,66	140,36	
(p)	ns	ns	ns	Ns	ns	ns	
Family Planning Counselling							Mann- Whitney
Yes	158,50	159,89	157,56	171,54	157,62	169,24	
No	147,43	146,77	147,88	141,24	147,85	142,33	
(p)	ns	ns	ns	0,004**	ns	0,011**	

* $p < 0,05$ ** $p < 0,01$ *** $p < 0,001$

Conclusions

The results show limited awareness of how HPV is transmitted, of how it manifests and its location. On the other hand, knowledge of the incidence and mortality rate due to CCU in Portugal and of the percentage of presence of HPV in CCU is virtually nonexistent. Higher education students have a limited understanding of not only the forms of transmission but also of the consequences of infection, although they are familiar with the meaning of the acronym HPV. Students' knowledge of cervical cancer is also very poor and they seldom relate HPV to CCU. They seem to have some knowledge of risk factors but are barely aware of prevention strategies and of the importance of vaccination. We found out that there is a relationship between the level of knowledge of HPV and the level of knowledge of CCU. Students stated that they were willing to obtain and deepen their knowledge and that their favourite sources of information are health workers and the media. They stressed the importance of attending workshops focusing on these topics at school. A sizable proportion of the students surveyed do not attend family planning counselling and do not use contraception, which makes them more vulnerable and increases the likelihood of contracting HPV and, consequently, CCU.

Higher Education Institutions should be concerned with the integral formation of their student and will then become health agents themselves by valuing the students' personal and social development. That way, we suggest that the Health Offices of any Higher Education Institution come up with health promotion programmes that will be designed in close cooperation with their students and will have to meet the respondents' preferences. The Mentoring Programmes that are implemented at the beginning of each school year to welcome and integrate new students should include workshops that will give priority to sexual health literacy and will therefore be crucial to prevent the incidence of CCU.

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HIGHER HEALTH LITERACY: ELEMENTARY AND HIGH SCHOOL PORTUGUESE STUDENTS' EATING HABITS AND HARMFUL CONSUMPTIONS

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Abstract

Framework: Health literacy, the ability to understand and use health related information, has been known over the past decade as a fundamental dimension of health promotion programmes carried out in schools.

Objectives: To identify socio-demographic and contextual lifestyle variables that may interfere with health literacy and that relate to eating and harmful consumptions of elementary and high school students.

Methods: Quantitative, descriptive and analytical study, with a sample of 308 adolescents, mostly female students with a mean age of 15.42 years. Most of the students were attending Year 9 of a lower secondary school. The data collection instrument used was the Your PEL Questionnaire, consisting of four sections: Food habits, Tobacco consumption, Alcohol use, and Sexuality, and another focusing on their socio-demographic background.

Results: The vast majority of the surveyed adolescents have already tried alcohol (72.9%); 41.6% of them have already smoked; Most adolescents have 4 to 5 meals per day, which corresponds to an average of 4.46 ± 1.06 meals a day; 87.5% are used to consume fast food (pizza, hamburgers, hot dogs); 72.0% have soup 3 or more times a week, 60.7% eat 1 to 2 portions of fruit a day and 77.7% eat vegetables once or twice a day; 93.3% have lunch 3 or more times per week at the school's canteen. Gender, age, school, alcohol consumption and smoking interfered with health literacy with statistical significance. **Conclusions:** Health promotion at school implies the design of new interventions aiming at adolescents, enabling them to make informed decisions and reach their full health potential. The results point to the need for interventions that will take into account gender, age and school differences.

Keywords: Higher Health Literacy

Introduction

Strong health literacy is an important issue today and is vital to achieve public health. While there is a vast body of literature focusing on health literacy in adults, studies focusing on adolescents are still scarce (Manganello, 2018). Adolescents are major users of mass media and other technologies to access health information and are a target group for many health-related educational interventions. They are also at a crucial stage of development, learning skills they will take with them into adulthood (Manganello, 2018).

Although a child or adolescent may be unable to read a medical text, he might nevertheless be able to understand what health-promoting behaviours or health-management skills are in his home environment and actively participate in decision-making regarding his/her own health care/disease situation and/or the kind of health care they need to be provided with (Borzekowski, 2009). According to the same author, social support from family, friends, health providers and teachers may facilitate the learning of more complex health concepts.

A young person with a good literacy in health issues will be able to take care of him or herself- physically, emotionally, socially, mentally and spiritually. They understand the concept of risk, are able to deal with health-

related information and seek health providers in accordance with their needs, are better prepared to communicate with their health providers, to get important clarifying answers, to understand not only how to take medicines but also their potential side effects and interactions and take a stand to protect their health and that of their family and of their community (Fetro, 2010).

Paek, Reber, & Lariscy (2011) consider that the sooner and the more often young people are provided with health information through teachers, family members, health providers and the by media, the higher their levels of health literacy. Wu, Begoray, MacDonald, Higgins et al. (2010) conducted a study to assess the literacy of 275 Canadian adolescent girls and boys, mostly attending the 10th grade, and found out that lower scores were achieved by boys.. Ghaddar, Valerio, Garcia, & Hansen (2012) conducted a study with a group of 5 high schools in Texas. Two of those school provided health training programmes. Their sample consisted of 261 students, aged 14-20, whose school level went from the 9th to the 12th grade. 58% of those participants attended schools with health training programmes. The sample comprised students of both genders and who were mostly Hispanic (86%). Adequate levels of health literacy were found, with a mean score of 3.83. However, 37% of those young people showed limited levels of literacy. Higher levels of health literacy were found among young people who were attending schools with health training programmes and who were, in general, attending the final years of high school.

Fleary, Joseph, and Pappagianopoulos (2018) conducted a systematic review of the literature on the relationship between health literacy and health behaviours in adolescents. The results show the existence of a significant relationship between health literacy and adolescents' health behaviours.

Okan et al. (2018) consider that the study of health literacy in children and adolescents still has a long way to go, and that few studies have focused on health literacy in children and adolescents in general, much less on the school environment.

However, it is essential to study and promote health literacy among children and adolescents. They are developing important health-promoting behaviours and habits that will have an impact on the rest of their lives and adequate health literacy can provide them with skills that will support healthy and informed lifestyles.

Risk behaviours, including tobacco and alcohol consumption, problem behaviours, such as assaults, and obesity showed lower levels of health-promoting behaviour (Chang, 2011; Okan et al., 2018).

Health literacy is defined in the Institute of Medicine as the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions (*Institute of Medicine, 2014*) and can be an important factor in the way these messages influence expectations. Health literacy in adolescents is a major concern since a significant number of adolescents fail to have an adequate level. Research on adolescent and health literacy is still a developing field, but recent studies have showed associations between health behaviours and health outcomes and show that lower levels of health literacy make it difficult for young people to access and understand preventive care information and to access preventive care services. In addition, adolescents whose parents have lower health literacy skills are more likely to have worse outcomes (Chisolm, Johnson & McAlearney, 2011).

Healthy eating can play a vital role in the prevention of various chronic diseases, including obesity, cardiovascular disease, certain types of cancer and type 2 diabetes. To help prevent diet-related chronic diseases, proposals have been made for healthy eating behaviours to be established in childhood and maintained during adolescence (Healthy people 2020 objectives: Nutrition and weight status, 2018). Eating habits vary widely among adolescents and present some general trends over time that clearly reflect socio-cultural trends in food availability and nutritional goals.

The results obtained from some of the questionnaires administered to assess nutritional knowledge show that more than two-thirds of the adolescents, especially boys, adolescents from rural areas and overweight adolescents have unsatisfactory knowledge of dietary recommendations, sources of nutrients, or of the relationships that exist between diet, disease and eating habits. Among this group, television represents the main source of information about nutrition (Milosavljević, Mandić & Banjari, 2015).

Food literacy has been identified as a promising approach to support healthy dietary behaviours in adolescents. However, adolescents' perspectives on food literacy and on the impact it may have on their dietary behaviours are not well understood (Ronto, Ball, Pendergast & Harris, 2016). That way, the same authors conducted a study that explored adolescents' perspectives on the potential for food literacy to influence their eating behaviours. Fifteen focus groups were conducted with adolescents aged 12-17 years and encompassed quantitative and qualitative questions. Adolescents were asked to rank 22 aspects of food literacy in order of importance and discuss their responses as a group. Overall, adolescents ranked food and nutrition literacy as more important than food skills and food capacity.

Although adolescents stated that food and nutrition knowledge is important for them to eat well, the majority did not apply their knowledge to practice due to poor confidence in food skills. Participants demonstrated very limited knowledge of macro aspects of food literacy. Food skills, such as planning and managing budgets for food and time for food shopping, were ranked as least important due to their apparent irrelevance, but are usually recognized as important later in life. Adolescents reported being very interested in developing food skills such as food preparation but they had very limited opportunities due to lack of food literacy education at home and at school.

Food literacy has recently emerged to associate food-related knowledge and skills with healthy diets. Its promotion is important to protect adolescents as they eat too many low-nutrient, high-energy foods. Although the components of food literacy have been derived from studies focusing on adolescents, a reliable and valid measurement tool to assess food literacy and promotion strategies with all components of food literacy has yet to be developed (Chang, 2011).

In recent years, topics focusing on chronic diseases, healthy dietary choices, nutritional knowledge, and food preparation skills have sparked new interest in food literacy (Carbone & Zoellner, 2012). This new interest is based on the control of the calories consumed by adolescents and on adolescents' dietary habits that include convenience foods such as processed foods and pre-packaged snacks (Gibbs & Chapman-Novakofski, 2013).

Pendergast, Garvis and Kanasa (2011) claim that there is a clear relationship between what adolescents eat and the fact that they have a very limited knowledge of what foods are made of, why and how labelling information is read, and also how and why healthy food is prepared and cooked safely to avoid food poisoning. So, the term "food literacy" was created to address the synthesis of functional, interactive, and critical dimensions of the aforementioned knowledge, skills, transformations, and empowerment in food experience people encounter and in today's environment (Chang, 2011).

Besides being a serious health threatening behaviour, alcohol is directly and indirectly related to numerous negative social consequences, such as risky sexual behaviour, family violence, physical abuse and traffic accidents. Alcohol use is a particularly important problem in adolescence. First of all, adolescents' brains are very vulnerable because brain structures are still developing, particularly during puberty, and alcohol can damage some parts of the brain and can, consequently, affect their learning capacity and behaviour. On the other hand, alcohol consumption is usually related to aggressive behaviours (Pulido, Indave-Ruiz, Colell-Ortega, Ruiz-Garcia et al., 2014).

The lower the adolescents' health literacy levels, the less they understand and assess messages designed to influence health-related behaviours, such as tobacco and alcohol use. Studies focusing on alcohol use, smoking, and health literacy among adolescents show stronger associations between low health literacy and substance use behaviours. Adolescents with lower levels of health literacy, in particular, are almost three times more likely to consume alcohol and tobacco than adolescents with high levels of health literacy, and the chances of improper use of alcohol were higher among adolescents with lower levels of health literacy (Chisolm et al., 2014).

Data collected from World Health Organization's *Global Burden of Disease* study were used to calculate Disability-Adjusted Life-Years (DALYs) for adolescents aged 10- 24 years whose main risk factors were alcohol (7% of DALYs), unprotected sex (4%), iron deficiency (3%), and illicit drug use (2%). Other risk factors were also observed, such as tobacco use, low physical activity and overweight/obesity. This information suggests that public health strategies should focus on children and adolescents' health, and that special attention should be placed on alcohol and tobacco consumption (Gore, Bloem & Patton, 2011).

Based on the concept of health literacy, sexual and reproductive health goes beyond knowledge and behaviour and is the self-perceived ability of an individual to access the needed information, understand the information, and assess and apply the information into informed decision making to contribute to good sexual and reproductive health (Vongxay, Albers, Thongmixay et al., 2019). It is not only knowing (knowledge) and doing (behaviour), but it is the process of individual's thought on a sexual and reproductive health problem before taking an action. That way, the aforementioned authors conducted a cross-sectional study to assess sexual and reproductive health literacy among adolescents aged 15-19 years and determine the factors associated with sexual and reproductive health. The study involved 461 adolescents living in rural and urban areas of Lao People's Democratic Republic in 2017. Data showed that 65.5% had inadequate sexual and reproductive health literacy. Scores were positively and significantly associated with several factors, including: school environment, poor knowledge of sexual and reproductive health, and functional literacy on contraceptive methods, which reflected how adolescents understood the use of condoms. Given that most adolescents have inadequate sexual and reproductive health literacy, the authors suggest that comprehensive sexual education, conveying all necessary information and service access for adolescents, is essential to ensure that adolescents can access, understand, assess, and apply good sexual and reproductive health knowledge in decision-making to benefit their own health.

Sexual and reproductive health education is a protective factor for teenage pregnancy, adverse sexual and reproductive health outcomes, and negative social consequences. However, this knowledge has proven insufficient, translating into poor social skills and competencies to promote and maintain a healthy life. Together, these skills are defined as health literacy, which is defined as the knowledge, motivation, and competences to access, understand, assess, and apply health-related information in healthcare, disease prevention, and health promotion (Sorensen, Van den Brouke, Fullam, Doyle et al., 2012; Vongxay, Albers, Thongmixay et al., 2019).

Study

In order to achieve the objectives set for this study, the *Your Pel* Project research team designed a questionnaire to be used as the study's data collection tool. This questionnaire measures the impact of health education programmes in the areas of food, alcohol and tobacco consumption, and sexuality, and is composed of 4 sub-

scales: food habits (25 items), tobacco consumption (23 items), alcohol use (22 items), and sexuality (22 items). The items are assessed using a 5 point likert scale: "Strongly disagree", "Disagree", "Neither agree nor disagree", "Agree" and "Strongly agree". The questionnaire comprises 92 questions, 51 are affirmative and 41 are negative. Each dimension includes different factors, namely:

- Food habits: Factor 1 – Risk behaviours (9 items), Factor 2 - Good practices (5 items);
- Tobacco consumption: Factor 1 - Risk perception related to consumption (9 items), Factor 2 - Beliefs favouring consumption (8 items);
- Alcohol use: Factor 1 - Beliefs favouring consumption (6 items), Factor 2 - Myths about alcohol consumption (6 items), Factor 3 – Risk perception related to consumption (6 items);
- Sexuality: Factor 1 - Responsibility (7 items), Factor 2 – Simplistic vision (5 items).

Findings

The results show, for the whole sample, that the adolescents' age ranges between 13 and 20 years. Male respondents, who represent 49.7% of the total sample, are between 13 years and 20 years old, and girls, who represent 50.3% of the whole sample, are between 13 and 19 years old.

Table 1 – Statistics related to the participants' age according to their gender

Gender	N	Min	Max	M	SD		CV (%)	Sk/error	K/error
Male	153	13	20	15.30	1.49		9.73	3.63	2.20
Female	155	13	19	15.53	1.47		9.46	2.08	0.04
Overall	308	13	20	15.42	1.48		9.59	4.45	1.39

Table 2 shows that 39.6% of the participants are 15 years old. 38.6% of them are boys and 40.6% are girls. 40.5% of the male participants and 42.6% of the female participants are attending the 9th grade (41.6%), followed by those who are attending the 8th grade (18.3% boys and 15.5% girls) (see table 2).

Table 2 – Socio-demographic background according to the participants' gender

Gender	Male		Female		Total		Residual		X ²	p
	N° (153)	% (49.7)	N° (155)	% (50.3)	N° (308)	% (100.0)	1	2		
Age										
≤14 years old	39	25.5	29	18.7	68	22.1	1.4	-1.4	2.131	0.3.45
15 years old	59	38.6	63	40.6	122	39.6	-.4	.4		
≥16 years old	55	35.9	63	40.6	118	38.3	-.8	.8		
School year										
7 th grade	23	15.0	17	11.0	40	13.0	1.1	-1.1	5.025	0.413
8 th grade	28	18.3	24	15.5	52	16.9	.7	-.7		
9 th grade	62	40.5	66	42.6	128	41.6	-.4	.4		
10 th grade	18	11.8	20	12.9	38	12.3	-.3	.3		
11 th grade	14	9.2	11	7.1	25	8.1	.7	-.7		
12 th grade	8	5.2	17	11.0	25	8.1	-1.8	1.8		
Total	153	100.0	155	100.0	308	100.0				

One of the objectives was to understand whether or not adolescents had tried alcohol before. The vast majority of the participants answered that they had (72.9%). 75.2% of those respondents were boys and 72.9% were girls. 41.6% of the surveyed adolescents admitted that they have smoked before (cigarettes or electronic cigarettes). 42.5% of those respondents were boys and 40.6% were girls (see table 3).

Data collected shows that most of the surveyed adolescents have not had sex yet (82.5%), which corresponds to 77.1% of the boys and 87.7% of the girls. On the other hand, 17.5% of them stated that they have already had

their first sexual experience. Most of those respondents were boys (22.9%), resulting in statistically significant differences ($X^2=6.004$; $p=0.014$).

As far as the number of meals that adolescents have per day is concerned, evidence shows that most of them (75.2% of the boys and 71.0% of the girls) have 4-5 meals a day. A high proportion of adolescents (87.5%) are used to eat fast food (pizzas, hamburgers, or hotdogs). This overall percentage refers to 90.0% of the boys and 85.1% of the girls. Most adolescents (72.0%) eat soup 3 or more times a week. This figure represents 71.2% of the boys and 72.7% of the girls surveyed. It should also be noted that 20.9% of the respondents have soup once or twice a week (boys 20.9% vs. girls 21.0%) (see table 3).

The adolescents were asked how many portions of fruit they have per day and most of them (60.7%) replied that they usually have 1 or 2 portions a day. 62.7% of them were boys and 58.8% were girls. The percentage of adolescents who eat 3 or more portions of fruit a day (35.9%) is also significant. This percentage represents 35.2% of the participating boys and 36.6% of the girls (see table 3).

When adolescents were asked how many times a day they have vegetables, a high proportion of them (80.7% of the boys and 74.8% of the girls) replied that they eat vegetables once or twice a day (77.7%). It should also be noted that 15.5% eat vegetables 3 or more times a day, which represents statistically significant differences ($X^2=9.391$; $p=0.009$).

Evidence also shows that most of the adolescents (93.3%) eat 3 or more times a week in the school canteen. 82.0% of those who do are boys and 84.5% are girls

Table 3 – Contextual variables related to the participants' lifestyle according to their gender

Gender	Male		Female		Total		Residual		X ²	p
Variables	N° (153)	% (49.7)	N° (155)	% (50.3)	N° (308)	% (100.0)	1	2		
Alcohol use									0.205	0.651
Yes	115	75.2	113	72.9	228	74.0	.5	-.5		
No	38	24.8	42	27.1	80	26.0	-.5	.5		
Tobacco consumption									0.107	0.743
Yes	65	42.5	63	40.6	128	41.6	.3	-.3		
No	88	57.5	92	59.4	180	58.4	-.3	.3		
Have started their sex life									6.004	0.014
Yes	35	22.9	19	12.3	54	17.5	2.5	-2.5		
No	118	77.1	136	87.7	254	82.5	-2.5	2.5		
Number of daily meals									0.877	0.645
Up to 3 meals	21	13.7	27	17.4	48	15.6	-.9	.9		
4-5 meals	115	75.2	110	71.0	225	73.1	.8	-.8		
≥6 meals	17	11.1	18	11.6	35	11.4	-.1	.1		
Fast food consumption	N° (150)	% (49.3)	N° (154)	% (50.7)	N° (304)	% (100.0)			1.692	0.193
No	15	10.0	23	14.9	38	12.5	-1.3	1.3		
Yes	135	90.0	131	85.1	266	87.5	1.3	-1.3		
Eat soup on a weekly basis	N° (139)	% (49.3)	N° (143)	% (50.7)	N° (282)	% (100.0)			0.283	0.868
Rarely	11	7.9	9	6.3	20	7.1	.5	-.5		
Once or twice	29	20.9	30	21.0	59	20.9	.0	.0		
≥3 times	99	71.2	104	72.7	203	72.0	-.3	.3		
Portions of fruit per day	N° (142)	% (48.1)	N° (153)	% (51.9)	N° (295)	% (100.0)			1.537	0.464
Rarely	3	2.1	7	4.6	10	3.4	-1.2	1.2		
1-2 portions	89	62.7	90	58.8	179	60.7	.7	-.7		
≥3 portions	50	35.2	56	36.6	106	35.9	-.2	.2		

Daily consumption of vegetables	N° (140)	% (49.5)	N° (143)	% (50.5)	N° (283)	% (100.0)				
Rarely	3	2.1	16	11.2	19	6.7	-3.0	3.0	9.391	0.009
Once or twice	113	80.7	107	74.8	220	77.7	1.2	-1.2		
≥3 times	24	17.1	20	14.0	44	15.5	.7	-.7		
Number of times they have lunch in the school canteen during the week	N° (111)	% (48.9)	N° (116)	% (51.1)	N° (227)	% (100.0)				
Rarely	2	1.8	3	2.6	5	2.2	-.4	.4	n.a.	n.a.
Once or twice	18	16.2	15	12.9	33	14.5	.7	-.7		
≥3 times	91	82.0	98	84.5	189	83.3	-.5	.5		

As for the use of Social Networks, data shows that 41.2% of the teenagers use Youtube quite often, 48.1% always use Instagram, and 51.3% say they rarely use Snapchat; some of them say that they seldom use Facebook (50.6%) or Twitter (51.5%) or Reddit (88.5%). So, Social Networks that are most commonly used by teenagers are Youtube and Instagram.

Almost all teenagers (94.2%) use WhatsApp and Skype (32.3%), although most of the respondents reported they don't use the latter or don't use Viber (90.5%)

Food habits, sexuality and harmful consumption

The results related to the food habits dimension indicate that the highest mean value corresponds to Factor 1 - Good Practices (Mean=3.810.54), where the lowest score is 1.00 and the highest score is 5.00. In the tobacco consumption dimension the highest mean value will be found in Factor 1 – Risk Perception related to consumption (Mean=4.420.58), where the lowest score is 1.00 and the highest score is 5.00. In the Alcohol use dimension the factor with a higher mean value is Factor 3 – Risk Perception of risk related to consumption (Mean=4.120.62) where the lowest score found is 1.00 and the highest is 5.00. The highest value in the Sexuality dimension corresponds to Factor 1 - Responsibility (average=4.140.55), where the lowest score found is 1.20 and the highest is 5.00. The values of the coefficient of variation indicate moderate and high dispersions in relation to the mean values.

Table 4 – Statistics related to food habits, sexuality and harmful consumption

Food habits, sexuality and harmful consumption	N	Min	Max	M	SD	CV (%)	Sk/error	K/error
Food habits	308							
Factor 1 – Risk behaviours		1.00	5.00	3.46	0.82	23.69	-5.92	0.20
Factor 2 – Good practices		1.00	5.00	3.81	0.54	14.17	-6.47	7.85
Tobacco consumption								
Factor 1 Risk perception related to consumption		1.00	5.00	4.42	0.58	13.12	-14.62	24.66
Factor 2 – Beliefs favouring consumption		1.00	5.00	3.93	1.26	32.06	-9.00	0.54
Alcohol use								
Factor 1 - Beliefs favouring consumption		1.00	5.00	3.83	1.15	30.02	-8.20	0.97
Factor 2 – Myths about alcohol consumption		1.00	5.00	3.41	0.98	28.73	-1.48	-1.53
Factor 3 - Risk perception related to consumption		1.00	5.00	4.12	0.62	15.04	-6.50	7.23
Sexuality								
Factor 1 – Responsibility		1.20	5.00	4.14	0.55	13.28	-8.19	13.17
Factor 2 – Simplistic vision		1.00	5.00	3.61	0.89	24.65	-6.12	1.11

As for gender interference in elementary and secondary school students' health literacy in the dimensions related to food habits, sexuality and harmful consumption, evidence shows that the highest mean values relate to girls. That way, data shows that girls show good practices when it comes to food habits. In the tobacco consumption dimension, highest scores are found in Factor 2- Beliefs favouring consumption; once again girls score higher in

the Alcohol use dimension, and girls show more responsibility in the sexuality dimension. The values show statistically significant relevance ($p=0.001$)

Table 5 – Relationship between elementary and secondary students' health literacy in the food habits, sexuality and harmful consumptions dimensions and their gender

Gender	Male		Female		t	p
Food habits, sexuality and harmful consumptions	Mean	Sd	Mean	Sd		
Food habits						
Factor 1 – Risk behaviours	3.40	0.75	3.53	0.88	-1.379	0.169
Factor 2 – Good practices	3.73	0.58	3.89	0.48	-2.472	0.014
Tobacco consumption						
Factor 1 Risk perception related to consumption	4.39	0.65	4.46	0.49	-1.083	0.280
Factor 2 – Beliefs favouring consumption	3.91	1.26	3.96	1.26	-.340	0.734
Alcohol						
Factor 1 - Beliefs favouring alcohol consumption	3.80	1.11	3.87	1.19	-.542	0.588
Factor 2 – Myths about alcohol consumption	3.31	0.96	3.50	1.00	-1.657	0.099
Factor 3 - Risk perception related to alcohol consumption	4.10	0.697	4.15	0.55	-.682	0.496
Sexuality						
Factor 1 – Responsibility	4.04	0.58	4.24	0.50	-3.220	0.001
Factor 2 – Simplistic vision	3.54	0.82	3.68	0.94	-1.318	0.189

As for the relationship between elementary and secondary school students' health literacy in the food habits, sexuality and harmful consumption dimensions and their age, data shows that the highest mean values correspond to the 15 year old students. This means that 15 years old adolescents show good practices in the Food habits dimension, that they have a good risk perception related to tobacco consumption, that they understand better than the others age groups the risk associated with alcohol use and that they are more responsible when it comes to sexuality matters. It should be noted that the youngest adolescents (≤ 14 years old) were those who got the lowest scores in all the dimensions. There are statistically significant differences in the two factors of the food habits dimension (Factor 1 - Risk behaviours $p=0.000$; Factor 2 - Good practices $p=0.007$); in Factor 2 - Beliefs favouring consumption of the Tobacco consumption dimension ($p=0.000$); in two of the factors of the Alcohol use dimension (Factor 1 - Beliefs favouring alcohol consumption $p=0.000$; Factor 2 - Myths about alcohol consumption $p=0.009$) and in the two factors of the Sexuality dimension (Factor 1 - Responsibility $p=0.000$; Factor 2 – Simplistic vision $p=0.000$).

Table 6 – Relationship between elementary and secondary students' health literacy in the food habits, sexuality and harmful consumptions dimensions and their age

Age	≤ 14 years old		15 years old		≥ 16 years old		f	p
Food habits, sexuality and harmful consumptions	Mean	Sd	Mean	Sd	Mean	Sd		
Food habits								
Factor 1 – Risk behaviours	2.99	0.75	3.70	0.72	3.49	0.84	18.025	0.000
Factor 2 – Good practices	3.68	0.57	3.92	0.44	3.77	0.59	5.002	0.007
Tobacco consumption								
Factor 1 Risk perception related to consumption	4.30	0.72	4.49	0.48	4.41	0.57	2.417	0.091
Factor 2 – Beliefs favouring consumption	3.11	1.46	4.27	1.01	4.06	1.17	22.071	0.000
Alcohol use								
Factor 1 - Beliefs favouring consumption	3.08	1.40	4.12	0.91	3.97	1.03	22.022	0.000
Factor 2 – Myths about alcohol consumption	3.11	0.96	3.56	0.98	3.42	0.97	4.841	0.009
Factor 3 – Risk perception related to alcohol consumption	4.05	0.70	4.19	0.54	4.10	0.66	1.230	0.294
Sexuality								
Factor 1 – Responsibility	3.91	0.56	4.22	0.49	4.18	0.57	7.913	0.000
Factor 2 – Simplistic vision	3.13	0.94	3.82	0.73	3.67	0.90	14.727	0.000

The results obtained according to the students' school year show those attending the 9th grade show higher risk behaviours when it comes to food habits, a greater risk perception related to consumption and are more likely to be influenced by beliefs favouring tobacco consumption; 10th grade students show higher risk perception related to alcohol consumption. 11th grade teens, in turn, show a more simplistic vision of sexuality and those in the 12th grade seem to believe in more myths about alcohol consumption and show greater responsibility when it comes to their sexual behaviours. There are statistically significant differences in almost all factors in the dimensions under study, except for Factor 3 – Risk perception related to consumption in the Alcohol use dimension (see table 7).

Table 7 – Relationship between elementary and secondary students' health literacy in the food habits, sexuality and harmful consumptions dimensions and the school year they are attending

School year	7 th grade	8 th grade	9 th grade	10 th grade	11 th grade	12 th grade	X ²	P
Food habits, sexuality and harmful consumptions	Mean ordination	Mean ordination	Mean ordination	Mean ordination	Mean ordination	Mean ordination		
Food habits								
Factor 1 – Risk behaviours	96.99	112.94	185.50	156.45	157.28	168.48	44.294	0.000
Factor 2 – Good practices	111.25	149.35	168.78	125.58	206.30	153.48	25.791	0.000
Tobacco consumption								
Factor 1 Risk perception related to consumption	142.70	133.47	172.92	158.93	146.64	123.94	12.439	0.029
Factor 2 – Beliefs favouring consumption	99.34	114.39	185.57	181.00	128.70	152.62	47.522	0.000
Alcohol use								
Factor 1 – Beliefs favouring consumption	108.95	119.63	177.11	174.70	135.60	172.32	31.046	0.000
Factor 2 – Myths about alcohol consumption	133.44	131.58	170.17	157.68	132.36	172.94	12.363	0.030
Factor 3 – Risk perception related to consumption	156.76	135.69	164.99	169.67	134.04	133.68	8.001	0.156
Sexuality								
Factor 1 – Responsibility	105.59	127.91	172.76	154.33	168.64	180.70	25.074	0.000
Factor 2 – Simplistic vision	107.98	121.00	175.77	155.57	176.78	165.80	27.774	0.000

Evidence shows that the adolescents who have never tried alcohol are those who show higher mean values in all dimensions, (food habits, tobacco consumption, alcohol use and sexuality) and that the highest mean value is found in Factor 2 - Myths about alcohol consumption. It can be observed that there is statistically significant relevance in the two factors of the Tobacco consumption dimension (Factor 1 – Risk perception related to tobacco consumption p=0.002, and Factor 2 - Beliefs favouring consumption p=0.014), in the three factors of the Alcohol use dimension (Factor 1 - Beliefs favouring consumption p=0.005; Factor 2 - Myths about alcohol consumption p=0.000; Factor 3 – Risk perception related to alcohol consumption p=0.004) (see table 8).

Table 8 – Relationship between elementary and secondary students’ health literacy in the food habits, sexuality and harmful consumption dimensions and the fact that they have already tried alcohol

Have tried alcohol before	yes	No	UMW	P
Food habits, sexuality and harmful consumptions	Mean Ordination	Mean Ordination		
Food habits				
Factor 1 – Risk behaviours	151.09	164.21	8343.000	0.256
Factor 2 – Good practices	151.67	162.58	8474.000	0.342
Tobacco consumption				
Factor 1 Risk perception related to consumption	145.34	180.61	7031.000	0.002
Factor 2 – Beliefs favouring consumption	147.16	175.42	7446.500	0.014
Alcohol use				
Factor 1 - Beliefs favouring consumption	146.07	178.54	7197.000	0.005
Factor 2 – Myths about alcohol consumption	139.93	196.02	5798.500	0.000
Factor 3 – Risk perception related to consumption	147.16	175.41	7447.000	0.014
Sexuality				
Factor 1 – Responsibility	152.71	159.60	8712.000	0.550
Factor 2 – Simplistic vision	153.48	157.39	8888.500	0.734

Data shows that adolescents who have never smoked before show higher mean values in all the factors of the food habits, tobacco consumption, and alcohol use dimensions. In the sexuality dimension, these adolescents reveal greater responsibility. Those who have already smoked, on the other hand, reveal a simplistic vision when it comes to sexuality. Statistically significant differences are only found in Factor 2 - Good practices in the food habits dimension ($p=0.018$)

Table 9– Relationship between elementary and secondary students’ health literacy in the food habits, sexuality and harmful consumption dimensions and the fact that they have already smoked before

To have smoked before	Yes		No		t	P
Food habits, sexuality and harmful consumptions	Mean	Sd	Mean	Sd		
Food habits						
Factor 1 – Risk behaviours	3.44	0.79	3.48	0.84	-.412	0.681
Factor 2 – Good practices	3.72	0.56	3.87	0.51	- 2.377	0.018
Tobacco consumption						
Factor 1 Risk perception related to consumption	4.37	0.58	4.46	0.57	- 1.302	0.194
Factor 2 – Beliefs favouring consumption	3.84	1.16	3.99	1.32	- 1.025	0.306
Alcohol use						
Factor 1 – Beliefs favouring consumption	3.80	1.04	3.86	1.22	-.500	0.617
Factor 2 – Myths about alcohol consumption	3.29	0.98	3.49	0.98	- 1.824	0.069
Factor 3 – Risk perception related to consumption	4.07	0.66	4.16	0.60	- 1.276	0.203
Sexuality						
Factor 1 – Responsibility	4.11	0.56	4.16	0.55	-.704	0.482
Factor 2 – Simplistic vision	3.63	0.83	3.60	0.92	.379	0.705

The results presented in table 10 indicate that adolescents who already have an active sex life are more likely to adopt risk behaviours involving their food habits, are more likely to believe in myths about alcohol consumption

and have a more simplistic vision of sexuality, whereas those who have not yet started their sex lives display a higher mean score when it comes to good practices related to food habits, to risk perception related to tobacco consumption and more likely to follow beliefs that favour tobacco consumption and beliefs that favour alcohol consumption. These teens also have a higher risk perception related to consumption and show a greater level of responsibility in terms of sexuality. Statistically significant difference is only found in Factor 1 Risk perception related to tobacco consumption ($p=0.022$).

Table 10– Relationship between elementary and secondary students' health literacy in the food habits, sexuality and harmful consumption dimensions and the fact that they have already started their sex life

To have already started their sex life	Yes	No	UMW	P
Food habits, sexuality, harmful consumptions	Mean Ordination	Mean Ordination		
Food habits				
Factor 1 –Risk behaviours	156.47	154.08	6751.500	0.858
Factor 2 – Good practices	135.93	158.45	5855.000	0.089
Tobacco consumption				
Factor 1 Risk perception related to consumption	129.52	159.81	5509.000	0.022
Factor 2 – Beliefs favouring consumption	145.40	156.44	6366.500	0.405
Alcohol				
Factor 1 - Beliefs favouring consumption	151.02	155.24	6670.000	0.751
Factor 2 – Myths about alcohol consumption	154.91	154.41	6836.000	0.970
Factor 3 - Risk perception related to consumption	138.72	157.85	6006.000	0.149
Sexuality				
Factor 1 – Responsibility	148.72	155.73	6546.000	0.598
Factor 2 – Simplistic vision	161.18	153.08	6497.500	0.542

Discussions/Conclusions

The following conclusions can be drawn from the results obtained:

- most of the surveyed adolescents have already tried alcoholic beverages (72.9%);
- most of the responding adolescents have not yet started their sex life (82.5%);
- most of the adolescents who took part in the study have between 4-5 daily meals, which corresponds to an average of 4.46 ± 1.06 daily meals; the highest percentage of adolescents are used to eating fast food (pizzas, hamburgers, hot dogs) (87.5%), and most of them (72.0%) reported that they have soup 3 or more times a week; 60.7% have 1 or 2 portions of fruit every day and 77.7% of them have vegetables once or twice a day. Finally, 93.3% of the participants have lunch 3 or more times a week in the school canteen.
- gender, age, school and school year have statistically interfered with elementary and secondary school students' health literacy in the food habits, sexuality and harmful consumption dimensions;
- alcohol use, tobacco consumption and whether or not respondents have already initiated their sex life significantly and statistically interfered with elementary and secondary school students' health literacy in the food habits, sexuality, and harmful consumption dimensions.

The results obtained suggest we should keep on promoting health literacy at school. This endeavour implies the development of more adequate interventions aimed at adolescents, giving priority to information technologies since social networks are widely used by adolescents nowadays. It is crucial, as the Project "Your PEL" advocates, to promote health literacy among students and to empower them so they are capable of developing a certain health literacy awareness that will help them reach a full health potential that will aggregate three specific dimensions: food habits, harmful consumption and sexuality. In this context, community health nurses can develop health education actions, giving credible information to adolescents about the three aforementioned dimensions, so that they can assimilate them and apply them in their daily lives. It is suggested that these health education sessions include the three dimensions in an appropriate and attractive way, encouraging the participation and involvement of adolescents, and that focus should be placed on the life cycle approach to health to allow adolescents to have a healthier future.

It is also important to stress the huge amount of information on sexuality, food habits and harmful consumption that is available on the Internet and that is not always properly treated and adjusted to this particular target audience. Many of the contents focusing on these dimensions are frequently taken out of context, obsolete and

even incorrect. As such, credible content designed for the adolescents will have to be created as part of a concerted, careful and thorough strategy that will help provide them with the right level of health literacy.

In this context, it is important to take the "Your PEI" Project to each and every school since it has been working in this area, disseminating information related to food habits, harmful consumption and sexuality. The project provides forums organized by themes where adolescents can anonymously ask their questions and check the answers given to the questions they asked or to those asked by other adolescents. They also have access to a glossary where they can find definitions explaining many of the concepts associated with these three dimensions in a language adapted to their age group.

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INVESTIGATION OF THE DIFFERENCE BETWEEN ONLINE LEARNING AND FACE-TO-FACE LEARNING ON THE ASPECTS OF STUDENTS' SATISFACTION AND PREFERENCES: A STUDY ON HONG KONG HIGHER EDUCATION

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Abstract

Nowadays, it is very familiar on applying e-learning courses in universities. But, no studies in Hong Kong show that the university students prefer to attend the face to face lecture in classrooms or to attend online lecture (e.g. via ZOOM). In this study, we are going to find out students' experiences taking e-learning courses, students' expected accomplishments and the difference between preferences viewed by students on online learning and face-to-face learning.

Students are fully understanding that there has potential for online learning to set up a well- designed and organized of teaching materials, students can manage the learning progress and learning schedule. Students can distribute and receive course materials in online learning. Besides, they favored face to face learning for learning objectives that deriving a face to face learning experience and interaction between tutor and students or developing an interpersonal relationship. However, a concern of students' perceived satisfaction of their learning accomplishments that they advocate face to face learning when the techniques in the application need to be obtained. Students prefer online learning when they can control their learning progress and schedules easily.

Keywords: Students' satisfaction, online learning

Introduction

Education is a very important part in our lives. Due to the advanced technology, using e-learning courses is very common and convenient nowadays. So, it is important for us to examine how university students think of using online learning courses. In this survey, we are going to understand their experiences, learning outcomes and satisfaction towards online learning and find out the difference between preferences viewed by students on online learning and face-to-face learning (Manuela, P. & Brigitte, M., 2010). In this study, a questionnaire survey will be conducted. Therefore, this study purpose to help educators in universities to notice about this issue and modify better and tailored e-learning courses for university students.

We address the following questions in this research:

Will the five fields of instruction enhance the learning satisfaction of students?

Will students prefer face to face learning or online learning?

The Study

Measure of fields of instruction in online learning

Professors/teachers are considering many technical issues when designing an online learning course. The following fields of instruction which may be influenced by decisions made which associated with the didactive design of an online learning course (Brophy, 1999).

Course Design

Assuming that a well-defined, clear and organized curriculum and learning materials are main elements to stimulate meaningful e-learning. (Brophy, 1999). The better learning environment and flexibility of using electronic learning system may lead to successful course implementation of online learning courses. (Chang & Tung, 2008; Shee & wang, 2008).

Interaction

In this survey, interaction had divided into two aspects to investigate students' relationship with their instructors and peer students as to find out whether the interaction can be important factors to affect the effectiveness of online learning.

For an online learning system, students carry out personal communications with others using different ways like internets and platforms instead of using face to face interaction. However, it is also possible for e-learning systems providing a better capacity for social and interpersonal communication. E-learners can communicate or interact online with their tutors, peer students in interactive environments (Liaw, 2004). They can discuss questions, ask and answer questions and debate subject-related topics.

In addition, Liaw (2004) has proposed that we can mediate asynchronous communication technologically and it is independent on tutor and students who carry out the classroom interaction activities at the same time. In the asynchronous communication, e-learners handle affairs on their own easement and control their learning progress. Furthermore, real time activities can be conducted using synchronous communication, demanding interaction is occurred between tutors and students simultaneously. Therefore, an interactive learning circumstances is required for improving e-learners' perceived satisfaction towards online learning circumstances (Liaw & Huang, 2007; Sharma et al., 2007).

Interaction with tutor

This aspect of interaction is about that instructors should execute various of assignments when they are teaching. (Brophy, 1999). For example, providing structure of course materials, giving timely feedback for students when they have problems to ask, facilitating students' intention to deal with their work, helping students to participate in learning activities. A good communication between students and teachers sustain constructing learning theories, enthusiasm and the relationship development. (Johnson, Hornik, & Salas, 2008; Paechter & Schweizer, 2006; Richardson & Swan, 2003) assumed that exchange information about educational matter is significant for e-learning.

Communication with peer students

Communication with peer students relates to process of communication. Students can exchange educational information or social information. Bringing benefits to students which discussing and sharing information and ideas in small teams to develop understanding, social help from peer teammates, acquiring knowledge in a positive condition. (Brophy, 1999; Juck, Paechter, & Tatar, 2003). In order to motivate students' interaction in group activity, stimulate them to engage in a good learning atmosphere and being satisfied on courses, perception of group cohesion and mutual help is associated importantly. (Concannon, Flynn, & Campbell, 2005).

Student Learning Process

Each student who is taking e-learning courses may obtain adequate opportunities to apply and practice the theories in real environment. On the whole, students can manage their location, time and the progress of their learning (Narciss, Proske, & Körndle, 2007). Controlling the learning progress can motivate the students to learn effectively (Pintrich, 2000).

Learning Outcomes

Learning outcomes can be defined as the competences that students are accomplished in their courses (Weinert, 2001). Skills of problem solving, scientific practice, personal and social competences are involved in the application of subject-specific skills (Anderson & Krathwohl, 2001). In the university, students should learn the conceptual knowledge and the knowledge on social competences and personal communication skills at the same time.

Development of Hypothesis

Course Design (CD) in e-learning

Learners are able to communicate with others instantaneously, in anytime and anywhere they want without any restrictions towards e-learning (Harasim, 1990; Leidner & Jarvenpaa, 1995; Taylor, 1996). Furthermore, it can avoid awkwardness situation happened with face-to-face communication usual classes. Students who maybe shy to speak out or any other reasons can make use of this system to express their ideas and ask questions online (Finley, 1992; Harasim, 1990; Strauss, 1996). Therefore, the quality of learning environment and convenience will affect students learning efficiency when they are learning online. Moreover, quality is one of the significant factors affecting learning outcomes and expected satisfaction towards online learning (Piccoli et al., 2001).

H1: Course Design (CD) will positively affect e-learners' course satisfaction in e-learning.

Interaction with tutor (IT) in online learning

Some studies have mentioned that tutors' rapid response greatly improve learners' performance on their learning (Arbaugh, 2002; Thurmond et al., 2002). It is very important for students when they come across difficulties in e-learning course to receive timely support from their tutor which encouraging them to continue their studies, while if the tutors are failed to give response as soon as possible, a negative impact will be occurred on them (Soon, Sook, Jung & Im, 2000). Thus, learning satisfaction will be enhanced due to tutors' quick response on answering students' questions and their requirements and able to deal with e-learning activities (Arbaugh, 2002; Chickring & Gamson, 1987; Ryan, Carlton & Ali, 1999; Thurmond et al., 2002). Tutor response timeliness which is determined by student's perception whether tutors can reply immediately. In addition, Webster and Hackley (1997) and Piccoli et al. (2001) has suggested tutors' interaction with students and attitudes towards online learning which positively affects the online learning outcomes and learners' perceptions on e-learning as tutors play the major role in learning activities.

H2: Interaction with tutor (IT) will positively affect e-learners' course satisfaction in e-learning.

Interaction with peer students (IS) in online learning

The more students have interaction with other peer students, the higher the online learning satisfaction they gained (Arbaugh, 2000). Problems can be resolved and progress will be improved by interacting between learners with others and with the assistance of course materials. The learning effects could be enhanced by learners were interacting electronically (Piccoli et al., 2001). Various studies have suggested that interactive course design is a necessary element for expected learning satisfaction and leading to success (Hong, 2002; Jiang & Ting, 1998; Nahl, 1993; Schwartz, 1995). Moreover, Moore has proposed that learners have interaction with peer students are one of the interactions in learning activities. Teaching styles which including interactions with students have played a crucial role in learning activities (Borbely, 1994; Lachem, Mitchell, & Atkinson, 1994; Webster & Hackley, 1997). Students cannot concentrate and pay attention on teaching materials if no conspicuous interactions between tutors and peer students (Isaacs et al., 1995). As online learning can conduct at home or somewhere, students are required to pay more attention than face to face learning (Kydd & Ferry, 1994). Improving the communication skills in online learning could influence the effectiveness of interactions.

H3: Interaction with peer students (IS) will positively affect e-learners' course satisfaction in e-learning.

Individual Learning Process (LP) in e-learning

Students are going to exercise and apply what they have learnt in a course. In general, they can make up their choices themselves with regard to the place, time and management of individual learning progress (Narciss, Proske, & Körndle, 2007). For example, students' management of their learning progress can be one of the significant characteristics which contributes to motivation and course satisfaction (Pintrich, 2000).

H4: Individual Learning Process (LP) will positively affect e-learners' course satisfaction in the e-learning.

Learning Outcomes (LO) in e-learning

Learning outcomes may base on two variables and they are cognitive and emotional variables. For the cognitive variables, the most significant thing is to consider the learning accomplishments. They can be depicted as conceptual and methodical knowledge like problem-solving skills, personal or social skills, etc. (Paechter, Maier, & Macher, in press; Weinert, 2001). In other words, course satisfaction is a significant learning outcome which determines their final choice of courses (Chiu, Hsu, Sun, Lin, & Sun, 2005; levy, 2007).

H5: Learning Outcomes (LO) will positively affect e-learners' course satisfaction in the e-learning.

Students' selection choice on either online or face to face learning

To design an online learning course for students, tutors confronted with a lot of problems and considerations which as a result influencing how students learn, practise and apply theories. The decisions which are relative to the didactic design of courses may need to refer, the five fields of instruction (Brophy, 1999; Ehlers, 2004).

With regard to different purposes of a course and learning condition, students would like to compare whether the purposes of courses can be better accomplished in online learning sessions or in face-to-face learning sessions. Moreover, students have assessed that various learning outcomes can be better accomplished either online or face-to-face learning.

Findings

We used a questionnaire survey to collect data and information from respondents. The university students who studied in Hong Kong were our target groups. A questionnaire survey to collect data from e-learners' satisfaction and preferences towards e-learning was also done in a similar study (Manuela & Brigitte, 2010).

A. Population and Sample

The university students who have used e-learning techniques were our target group. They have experienced a lot of e-learning courses in high schools or now in universities and they are able to tell us the reasons why they choose either online or face-to-face learning. Therefore, the information and data from them which will be more useful and precise for the survey. The factors that are influencing their experiences, learning outcomes and satisfaction towards e-learning can be gathered in the questionnaires. A total of 250 questionnaires were distributed to university students and 225 copies were collected from them. However, only 215 samples can be used in the survey.

Table 1. Demographic Information of respondents

Individual student Variables	Frequency
Distribution of gender	
Male	49.8%
Female	50.2%
Distribution of Age	
18-22 years old	95.8%
23-27 years old	4.2%
Year	
Year 1	26.5%
Year 2	23.3%
Year 3	27.4%
Year 4	22.8%
Number of courses taken	
2	0.5%
3	11.6%
4	11.6%
5	61.4%
>5	14.9%
Time spent in courses	
<5 hours	4.2%
5-10 hours	7.4%
11-15 hours	24.2%
16-20 hours	56.7%
>20 hours	7.4%

B. Data Collection & Data Analysis

We designed the questionnaire which based on the five fields of instructions in online learning which enquiring for students' learning satisfaction, learning experiences and learning outcomes, also their choices on either online or face to face learning. The respondents need to think of their experiences of online learning courses (Paechter,

Fritz, Maier, & Manhal, 2007). For the analysis (Vaughn, Schumm, & Singagub, 1996), respondents' answers were very important to determine.

The questionnaire was divided into four parts. Part 1 was used to ask the demographic information of respondents. Part 2 contained 25 questions which were used to ask the respondents of their experiences, learning outcomes and satisfaction in e-learning courses. Part 3 were 7 questions to find out the students' experiences that contribute to satisfaction. Part 4 were 19 questions investigating students' choices on either online or face-to-face learning. The questionnaires were distributed during the break period times of lectures. So that, numerous of questionnaires can be easily distributed to our target group in class and the return rate will also be high and fast.

C. Data Analysis & Findings

Table 2 below shows the descriptive statistics of all items. Besides, we used a five-point Likert scale to measure the items. From items 6-37, the scale was measured by five points (1= Strongly agree to 5= Strongly disagree). But from items 38-56, the scale was measured by (1= "better in online components to 5= "better in face-to-face components").

Table 2. Summarized Descriptive Statistics

Descriptive Statistics		
ITEMS	Mean	S.D
6. The university provides the communication channel (e.g. facebook, email etc) to teachers to interact with students.	4.22	0.732
7. The teachers provide comprehensible and explicit course materials to students.	4.31	0.656
8. I can handle the communication channels easily.	4.29	0.692
9. I am required to handle the computer and network failures. (e.g. slow access to Internet, errors of the software, etc.)	4.25	0.723
10. The lectures are required to put a lot of effort on organizing the courses through online teaching.	4.33	0.682
11. I can contact their tutors easily through e-mail, Facebook, etc.	4.48	0.647
12. My teachers can implement the online teaching courses effectively.	4.40	0.716
13. My tutor responds feedback as soon as possible through email, Facebook, or any other communication channels.	4.42	0.711
14. Based on my learning progress, my teachers can assist and give advice to me.	4.40	0.710
15. It is useful for me to contact my teachers personally.	4.37	0.723
16. Because I can attend the course through online teaching by my teachers, face to face interaction with my teachers is greatly reduced.	4.44	0.666

17. The information and ideas concerning the courses and study can be shared with peer students easily through e-mail, Facebook, etc.	4.36	0.722
18. There are adequate chances in the course to develop relationship with peer students.	4.41	0.698
19. The email and Facebook etc can allow me to contact with peer students personally easily.	4.34	0.732
20. The email and Facebook etc can allow me to do the group work with my peer students,	4.35	0.726
21. The communication with media makes group work more complicated.	4.33	0.30
22. The online teaching and learning is very flexible and I am allowed to attend the lecture at home or university.	4.37	0.743
23. The progress of my learning and the achievement of my learning outcome can be easily controlled by me through online learning.	4.36	0.715
24. My knowledge (e.g, assignments and practical activity) can be enhanced using online learning.	4.38	0.700
25. The learning atmosphere cannot be maintained easily online learning.	4.39	0.707
26. I acquire the basic knowledge in the course.	4.36	0.742
27. I can learn useful theories through online learning and those theories can be applied to various problems.	4.43	0.672
28. I can obtain the techniques to adjust the controlling of my learning schedule and progress.	4.36	0.709
29. I can obtain the techniques to use the Internet to do research online.	4.26	0.766
30. I can obtain the techniques to communicate with outside parties (e.g. media etc.).	4.35	0.726
31. The lecture materials are well-designed and organized.	4.45	0.733
32. I can obtain the main content, idea and knowledge in my course.	4.47	0.716
33. My teachers have strong techniques and knowledges in using the online teaching facilities to teach their courses.	4.51	0.696
34. I cannot be motivated to learn easily through online learning.	4.45	0.727
35. My teachers can give advices and guidance on my learning progress.	4.47	0.722
36. Special requirements of effort are required for organizing the courses through online teaching.	4.44	0.727

37. Discussion and group work with peer students can be enhanced in courses.	4.44	0.733
38. The course material contents are precise, clear and organized.	1.76	0.702
39. The students and teachers can achieve good learning and teaching experience and learning outcome through online learning.	1.88	0.737
40. The tutor provides fast feedback.	1.58	0.671
41. Assistance and useful advices are given by the tutor.	4.05	0.682
42. It is able to develop personal contact with the tutor.	4.11	0.653
43. The tutor is easy-going and accessible.	1.51	0.587
44. The sharing of courses' knowledge and information with peer students is efficient and convenient.	1.58	0.613
45. The team work between students can be enhanced in the courses.	4.19	0.651
46. It is able to develop a positive social relationship with students in the course.	4.14	0.650
47. The time and location are flexible for me to learn.	1.56	0.615
48. It is flexible for me to adjust my learning methods, schedule and progress.	1.57	0.614
49. I am allowed to use the knowledge learnt from online learning to do my assignments and exercises.	1.65	0.638
50. I am allowed to monitor my learning progress and process.	1.61	0.646
51. There is support for maintaining learning motivation.	4.04	0.644
52. I am allowed to obtain the techniques to learn the procedures of research work online (e.g. scientific work).	1.79	0.716
53. I am allowed to achieve the theories of the courses easily.	1.84	0.757
54. I am allowed to obtain the techniques how to apply the theories learnt in practical environment.	4.00	0.687
55. I am allowed to obtain the techniques how to contact, communicate, interact and communicate with other peer students.	3.99	0.694
56. I am allowed to achieve the techniques to adjust the controlling of my learning schedule and progress..	1.60	0.632

Before the collected information was analyzed, we were required to validate the data and made sure that the data was reliable. First, the results of component analysis were used to ensure the components in questionnaires are valid. The obtained values in analysis must be greater than 0.3. For course design, five items were included and their ranges were from 0.711 to 0.822. For interaction with tutor, six items were included and the ranges were from 0.705 to 0.858. For interaction with peer students, five items were included and their ranges were from 0.673 to 0.75. For individual learning process, four items were included and their ranges were from 0.708 to 0.789. For learning outcomes, five items were included and their ranges were from 0.611 to 0.778. As all results obtained were all higher than 0.3, the collected data perceived as valid.

Furthermore, the Cronbach's alpha used to test how do the items reliable with others. If the obtained results were not lower than the threshold value 0.7 (Nunnally, 1978), then the items can be perceived as reliable for analysis. Those results were 0.821, 0.866, 0.769, 0.703 and 0.742 which indicated all items were reliable as higher than 0.7.

Hypothesis Testing

We used Statistical Package for Social Sciences (SPSS) software to test the hypotheses. Pearson Correlation was applied. It is used for determining the relationship between two factors are positively or negatively affected (H1-H5) and finding the mean of items which students are more preferable in learning sessions.

I. Pearson Correlation among components

Table 3. Relationship between CD and CS

	Course Design (CD)	Course Satisfaction (CS)
Pearson Correlation (CD)	1	0.436**
Pearson Correlation (CS)	0.436**	1

It showed that the correlation coefficient obtained was 0.436 ($p < 0.01$) and also the relationship between Course Design (CD) and Course Satisfaction (CS) in e-learning was positive and significant. Since the result of Pearson correlation coefficient between CD and CS was 0.436, the relationship between these two factors was positive and important. Therefore, a positive and significant relationship was in between CD and CS.

H1: Course Design will positively affect course satisfaction in e-learning, was supported.

Table 4. Relationship between IT and CS

	Interaction with tutor (IT)	Course Satisfaction (CS)
Pearson Correlation (IT)	1	0.771**
Pearson Correlation (CS)	0.771**	1

It showed that the correlation coefficient obtained was 0.771 ($p < 0.01$) and also the relationship between impact of Interaction with tutors (IT) and Course Satisfaction (CS) in e-learning was positive and significant. Since the result of Pearson correlation coefficient between IT and CS was 0.771, the relationship between these two factors was positive and important. If the coefficient value was greater than 0.5, a strong correlation was achieved (Cohen, 1988). Therefore, a strong significant positive association was in between IT and CS.

H2: Interaction with tutor will positively affect e-learners' course satisfaction in the e-learning, was supported.

Table 5. Relationship between IS and CS

	Interaction with peer students (IS)	Course Satisfaction (CS)
Pearson Correlation (IS)	1	0.650**
Pearson Correlation (CS)	0.650**	1

It showed that the correlation coefficient obtained was 0.65 ($p < 0.01$) and also the relationship between Interaction with peer students (IS) and Course Satisfaction (CS) in e-learning was positive and significant. Since the result of Pearson correlation coefficient between IS and CS was 0.65, the relationship between these two factors was positive and important. If the coefficient value was greater than 0.5, a strong correlation was achieved (Cohen, 1988). Therefore, a strong significant positive association was in between IS and CS.

H3: Interaction with peer students will positively affect e-learners' course satisfaction in the e-learning, was supported.

Table 6. Relationship between LP and CS

	Individual Learning Process (LP)	Course Satisfaction (CS)
Pearson Correlation (LP)	1	0.628**
Pearson Correlation (CS)	0.628**	1

It showed that the correlation coefficient was 0.628 ($p < 0.01$) and also the relationship between Individual Learning Process (LP) and Course Satisfaction (CS) in e-learning was positive and significant. Since the result of Pearson correlation coefficient between LP and CS was 0.628, the relationship between these two factors was positive and important. If the coefficient value was greater than 0.5, a strong correlation was achieved (Cohen, 1988). Therefore, a strong significant positive association was in between LP and CS.

H4: Individual Learning Process will positively affect e-learners' course satisfaction in the e-learning, was supported.

Table 7. Relationship between LO and CS

	Learning Outcomes (LO)	Course Satisfaction (CS)
Pearson Correlation (LO)	1	0.629**
Pearson Correlation (CS)	0.629**	1

It showed that the correlation coefficient was 0.629 ($p < 0.01$) and also the relationship between Learning Outcomes (LO) and Course Satisfaction (CS) in e-learning was positive and significant. Since the result of Pearson correlation coefficient between LO and CS was 0.629, the relationship between these two factors was positive and important. If the coefficient value was greater than 0.5, a strong correlation was obtained (Cohen, 1988). Therefore, a strong significant positive association was in between LO and CS.

H5: Learning Outcomes will positively affect e-learners' course satisfaction in the e-learning, was supported.

II. The difference between preferences viewed by students (online learning against face-to-face learning)

Table 8. Course Design in learning sessions

Items	Mean
CD21	1.76
CD22	1.88

The means of Course Design were 1.76 and 1.88 of two items. Based on the five-point scale in the questionnaire, 1-point means "better in online learning sessions". The acquired result indicated that the respondents rated towards "better in online learning sessions" in this part.

Table 9. Interaction with tutor in learning sessions

Items	Mean
IT21	1.58
IT22	4.05
IT23	4.11
IT24	1.51

The means of Interaction with tutor were 1.58, 4.05, 4.11 and 1.51 of four items. Based on the five-point scale in the questionnaire, 1-point means "better in online learning sessions". The first item and fourth item in this part was towards "better in online learning sessions", but the second item and the third item indicated towards "better in face-to-face learning sessions". The acquired result indicated that the respondents rated two items towards "better

in online learning sessions” and two items rated towards “better in face-to-face learning sessions” were about the same as in this part.

Table 10. Interaction with peer students in learning sessions

Items	Mean
IS21	1.58
IS22	4.19
IS23	4.14

The means of Interaction with peer students were 1.58, 4.19 and 4.14 of three items. The first item in this part was towards “better in online learning sessions”, but the second item and the third item indicated towards “better in face-to-face learning sessions”. The acquired result indicated that the respondents mostly rated towards “better in face-to-face learning sessions” in this part.

Table 11. Individual Learning Process in learning sessions

Items	Mean
LP21	1.56
LP22	1.57
LP23	1.65
LP24	1.61
LP25	4.04

The means of Individual Learning Process were 1.56, 1.57, 1.65, 1.61 and 4.04 of five items. The first four items in this part were towards “better in online learning sessions”, but the fifth item indicated towards “better in face-to-face learning sessions”. The acquired result indicated that the respondents mostly rated towards “better in face-to-face learning sessions” in this part.

Table 12. Learning Outcomes in learning sessions

Items	Mean
LO21	1.79
LO22	1.84
LO23	4.00
LO24	3.99
LO25	1.60

The means of Individual Learning Process were 1.79, 1.84, 4.00, 3.99 and 1.6 of five items. The first, second and fifth items in this part were towards “better in online learning sessions”, but the second and third items indicated towards “better in face-to-face learning sessions”. The acquired result indicated that the respondents rated three items towards “better in online learning sessions” while two items rated towards “better in face-to-face learning sessions” in this part.

Discussion and Conclusion

This report investigated the relationships among learning outcomes, course satisfaction and students’ experiences towards online learning and also examined the difference between preferences viewed by students on online learning and face-to-face learning. The questionnaire survey was conducted to ask for university students’ points of view towards e-learning.

Five fields of instruction ((i) interaction with peer students and (ii) teachers, (iii) individual learning outcome and (iv) learning process, and (v) designing course) were used for investigating. We used five items to test the students' views towards course satisfaction in online learning. Also, using those five fields of instruction to know the students' preference in online learning.

This survey result supported H1 to H5. It indicated students thought that a clear and coherent construction of learning substances to be concerned as good points of learning materials. As the result, the elements influence course satisfaction (Chang & Tung, 2008; Naveh, Tubin, & Pliskin, 2010; Shee & Wang, 2008) and also the performance in the courses (Lee & Lee, 2008). It is very important to implement a good design for course. The interaction between tutor and students has been indicated that affected significantly students' course satisfaction towards e-learning (Madden & Carli, 1981; Powers & Rossman, 1985). The significance of peer interaction is proposed by some research (Moore, 1989; Rourke et al., 2001). To develop a better relationship with others will make everything work fluently and reduce conflicts and contribute to course satisfaction. Students have choices to decide what times and where they learn and they can be able to manage the learning progress and learning process of themselves. They acquire knowledge and apply to resolve problems and difficulties. As the results, better learning components contribute to course satisfaction. Finally, it is able to find out in which fields of instruction that the students are preferable either on face to face learning or online learning.

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LIFELONG LEARNING TENDENCIES OF VOCATIONAL SCHOOL STUDENTS

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Özet

Meslek yüksekokulu öğrencilerinin yaşam boyu öğrenme eğilimlerinin araştırıldığı bu çalışmada nicel araştırma yöntemi benimsenmiştir. Araştırma deseni, karşılaştırma araştırması ile betimsel araştırmadır. Çalışmada Tokat ilinde bulunan 13 meslek yüksekokulunda öğrenim gören 627 öğrenciden veri toplanmıştır. Veri toplama aracı 27 madde ve dört boyuttan oluşan Yaşam Boyu Öğrenme Eğilimleri Ölçeğidir. Ölçeğin boyutları; motivasyon, sebat, öğrenmeyi düzenleme ve meraktır. Bulgular, meslek yüksekokulu öğrencilerinin orta seviyenin üstünde bir yaşam boyu öğrenme eğilimleri olduğunu göstermektedir. Boyutlar arasında en yüksek ortalama motivasyona en düşük ortalama merak boyutuna aittir. Cinsiyet, yaşam boyu öğrenme toplam ölçek ortalamasını farklılaştıran bir değişkendir. Kız öğrencilerin yaşam boyu öğrenme eğilimleri erkek öğrencilerden yüksektir. Ayrıca öğrenmeyi düzenleme ve merak boyutlarında da kız öğrenciler lehine anlamlı fark saptanmıştır. Sınıf düzeyi, öğrenmeyi düzenleme boyutu için anlamlı farklılık oluşturan bir değişkendir. Birinci sınıf öğrencileri ikinci sınıf öğrencilerinden daha fazla öğrenmeyi düzenleme eğilimine sahiptir. Öğrenim görülen bölüm, yaşam boyu öğrenme motivasyon eğilimlerini farklılaştırmaktadır. Teknik bilimler alanında öğrenim gören öğrenciler en yüksek motivasyon ortalamasına, sağlık bilimleri alanındaki öğrenciler ise en düşük motivasyon ortalamasına sahiptir. Aile gelir durumu, anne eğitim düzeyi ve baba eğitim düzeyi yaşam boyu öğrenme toplam ölçeği ile boyutları açısından anlamlı fark oluşturmamıştır. Öğrencilerin mezun olduktan sonraki planları merak boyutu için anlamlı bir değişkendir. Eğitimlerine devam etmek isteyen öğrencilerin merak ortalamaları işe girmek isteyen öğrencilere göre anlamlı derecede yüksektir.

Anahtar Kelimeler: Yaşam boyu öğrenme, motivasyon,

Abstract

In this study, which investigated lifelong learning tendencies of vocational school students, quantitative research method was adopted. The research designs are comparative research and descriptive research. Data were collected from 627 students from 13 vocational schools in Tokat. Data collection tool is Lifelong Learning Tendency Scale consisting of 27 items and four dimensions. Dimensions of the scale are motivation, persistence, self-regulation and curiosity. The findings show that vocational school students have a lifelong learning tendency above the intermediate level. Among the dimensions, motivation has the highest mean while curiosity has the lowest mean. Gender is a variable that differentiates the lifelong learning total scale mean. Female students have higher lifelong learning tendencies than males. In addition, a significant difference was found in favor of female students in terms of self-regulation and curiosity. Class level is a variable that makes a significant difference for self-regulation dimension. First year students tend to be more self-regulated than second years. The major, differentiates lifelong learning motivation tendencies. The students who study in the technical sciences have the highest motivation mean, while the students study in the health sciences have the lowest. Family income, mother education level and father education level did not make a significant difference in terms of lifelong learning total scale and its dimensions. Students' plans after graduation is a significant variable for the curiosity dimension. The students who want to pursue their education have significantly higher curiosity mean than the students who want to work.

Introduction

The effects of scientific, technological, and cultural changes on human life, the rapid differentiation of information and the prolongation of lifespan compared to the past force people to be in a constant state of learning. Education is not limited to schools or specific periods anymore. Scientific studies are ongoing for the education of individuals of all ages and characteristics. This perspective, which can be explained under the concept of lifelong learning is defined as all learning activities carried out throughout life in order to improve the knowledge, skills and competencies of individuals related to their professional, social and personal lives through formal or informal education. As can be understood from the definition, with lifelong learning social integration, active citizenship, personal development, self-sustainability, competitiveness, and employability are aimed (Coşkun & Demirel, 2012; Lifelong Learning Platform, 2016; Uzunboylu & Hürsen, 2011).

Lifelong learning became one of the UNESCO policies in the 1970s and OECD policies in the 1980s and it started to gain importance among scientists studying in education. The most important reason for the need for lifelong learning was insufficient education provided in schools so the idea that the missions of the schools must change came forward. Today, lifelong learning is still the main paradigm of education systems and reforms in the international arena. UNESCO's (Rethinking Education: Towards a Global Common Good-2015) and United Nations' (2030 Agenda for Sustainable Development) reports are based on providing inclusive and quality

education and promoting lifelong learning opportunities for all. All fields, sectors and ages are included in the educational objectives. In Turkey, however the idea of lifelong learning has become widespread in the 2000s. General Directorate of Lifelong Learning was established under Ministry of National Education. The priorities determined in the action plan of the Directorate are as follows: Creating lifelong learning culture and awareness in the society, increasing lifelong learning opportunities and provision, increasing access to lifelong learning, developing a lifelong learning guidance system, developing a system for evaluating previous learning, developing a lifelong learning monitoring and evaluation system. (General Directorate of Lifelong Learning, 2014; Güleç, Çelik & Demirhan, 2012; Lifelong Learning Platform, 2016).

General purposes of lifelong learning are personal development, social integration, and economic growth. Personal development is based on the principles such as focusing on individuals, shaping education according to their interests and needs, granting individuals the right to choose and initiate more, improving their life standards and maximizing their capacities. Social integration focuses on ensuring equal opportunities for everyone to benefit from lifelong learning rather than staying with a limited group, and strengthening democracy. Economic growth, on the other hand, has the objectives of supporting skill development, providing appropriate conditions and opportunities for skill development, and supporting initiatives that will increase economic development (State Planning Organization, 2001).

In the European Reference Framework (2007), it has defined eight basic competencies related to lifelong learning. These are: communication in mother tongue, communication in foreign languages, basic competence in mathematics, science and technology, digital competence, learning to learn, social and civic competences, entrepreneurship, cultural awareness and expression. All these qualifications are equally important, and dimensions of knowledge, skills and attitudes are addressed for each. The knowledge dimension includes events, shapes, concepts, ideas and theories. The skill dimension refers to the capacity to run processes and deliver meaningful knowledge. Attitudes are related to the tendency to act or react according to ideas, people, or situations. Apart from these, values, thoughts and beliefs are considered. In addition, high-level cognitive skills such as critical thinking, creativity, initiative, problem solving, risk assessment and decision making are also associated with key competencies (European Commission, 2018).

In addition to the general purposes of lifelong learning and competencies related to lifelong learning, the principles of lifelong learning have also been determined in the literature. Accordingly, lifelong learning adopts the principles of ending encyclopedic knowledge, ending illiteracy, ending the transfer of information in traditional ways, ending excessive specialization, ending traditional education methods at all levels, and democratizing education (Turkey State Planning Organization, 2001).

In order for life-long learning to be successful, certain conditions must be met. Voluntary participation is the most important of these. The willingness of individuals to learn will increase their success rate. Active participation is another variable. The active participation of individuals in learning and applying what they have learned will also increase their self-confidence. Past experience is a factor that affects new learning. Appropriate methods and materials should be determined by considering what and to what extent the learners know. The learning climate is another factor. Physically and psychologically appropriate and supportive environments will increase the quality of life-long learning. Finally, determining how learners learn best will play a significant role in guiding an effective lifelong learning process (Gravani, 2012).

Lifelong learning has become a necessity rather than a choice or an advantage. It is not possible for individuals who do not improve and update themselves to be successful in their business or social lives. For this reason, it is considered that lifelong learning is a subject that needs to be studied carefully.

Higher education is the last step of formal education. There is no guiding on how the learning would continue after this step. It is important for individuals who graduate from higher education to have knowledge about lifelong learning in order to adapt to their professional lives, environment and changing conditions (Karaman & Aydoğmuş, 2018). Based on this idea, the tendencies of vocational school students towards lifelong learning were examined in the study.

In the literature, there are a limited number of studies on the lifelong learning tendencies of vocational school students, and the samples are restricted with one or two schools in these studies. This research is important as it has a large sample (n=627) and its data was collected from 13 different vocational schools in Tokat. It is also important that students gain awareness of the concept of lifelong learning.

Research Purpose

The purpose of this study is to examine the lifelong learning tendencies of vocational school students and to investigate whether some demographic variables differentiate their lifelong learning tendencies. Research questions are below:

1. What are the lifelong learning tendencies of vocational school students?
2. Do vocational school students' lifelong learning tendencies differ according to the following demographic variables?
 - a. Gender
 - b. Grade

- c. Major
- d. Family income
- e. Mother education level
- f. Father education level
- g. Plans after graduation

Method

Research Design

The quantitative research method has been adopted in the research. As research designs comparative research and descriptive research were used. The sample was defined and student tendencies were revealed by using the descriptive statistics. It was investigated whether the tendencies differ in terms of demographic variables through the comparative research (Gliner, Morgan & Leech, 2009).

Sample

The population of this research consists of the students studying at vocational schools in Tokat. The sample was created using convenience sampling technique which is a type of non-probability sampling. Data were collected from 661 students, but 34 participants were excluded from the study due to missing information in the data collection tool. Thus, the sample consisted of 627 participants. Demographic characteristics of the sample are presented in Table 1 and Table 2.

Table 1: Demographic characteristics of the sample

Variable	Variable Levels	<i>f</i>	%
Gender	Female	331	52.8
	Male	296	47.2
	Total	627	100
Grade	1. Grade	336	53.6
	2. Grade	291	46.4
	Total	627	100
Vocational School (VS)	Adalet VS	37	5.9
	Almus VS	76	12.1
	Artova VS	83	13.2
	Erbaa VS	51	8.1
	Erbaa Health VS	48	7.7
	Niksar Social Sciences VS	81	12.9
	Niksar Technical Sciences VS	19	3
	Pazar VS	96	15.3
	Reşadiye VS	30	4.8
	Tokat Technical VS	17	2.7
	Turhal VS	14	2.2
	Turhal Health VS	21	3.3
	Zile VS	54	8.6
	Total	627	100
Family Income	0-2000 ₺	348	55.5
	2001-3000 ₺	156	24.9
	3001-4000 ₺	67	10.7
	4001-5000 ₺	36	5.7
	5001 ₺ and more	20	3.2
	Total	627	100
Mother Education Level	Illiterate	64	10.2
	Primary School	377	60.1
	Secondary School	124	19.8
	High School	55	8.8
	Graduate	4	.6
	Post-graduate	3	.5
	Total	627	100
Father Education Level	Illiterate	13	2.1
	Primary School	275	43.9
	Secondary School	180	28.7
	High School	120	19.1
	Graduate	36	5.7
	Post-graduate	3	.5
	Total	627	100
Future plans	Wants to work	398	63.5

As can be seen in Table 1, approximately 53% ($n = 331$) of the sample are girls and 47% ($n = 296$) are boys while 54% ($n = 336$) are first year students, 46% ($n = 291$) are second year students. The most data were collected from Pazar ($n = 96$, 15%), Artova ($n = 83$, 13%), Niksar Social Sciences ($n = 81$, 13%) and Almus ($n = 76$, 12%) vocational schools. The family income of the majority of the participating students ($n = 348$, 55.5%) is between 0-2000 ₺. Mother and

	Wants to pursue his/her education	145	23.1	father education levels of the most of the
	Other	84	13.4	
	Total	627	100	

students are primary school ($n = 377$, 60%; $n = 275$, 44%). While the majority of the students ($n = 398$, 63.5%) want to work after graduation, 23% ($n = 145$) of them want to pursue their education.

Table 2: Majors of the students

Variable	Variable Levels	Variable Sub-Levels	<i>f</i>	%
Major	Social Sciences	Banking and Insurance	304	48.5
		Penal Execution and Security Services		
		Call Center Services		
		Child Development		
		Public Relations and Advertising		
		Law Office Management and Secretariat		
		Business Administration		
		Logistics		
		Finance		
		Accounting and Tax Practices		
		Postal Services		
		Local Governments		
	Technical Sciences	Computer Programming	162	25.8
		Graphic Design		
		Occupational Health and Safety		
		Chemistry and Chemical Processing		
		Technology		
		Architecture and Restoration		
		Private Security and Property Protection		
		Civil Defense and Firefighting		
	Health Sciences	Textile Technology	161	25.7
		Physiotherapy		
		First and Immediate Aid		
		Medical Promotion and Marketing		
		Laboratory Technology		
		Laborant and Veterinary Health		
		Disabled Care and Rehabilitation		
	Total		627	100

As can be seen in Table 2, the majors of the students are grouped as social sciences, technical sciences and health sciences. 48.5% ($n=304$) of the students study in 12 different departments in the field of social sciences while 25.8% ($n=162$) of them study in eight different departments in the field of technical sciences, and 25.7% ($n=161$) of them study in six different departments in the field of health sciences.

Data Collection Tool

"Lifelong Learning Tendencies Scale" developed by Coşkun (2009) was used as data collection tool. The scale consists of 27 items and four dimensions. Dimensions are motivation (6 items), persistence (6 items), self-regulation (6 items) and curiosity (9 items). In the scale, all items in "motivation" and "persistence" dimensions were coded positive, while all items in "self-regulation" and "curiosity" were coded negative. The scale was prepared in six-point Likert type (1: Fits completely, 6: Does not fit at all). Cronbach's alpha reliability coefficient ($\alpha = .89$) on the sample in which the scale was developed is high enough and the researcher concluded that the scale was also valid according to the confirmatory factor analysis.

In this study, items related to motivation and persistence dimensions were reverse coded at the data analysis stage. Thus, high scores in all dimensions indicate high lifelong learning tendencies. The Cronbach alpha reliability coefficient for this research is $\alpha = .87$.

Data Collection Process

Using Google Forms, the researcher organized the data collection tool in a form that can be filled on-line. Then, all faculty members working in vocational schools were contacted via e-mail, the study was introduced and the link of the data collection tool was sent. They shared the link with their students. Voluntary students filled out the form. Data were collected in November and December 2019.

Data Analysis

Frequency, percentage, minimum, maximum, mean and standard deviation statistics were used to introduce the

sample and reveal lifelong learning tendencies. Whether lifelong learning tendencies differ according to demographic data was measured by t-test and ANOVA. Since the sample size is sufficient ($n > 100$) according to the central limit theorem, the assumptions of normality and homogeneity were accepted met (see Dimitrov, 2010).

Results

Lifelong Learning Tendencies of Vocational School Students

Table 3 shows lifelong learning tendency statistics of vocational school students.

Table 3: Descriptive statistics of lifelong learning tendency scale

	<i>N</i>	Min.	Max.	\bar{X}	<i>SD</i>
Total Scale	627	1.48	6.00	4.44	.81
Motivation	627	1.00	6.00	5.19	.80
Persistence	627	1.00	6.00	4.63	.97
Self-regulation	627	1.00	6.00	4.18	1.37
Curiosity	627	1.00	6.00	3.97	1.29

According to Table 3, the mean of the lifelong learning tendency scale is ($\bar{X} = 4.44$, $SD = .81$). It can be said that students' lifelong learning tendencies is above the middle. Motivation has the highest mean among the four dimensions ($\bar{X} = 5.19$, $SD = .80$). Motivation is followed by persistence ($\bar{X} = 4.63$, $SD = .97$) and self-regulation ($\bar{X} = 4.18$, $SD = 1.37$). The dimension with the lowest mean is curiosity ($\bar{X} = 3.97$, $SD = 1.29$).

Lifelong Learning Tendencies of Vocational School Students by Gender

Whether lifelong learning tendencies of vocational school students differ according to their gender was tested with the t test. Results are presented in Table 4.

Table 4: Lifelong learning tendencies according to gender

Scale Dimensions	Groups	<i>N</i>	\bar{X}	<i>SD</i>	<i>SE\bar{X}</i>	<i>t</i> -test		
						<i>t</i>	<i>df</i>	<i>p</i>
Total Scale	Female	331	4.58	.77	.04	4.58	625	.00
	Male	296	4.29	.83	.05			
Motivation	Female	331	5.25	.73	.04	1.95	625	.052
	Male	296	5.13	.87	.05			
Persistence	Female	331	4.67	.95	.05	.831	625	.40
	Male	296	4.60	1.0	.06			
Self-regulation	Female	331	4.37	1.28	.07	3.52	625	.00
	Male	296	3.99	1.44	.08			
Curiosity	Female	331	4.21	1.19	.07	4.87	625	.00
	Male	296	3.72	1.35	.08			

As can be seen in Table 4, there is a statistically significant difference between male and female students' lifelong learning total scale means ($t = 4.58$, $p < .05$). The total scale mean of female students ($\bar{X} = 4.58$) is higher than males ($\bar{X} = 4.29$). It can be concluded that female students have higher lifelong learning tendencies than males.

The means of self-regulation ($\bar{X}_{female} = 4.37$, $\bar{X}_{male} = 3.99$) and curiosity ($\bar{X}_{female} = 4.21$, $\bar{X}_{male} = 3.72$) dimensions differ significantly in favor of female students ($t = 3.52$, $p < .05$; $t = 4.87$, $p < .05$). On the other hand, in terms of motivation and persistence mean scores ($\bar{X}_{female} = 5.25$, $\bar{X}_{male} = 5.13$; $\bar{X}_{female} = 4.67$, $\bar{X}_{male} = 4.60$) there are not statistically significant differences between females and males ($t = 1.95$, $p = .052$; $t = .83$, $p = .40$).

Lifelong Learning Tendencies of Vocational School Students by Grade

T-test results of lifelong learning tendencies of vocational school students according to their grades are presented in Table 5.

Table 5: Lifelong learning tendencies according to grade

Scale Dimensions	Groups	<i>N</i>	\bar{X}	<i>SD</i>	<i>SE\bar{X}</i>	<i>t</i> -test		
						<i>t</i>	<i>df</i>	<i>p</i>
Total scale	1.grade	336	4.48	.80	.04	1.34	625	.18
	2.grade	291	4.39	.82	.05			
Motivation	1.grade	336	5.19	.76	.04	.031	625	.97
	2.grade	291	5.19	.85	.05			
Persistence	1.grade	336	4.58	.96	.05	-1.56	625	.12
	2.grade	291	4.70	.99	.06			

Self-regulation	1.grade	336	4.29	1.29	.07	2.02	625	.04
	2.grade	291	4.07	1.44	.08			
Curiosity	1.grade	336	4.07	1.21	.06	1.87	625	.06
	2.grade	291	3.87	1.38	.08			

Table 5 shows a significant difference between the first and second grades' self-regulation means ($t = 2.02$, $p < .05$). First grades have a significantly higher self-regulation mean ($\bar{X} = 4.29$) than second grades ($\bar{X} = 4.07$).

There are not statistically significant differences between first and second grades in terms of total scale mean, and motivation, persistence and curiosity dimensions ($t = 1.34$, $p = .18$; $t = .031$, $p = .97$; $t = -1.56$, $p = .12$; $t = 1.87$, $p = .06$).

Lifelong Learning Tendencies of Vocational School Students by Major

One-way ANOVA results of lifelong learning tendencies of vocational school students according to their majors are presented in Table 6.

Table 6: Lifelong learning tendencies according to major

Scale Dimensions	Groups	N	\bar{X}	SD	SE	ANOVA					
							SS	df	MS	F	p
Total scale	Social sci.	304	4.45	.79	.04	Between groups	.121	2	.06		
	Technical sci.	162	4.42	.82	.06	Within groups	410.6	624	.65		
	Health sci.	161	4.43	.83	.06	Total	410.8	626			
	Total	627	4.44	.81	.03						
Motivation	Social sci.	304	5.22	.75	.04	Between groups	5.07	2	2.53	3.99	.01
	Technical sci.	162	5.27	.80	.06	Within groups	396.0	624	.63		
	Health sci.	161	5.04	.87	.06	Total	401.1	626			
	Total	627	5.19	.80	.03						
Persistence	Social sci.	304	4.66	.99	.05	Between groups	4.9	2	2.47	2.60	.07
	Technical sci.	162	4.73	.85	.06	Within groups	593.7	624	.95		
	Health sci.	161	4.49	1.04	.08	Total	598.7	626			
	Total	627	4.63	.97	.03						
Self-regulation	Social sci.	304	4.18	1.39	.07	Between groups	3.01	2	1.50	.8	.44
	Technical sci.	162	4.09	1.49	.11	Within groups	1173.0	624	1.88		
	Health sci.	161	4.28	1.17	.09	Total	1176.0	626			
	Total	627	4.18	1.37	.05						
Curiosity	Social sci.	304	3.98	1.28	.07	Between groups	3.04	2	1.52	.9	.40
	Technical sci.	162	3.87	1.39	.10	Within groups	1042.4	624	1.67		
	Health sci.	161	4.07	1.18	.09	Total	1045.4	626			
	Total	627	3.97	1.29	.05						

As can be seen in Table 6, there are not statistically significant differences between the major groups in terms of total scale mean, and persistence, self-regulation, and curiosity dimensions ($F = .09$, $df_{2, 624}$, $p = .91$; $F = 2.60$, $df_{2, 624}$, $p = .07$; $F = .8$, $df_{2, 624}$, $p = .44$; $F = .9$, $df_{2, 624}$, $p = .40$). On the other hand, a statistically significant difference was found between motivation means of the students according to their major ($F = 3.99$, $df_{2, 624}$, $p < .05$). Students studying in technical sciences have the highest mean ($\bar{X} = 5.27$) whereas students studying in health sciences have the lowest ($\bar{X} = 5.04$). Tukey follow-up analysis has been conducted to determine which groups were different from each other. Results are presented in Table 7.

Table 7: Tukey follow-up analysis results regarding to major

(I) Major	(J) Major	Mean difference (I-J)	SE	p
Social sciences	Technical sci.	-.050	.077	.79
	Health sciences	.183*	.077	.04
Technical sci.	Social sciences	.050	.077	.79
	Health sciences	.233*	.088	.02
Health sciences	Social sciences	-.183*	.077	.04
	Technical sci.	-.233*	.088	.02

According to Table 7, concerning motivation means, significant differences were found between social sciences and health sciences in favor of social sciences, and between technical sciences and health sciences in favor of technical sciences ($p < .05$; $p < .05$). There is not a significant difference between social sciences and technical sciences groups ($p = .79$).

Lifelong Learning Tendencies of Vocational School Students by Family Income

As presented in Table 1, the family income variable consists of five groups (0-2000 ₺, 2001-3000 ₺, 3001-4000 ₺, 4001-5000 ₺ and 5001 ₺ and above). However, the number of participants is not enough in two groups (4001-5000 ₺, $n = 36$; 5001 ₺ and above, $n = 20$) compared to the others. Therefore, before the analysis, these two groups were combined with the 3001-4000 ₺ group, and the new group was titled as 3001 ₺ and above ($n = 123$). ANOVA was conducted over the three-group family income variable. Results are presented in Table 8.

Table 8: Lifelong learning tendencies according to family income

Scale dimensions	Groups	N	\bar{X}	SD	SE	ANOVA				
						SS	df	MS	F	p
Total scale	0-2000 ₺	348	4.45	.78	.04	Between groups	.21	2	.10	
	2001-3000 ₺	156	4.41	.79	.06	Within groups	410.5	624	.65	.84
	3001 ₺ and +	123	4.44	.90	.08	Total	410.8	626		
	Total	627	4.44	.81	.03					
Motivation	0-2000 ₺	348	5.24	.72	.03	Between groups	2.07	2	1.03	
	2001-3000 ₺	156	5.15	.81	.06	Within groups	399.0	624	.64	1.62
	3001 ₺ and +	123	5.10	.95	.08	Total	401.1	626		.19
	Total	627	5.19	.80	.03					
Persistence	0-2000 ₺	348	4.71	.87	.04	Between groups	5.48	2	2.74	
	2001-3000 ₺	156	4.49	1.11	.08	Within groups	593.2	624	.95	2.88
	3001 ₺ and +	123	4.60	1.05	.09	Total	598.7	626		.057
	Total	627	4.63	.97	.03					
Self-regulation	0-2000 ₺	348	4.11	1.38	.07	Between groups	4.58	2	2.29	
	2001-3000 ₺	156	4.29	1.34	.10	Within groups	1171.4	624	1.87	1.22
	3001 ₺ and +	123	4.27	1.36	.12	Total	1176.0	626		.29
	Total	627	4.18	1.37	.05					
Curiosity	0-2000 ₺	348	3.98	1.25	.06	Between groups	.45	2	.22	
	2001-3000 ₺	156	3.93	1.34	.10	Within groups	1045.0	624	1.67	.13
	3001 ₺ and +	123	4.01	1.34	.12	Total	1045.4	626		.87
	Total	627	3.97	1.29	.05					

According to Table 8, there are not significant differences between income groups in terms of total scale and scale dimensions' means ($F = .16$, $df_{2, 624}$, $p = .84$; $F = 1.62$, $df_{2, 624}$, $p = .19$; $F = 2.88$, $df_{2, 624}$, $p = .057$; $F = 1.22$, $df_{2, 624}$, $p = .29$; $F = .13$, $df_{2, 624}$, $p = .87$).

Lifelong Learning Tendencies of Vocational School Students by Mother Education Level

As presented in Table 1, mother education level variable consists of six groups (illiterate, primary school, secondary school, high school, graduate, postgraduate). However, the number of participants in two groups (graduate, $n = 4$ and postgraduate, $n = 3$) is not enough compared to the others. Therefore, these two groups were combined with the high school group and a new group was composed as high school and above ($n = 62$). ANOVA was carried out with four-group mother education level variable. Results are presented in Table 9.

Table 9: Lifelong learning tendencies according to mother education level

Scale dimensions	Groups	N	\bar{X}	SD	SE	ANOVA				
						SS	df	MS	F	p
Total scale	Illiterate	64	4.47	.80	.10	Between groups	1.6	2	.53	
	Primary sch.	377	4.42	.80	.04	Within groups	409.2	623	.65	.81
	Secondary sch.	124	4.52	.86	.07	Total	410.8	626		.48
	High sch. and +	62	4.33	.73	.09					
	Total	627	4.44	.81	.03					
Motivation	Illiterate	64	5.29	.66	.08	Between groups	.94	2	.31	
	Primary sch.	377	5.18	.78	.04	Within groups	400.1	623	.64	.49
	Secondary sch.	124	5.18	.90	.08	Total	401.1	626		.68
	High sch. and +	62	5.13	.80	.10					
	Total	627	5.19	.80	.03					
Persistence	Illiterate	64	4.75	.78	.09	Between groups	4.67	2	1.55	
	Primary sch.	377	4.62	1.00	.05	Within groups	594.0	623	.95	1.63
	Secondary sch.	124	4.73	.97	.08	Total	598.7	626		.18
	High sch. and +	62	4.43	.97	.12					
	Total	627	4.63	.97	.03					
Self-regulation	Illiterate	64	4.22	1.42	.17	Between groups	4.03	2	1.34	
	Primary sch.	377	4.18	1.36	.07	Within groups	1172.0	623	1.88	.71
	Secondary sch.	124	4.28	1.37	.12	Total	1176.0	626		.54
	High sch. and +	62	3.97	1.37	.17					
	Total	627	4.18	1.37	.05					
Curiosity	Illiterate	64	3.91	1.34	.16	Between groups	2.24	2	.74	
	Primary sch.	377	3.95	1.25	.06	Within groups	1043.2	623	1.67	.44
	Secondary sch.	124	4.09	1.39	.12	Total	1045.4	626		.72
	High sch. and +	62	3.98	1.25	.15					
	Total	627	3.97	1.29	.05					

As can be seen in Table 9, there are not significant differences between mother education level groups in terms of total scale and scale dimensions' means ($F = .81, df_{2, 623}, p = .48$; $F = .49, df_{2, 623}, p = .68$; $F = 1.63, df_{2, 623}, p = .18$; $F = .71, df_{2, 623}, p = .54$; $F = .44, df_{2, 623}, p = .72$).

Lifelong Learning Tendencies of Vocational School Students by Father Education Level

As presented in Table 1, the father education level variable consists of six groups (illiterate, primary school, secondary school, high school, graduate, postgraduate). However, the number of participants in three groups (illiterate, $n = 13$; graduate, $n = 36$; postgraduate $n = 3$) is not enough compared to the other groups. For this reason, while illiterate group was combined with primary school group, graduate and postgraduate groups were combined with the high school group. In this way, two new groups which are named "primary school or below" ($n = 288$) and "high school or above" ($n = 159$) were formed. ANOVA was conducted on three-group father education level variable. Results are presented in Table 10.

Table 10: Lifelong learning tendencies according to father education level

Scale dimensions	Groups	N	\bar{X}	SD	SE	ANOVA					
							SS	df	MS	F	p
Total scale	Primary sch. or -	288	4.42	.80	.04	Between gro.	.46	2	.23		
	Secondary sch.	180	4.48	.82	.06	Within gro.	410.3	624	.65		
	High sch. or +	159	4.42	.80	.06	Total	410.8	626			
	Total	627	4.44	.81	.03						
Motivation	Primary sch. or -	288	5.19	.80	.04	Between gro.	.12	2	.06		
	Secondary sch.	180	5.20	.86	.06	Within gro.	401.0	624	.64		
	High sch. or +	159	5.17	.72	.05	Total	401.1	626			
	Total	627	5.19	.80	.03						
Persistence	Primary sch. or -	288	4.67	.92	.05	Between gro.	3.21	2	1.60		
	Secondary sch.	180	4.69	.93	.06	Within gro.	595.5	624	.95		
	High sch. or +	159	4.51	1.11	.08	Total	598.7	626			
	Total	627	4.63	.97	.03						
Self-regulation	Primary sch. or -	288	4.13	1.40	.08	Between gro.	1.86	2	.93		
	Secondary sch.	180	4.23	1.38	.10	Within gro.	1174.2	624	1.88		
	High sch. or +	159	4.24	1.30	.10	Total	1176.0	626			
	Total	627	4.18	1.37	.05						
Curiosity	Primary sch. or -	288	3.93	1.27	.07	Between gro.	1.08	2	.54		
	Secondary sch.	180	4.03	1.33	.09	Within gro.	1044.3	624	1.67		
	High sch. or +	159	3.99	1.28	.10	Total	1045.4	626			
	Total	627	3.97	1.29	.05						

As can be seen in Table 10, there are not significant differences between father education level groups in terms of total scale and scale dimensions' means ($F = .35, df_{2, 623}, p = .70$; $F = .10, df_{2, 623}, p = .90$; $F = 1.68, df_{2, 623}, p = .18$; $F = .49, df_{2, 623}, p = .61$; $F = .32, df_{2, 623}, p = .72$).

Lifelong Learning Tendencies of Vocational School Students by Future Plans

As presented in Table 1, future plans variable consists of three groups (wants to work, wants to pursue his/her education, and other). Students who want to get a job or start a business in any public or private institution after graduation formed the first group. Students who want to take the vertical transfer exam (DGS) or plan to take the university exam again were included in the second group. The other students who have not any plan yet, who want to do military duty, who want to get married or who want to trip in Turkey or abroad were consisted of the third group. While analyzing "future plans" variable, third group (other, $n = 84$) was excluded, and first and second groups were compared. T test analysis for this variable was conducted on 543 participants. Results are presented in Table 11.

Table 11: Lifelong learning tendencies according to future plans

Scale dimension	Groups	N	\bar{X}	SD	SE \bar{X}	t -test		
						t	df	p
Total scale	Getting a job	398	4.41	.81	.04	1.23	541	.21
	Academic education	145	4.51	.84	.07			
Motivation	Getting a job	398	5.20	.78	.04	.014	541	.98
	Academic education	145	5.20	.90	.07			
Persistence	Getting a job	398	4.62	.98	.04	-.330	541	.74
	Academic education	145	4.66	.98	.08			
Self-regulation	Getting a job	398	4.19	1.36	.06	.091	541	.92
	Academic education	145	4.18	1.42	.11			
Curiosity	Getting a job	398	3.89	1.29	.06	-2.24	541	.02
	Academic education	145	4.17	1.31	.10			

As can be seen in Table 11, a significant difference was found in terms of curiosity means between two groups in favor of students who want to progress academically ($t = -2.24, p < .05$).

There are not significant differences between two groups in terms of total scale mean, and motivation, persistence and self-regulation means ($t = 1.23, p = .21$; $t = .014, p = .98$; $t = -.33, p = .74$; $t = .091, p = .92$).

Conclusion

In this study, in which the lifelong learning tendencies of vocational school students and the demographic factors that may affect these tendencies were investigated, data were collected from 627 students studying at 13 vocational schools in Tokat. Lifelong Learning Tendencies Scale, consisting of 27 items and four dimensions, was used as data collection tool. Dimensions of the scale are motivation, persistence, self-regulation, and curiosity. Findings show that vocational school students have a lifelong learning tendency above the medium level. While motivation has the highest mean among the scale dimensions, curiosity has the lowest. In literature, there are some studies conducted with different samples supporting these results. Karakuş (2013), examined lifelong learning competencies of vocational school students and found that students have a high-level lifelong learning tendency. Özçiftçi and Çakır (2015), studied with primary school teachers and reached the conclusion that teachers have a high level of lifelong learning tendency. They also found that among the scale dimensions motivation has the highest mean and curiosity has the lowest. Bulaç and Kurt (2019) found that pre-service teachers' lifelong learning tendencies are above the medium. Motivation has the highest and curiosity has the lowest mean in their study too. According to the results, gender is a variable that differentiates the lifelong learning total scale mean. The lifelong learning tendencies of female students are higher than males. Also, significant differences were found in favor of female students for self-regulation and curiosity dimensions. In terms of motivation and persistence, the means of female students are higher than males, but these differences are not statistically significant. Similar to these results, Özçiftçi and Çakır (2015) concluded that gender differentiates the total scale mean of lifelong learning. Researchers stated that female teachers have higher lifelong learning tendencies than male teachers. Coşkun (2009), who investigated lifelong learning tendencies of university students, revealed that the lifelong learning tendencies of female students are higher than males. Çetin and Çetin (2017) and Şahin, Sarıtaş, and Çatalbaş (2017) stated that the lifelong learning tendencies of female teacher candidates is higher than males. Since women generally spend a shorter time in formal education than men, they may be more prone to lifelong learning (Jenkins, 2004 cited in Diker-Coşkun & Demirel, 2012).

Grade is a variable that makes a significant difference for the dimension of self-regulation. First grades tend to be more self-regulated than second grades. There are not significant differences between the first and second-year students in terms of total scale mean, and motivation, persistence and curiosity dimensions. In the study conducted by Diker-Coşkun and Demirel (2012), it was concluded that university students' lifelong learning tendencies differ in favor of the fourth grades. Karakuş (2013), found that lifelong learning competencies of vocational school students differ in favor of the second grades. These two studies show that the level of lifelong learning of students in upper grades is high. On the other hand, Kupana and Sazak (2019) conducted a similar study on conservatory students and concluded that grade does not affect students' lifelong learning tendencies. Considering all these results, it can be said that grade effect on lifelong learning tendencies change in different samples. The province, the major, and the school may have an impact on that change.

Students' majors differentiate their lifelong learning motivation tendencies. The students studying in the field of technical sciences have the highest motivation mean, while the students studying in the field of health sciences have the lowest. Concerning motivation means, significant differences were found between social sciences and health sciences in favor of social sciences, and between technical sciences and health sciences in favor of technical sciences. There are not significant differences between the major groups in terms of total scale mean, and persistence, self-regulation and curiosity dimensions. Bulaç and Kurt (2019) conducted a similar study on pre-service teachers and analyzed the data only on total scale means. The researchers concluded that the major significantly differentiates lifelong learning tendencies. Bulaç and Kurt's results are in conflict with this research. In this study, while differentiation was determined in the motivation dimension, no significant difference was found in total scale means.

The variables of family income, mother education level and father education level does not make a significant difference in terms of lifelong learning total scale mean and the dimensions' means. Similar to these findings, Dikmen, Denat, Filiz, and Başaran (2016) concluded that income does not affect the lifelong learning tendencies of students studying in the nursing. Bulaç and Kurt (2019) found that the variables of mother education level and father education level do not affect prospective teachers' lifelong learning tendencies. The findings support each other.

Future plans variable is statistically significant for the curiosity dimension. The curiosity mean of the students who want to progress academically is significantly higher than those who want to get a job. There are not significant differences between two groups in terms of the total scale mean, and motivation, persistence and self-regulation dimensions.

As a result, it can be said that lifelong learning tendencies of vocational school students is not high enough. Informative seminars, conferences and events can be organized to enhance student awareness about lifelong learning. The reasons why male students have low lifelong learning tendencies compared to females, and the second grades have lower self-regulation than the first grades could be revealed by conducting qualitative researches. Studies can be conducted on lifelong learning motivations of vocational school students studying in the field of health sciences. Regardless of their plans after graduation, students should be made aware that lifelong learning will help in all aspects of their lives. Studies designed with different demographic variables or research methods can be conducted on different samples on the subject.

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ON THE DEVELOPING OF MATHEMATICS TEACHER CANDIDATES' CONSTRUCTIVE SKILLS

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Abstract

The contemporary education systems target to students that are individually obtain the necessity information, are able to use it in different situations and are able to modify their all knowledge into practice of real life. This paper analyzes the developments of students' constructive skills in the long period of one semester. We present some important ways of the constructive skills which are directly connected students' performance development. Also, these skills are a combination of effective using of information, abilities that are give students to obtain the needed details to reach the soliton of the real-life problems. Finally, we can say that the systematic or methodological organization of students' skills give us a powerful tool to have well-educated students.

Keywords: constructive skill, mathematics teacher candidate, education system

Introduction

The research on the mathematical skills and abilities provided a large material context on the mathematics educational problems (Valeeva and Shakirova, 2015; Artzt at al., 2008; Zagyzvinsky, 1982; Friedman and Turetskiy, 1989; Ball, 1990; Presmeg, 1997). More specific classification of the studies are the approaches on the educational competence, the constructional abilities and skills of students on the educational subjects, the cognitive studies as a solution for educational problems, on the analyzing of students' problems solving difficulties (Kolyagin, 1977; Metel'skii, 1982; Sarantsev, 2005; Davidson, 1990; Morris and Murray, 2005). In some educational studies, it was focused on the using of task system as an educational solution method in which the solution procedures were given to show the problems and the detailed solution of them (Davidson, 1990; The education Alliance, 2006; Posametnier at al., 1998; Cox, 2004). According to Valeeva and Shakirova (2015), it is directly connected with the teachers' orientation to reach the aimed effects in the educational program.

The effective presentation of mathematics teaching with its pedagogical components could be result with the comprehensive development of the learners (Valeeva and Shakirova, 2015). According to them, only such an educational activity provides students a rich environment for the solution of their mathematical problems which give them the chance of using the theoretical structure, having a creative mathematical thinking. Also, as a main component of the professional mathematics education, mathematics problem solving activities is vital for the composing of rich teaching activities, and for the development of constructive skills and abilities. Many mathematics textbook authors present a large position of problem-solving activities to achieve the pedagogical purposes mentioned above. The enough number of mathematics textbooks, the reconstruction and revolution of mathematical curriculum, and the constant adaptation of technology into educational system turn out to be the development of problem-solving activities and tasks.

Buzulina (2002) explained the effect of the problem-solving activities as a basic important point of improving basic mathematics learning in vocational education. According to this theoretical idea, the task about problem solving activities should be used effectively in teaching of mathematics at the school curriculum. He also expressed that the needed educational and pedagogical level of the students could be provide using of a kind of application model of mathematical tasks. Some authors explained the effect of the task based on the problem-solving activities as developing of constructive skills and abilities, and as a basic key of students' cognitive interest to mathematics lecture (Valeeva and Shakirova, 2015; Johnson, 1975; Baumslag, 2000; Cox, 2011). They also stayed that tasks activities in mathematics lecture has a positive contribution to the understanding of the mathematical theory, and axiomatic structure of the lectures and the symbolic language of the concepts.

It is an effective combination of some methodology and knowledge that make teachers' teaching activities meaningful and beneficial. In this perspective, much research give a formulation of this formulation as that the educational, pedagogical, communicational, social, cultural, and informatic role of a teacher (Slasenin and Podymova, 1997; Shellard and Moyer, 2002; Anderson and Krathwhol). Valeeva and Shakirova (2015) stayed that the power of constructivist approach which design the teaching and learning process. they noted the simple formulation of this design that objective of instruction, context of curricula, methods of education, forms of teaching and learning, and mean of school. The authors presented an axiomatic model for teachers' constructive charters that has three types of activity should be conducted by teachers:

- Target: means that using of educational standard, necessities of students' information, skills and abilities, designing of educational activities.
- Content: explains determining and planning of the content of the course material, limitation of the curriculum.

- Procedure: contains composing of the lecture methods and activities, determining of the role of teacher and students through the lectures.
- Assessment: deals with the evaluation methods of students

Kovaleva (2012) determined tree basis constrictive skills which help to teacher using of mathematics teaching methods as a pedagogical tool to provide an effective learning environment. In other words, it is the mathematics teacher's professional ability that make it students' learning easily and powerfully.

- Transform ability between conceptual information and constructive activity
- Operational ability on the designing of the course
- Modification ability to realize the objectives of the education

Method

In this study, it was aimed to give a synthetic overview on the constructional skills of teacher candidates taught in education faculty. For this reason, it was presented and focused on some pedagogical and educational theory as mentioned above. Also, it was empirically, made some observations, test, and interviews with mathematics teacher candidates from an educational faculty in a Turkish university. 42 teacher candidates from a university, department of mathematics education of education faculty. In the first step of the study, it was planned a configuration model to implement in the educational program. Then, the constructive skill adapted the lecture, and students' mathematics education program was analyzed before the application. Finally, the education program was applied to the teacher candidates. In the next section, the efficiency of the constructive skills was analyzed to see the results our pedagogical approach. In the lectures, the harmonization between theoretical structure and constructive teaching model was tested and analyzed. The mathematics teacher candidates were leaded to the following steps which were constructed by inspired of Valeeva and Shakirova (2015):

- To analyze the constructure of the exercises in the textbook
- To modify tasks from simple to difficult
- To determine differentiated tasks
- To choose the goals expressed in the purposes of the education
- To focus the problems which are a combination of the theory, definitions, axioms, and algebraic operations of the lecture.

Findings

In the education program, vocational school students planned the lecture activities and experimental teaching practice. In every lecture activity, one of the defined constructive skill was tested, and applied. All the constructive skills of the teacher candidates were analyzed consciously as an objective of the education program. During the activities, teacher candidates were trying to design activities in which, a composition of different level of symbolic representation, different kind of applications were mixed through the education program. The critical point of the construction activities was the modulating of the lecture activities. Using by the classification determined by Valeeva and Shakirova (2015), the structure of the educational material was evaluated as successively and parallel. The famous geometric application of the authors was also used in our experimental study that "the position of lines according to each other in plane": first a pair of lines were focused, then different position of these line to each other was tested, and classified. The teacher candidates were able to formulate the different situation resulted from their own practice. At the end of the activity, the teacher was expressing the final expression of the mathematical proposition. This activity allowed to the students to be aware of the mental structure of the mathematical axiom, to see the relation between mathematical objects.

The pedagogical method that "inverted teaching and learning" was used during the applications. The activities were applied without pedagogical component. After, the students' confirmations as a respond the problem was presented. Usually, the teacher candidates proposed the same arguments. For the laboratory studies, teacher candidates were given the activities in which they needed to use any constructive skill. For this reason, teacher candidates were given tasks without instructions. As an Algebraic activity, they were informed to develop a fragment on the continuous functions. The teacher candidates focused the related part in the textbook and register it according to the order presented in the educational material. Initially, the following question was turned out as a result of this task: Could the teacher candidates themselves operated the task?

As a finding of this approach, when students were thought about the systematical problem, they suddenly start to confirm it.

Conclusions

In this study, the efficiency of the constructive skills was analyzed to see the results our pedagogical approach. In the lectures, the harmonization between theoretical structure and constructive teaching model was tested and

analyzed. This kind of activities was resulted that the teacher candidates could have been equipped with the constructive skills if the following conditions are valid:

- Every mathematical activity should be evaluated as an important part of the learning system
- This kind of activities provide them the constructive abilities when teachers focus on the constructive study model
- This kind of abilities could be developed in a special prepared activity aimed for development of constructional skills
- Students' self-constructive activities are one of the basic parts of this kind of education.

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ON THE EFFECT OF USING GRAF CALCULATOR IN MATH PROBLEM SOLVING: VOCATIONAL SCHOOL SAMPLE

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Abstract

In this paper, it is aimed to determine the effect of graf calculator on vocational school students' math problem solving by focusing linear equations and personal attitude for problem solving in math lectures. Linear equation is one of the main subjects of the mathematics curriculum in vocational school mathematics that has a wide-used implementational effect on all vocational education program. For this aim, it was used control and experimental study groups with the pretest and posttest experimental model to search the hypotheses of the paper. The sample group of the article was selected from a vocational school in Turkey. In the 3 weeks period, it was used graf calculator for the experimental group students and, traditional method for the control group students. The Linear Equation Problem Solving Test and Math Problem Solving Questionnaire were applied to study group students for the obtaining of the data. The findings showed that there is a meaningful difference between the mean score of students used graf calculator and the mean score of students not using any technological material in the math classes. The academic performance of the experimental group of the study was better than the control group scores.

Keywords: mathematic performance, graf calculator, linear equation, vocational school student

Introduction

In every area of the life, it is possible to meet problem from social life to technological life (CUMP, 2004; Brinkerhoff, 2006). These problems can be expressed by using of mathematics language. The solving of the problems sometimes had been easy, and some problems had been defined by mathematician as challenging problems because of their difficult solutions. According to some mathematicians, mathematics has the same meaning with solving problem as making proof of theorem, focusing diagrams, and constructing patterns (Hazzan, 2003; Lumb at al., 2001; Serdina Parrot, Leong, 2018, Zibiek and Hollebrands, 2008; Zorfass and Rivero, 2005). So, we can say that problem solving has a large meaning containing some systematic steps to reach a solution. With the involvement of technology into science, solving of mathematics problems has been renewed and modified into this area. After that, it is possible to modulate the necessity technological material with mathematical subjects especially with problem solving for making easy and fast computational steps, so than, supporting and extending mathematical reasoning (Chamblee at al., 2008; Ertmer at al., 2015; Almekhlafi and Almeqdadi, 2010).

Kissane (2000) stated that applying of hand-held scientific technological materials more especially graf calculators have been increased by mathematics and science teachers, also by problem solver that have a mathematical problem from any area of the life. He also noted that using of this technological material could present to the user or the learner exploring and exercising of different mathematical problems. Many educational studies have been conducted about graphic calculator using in teaching, learning, habits, and attitudes on different area of mathematics. Usually, the effect of using graphic calculator has been positive on teachers' teaching style and learners' learning performance in problem solving from every area of mathematics (Rich, 1991). One of the main finding of the studies conducted in using of graf calculator was learners were more willing to focus on problem solving and to spend much time with mathematical activities. Another basic finding was that when they used graphic calculator to accomplish non-classic problems, they did not feel unhappy and boring even if these problems were difficult or unsolvable according to them.

On the determining the effect of graf calculator on students' mathematical achievement in problem solving, Schoenfeld's application model was used by Allison (2000). According to him, using of graf calculator decreased the solution time and increased the accuracy of problem solving. Also, this technological material added positive contribute to students' ability on computational reasoning. Moreover, graf calculator powered their ability to analyze the solutions of the problems and testing the accuracy of the answers. Wilson at al. (1993) stayed that students need to understand the basic mathematics objects conceptually if they want to be a good problem solver. We can say that these basics objects are basic number sets, four basic operations on the sets and language of equations. According to some researchers, the lack of basic skills and concepts of mathematics could turn out to be difficulties in solving of problems and inabilities in operations on the number sets (Tambychik, 2005; Tay, 2005). Also, they noted such a weak could be result false perceptions, lack of interpretations, algorithmic analyzing problems.

In this study, it is focused on the information processing theory which contains problem solving procedure and operating of mathematical objects (Laurillard, 2002). A famous pure mathematician Polya (1965) stressed that student's expertise on problem solving and they have intellectual level when they use the problem-solving procedures correctly and orderly.

Graf calculators used in this study are hand-held model, able to find numerical solutions to linear equations, draw graph of functions, operate algorithms, and calculate on matrices algebra. Choi-Koh (2003) stated that these technological materials made positive contribution on students' learning, teachers' teaching and meaning changes in the mathematics curricula. Doerr and Zangor (2000) determined five basic functions of graf calculator in the learning and teaching of mathematics at a math laboratory or at a class:

- Exploratory
- Graf
- Confirmatory
- Problem solving
- Multi-dimensional tool

On the using of graf calculator for problem solving, Karadeniz (2015) noted that this technological machine has a positive contribution on the visualization of the problems and on the solution of the problems. Another experimental study stressed that using graf calculator for problem solving could be operated in different levels (Crippen, 1999). He also exemplified that different kinds of problems such as complex, concrete, and abstract problems could be accomplished by teacher or students. In this study, it was aimed to find some concrete answers the following two hypotheses: There is a meaningful difference in vocational school students' math achievement to solve math problems on linear equation between control and experimental group. There is a meaningful difference in vocational school students' attitude on mathematical problem solving between control and experimental group.

Method

The data of the study coming from a vocational school student in Turkey who were given basic mathematics lecture in their 2-year certificate program. There were fifteen departments at the vocational school but only 2 group were randomly chosen for the analyze. One of the groups from busines department selected as the experimental group (35 students) and applied the graf calculator in mathematics lecture but in the control group (31 students) no technological equipment was used and the lectures were conducted with the traditional model.

At the first step of the study, the pretest data tool was applied to all students. The students in the experimental group used graf calculators during the first application of the test. During the application, the control group learned the linear equations using traditional method, and the experimental group learned the linear equations in the problem-based approach with the using of graf calculators. After three weeks lecture application period, the posttest was answered by the study groups. Linear Equation Test was composed by the author to assess the vocational school students' proficiency thought the 3 weeks period. The consistency of the test was determined benefiting from the Cronbach alpha and found 0.74. In the linear equations test, there is 6 questions, and every question has 2 sub-questions, and so totally 12 questions were answered by the students (the total point of the linear equation test was 60).

The student attitudes' instrument developed by Conway (1996) was applied to determine students' attitude on problem solving (The Cronbach alpha value was 0.75). The questionnaire had 20 items that modulated the 5-point Likert scale with the degrees of Strongly Disagree, Disagree, Undecided, Agree, and Strongly Agree. From 1 point (Strongly Disagree) to 5 point (Strongly Agree) were given for every item of the questionnaire.

Findings

The first hypothesis was tested using independent t-test.

Table 1. Independent t-test for pretest mean score differences between groups.

Group	Mean	SD	t-value	Sig (2 tailed)
The experimental group	8.80	3.42	1.58	.23
The control group	7.11	3.11		

According to table 1, there is no meaningful difference between the pretest point of the experimental group (M=8.80) and the control group (M=7.11) that the p-value was 0.23 ($p > .05$).

Table 2. Independent t-test for posttest mean score differences between groups.

Group	Mean	SD	t-value	Sig (2 tailed)
The experimental group	42.96	11.05	12.29	.000
The control group	18.96	8.76		

The experimental group posttest score (M=42.96; SD=11.05) was higher that the control group posttest score (M=26.07; SD=8.76).

In order to analyze that there was a significant mean difference between the posttest and pretest scores of the groups, a paired-samples t-test was applied.

Table 3. Mean score differences of the groups obtaining from Paired Samples of the study

Group	Mean	SD	t-value	Sig (2 tailed)
The experimental group	34.15	9.12	33.11	.000
The control group	26.07	10.02	25.36	.000

According to table 3, the mean score difference between the pretest and posttest of the experimental group of the study was 34.15 while the control group was 26.07. So, we can say that there is a meaningful difference between the pretest and posttest score of the t-value is determined as 33.11 and p-value less than .05 in the experimental study group. Moreover, for the control group, the finding showed that the t-value is 25.36 and p-value less than .05 mean that there is a meaningful difference for the control group. We can say that every students' group score on the pretest is meaningfully lower than on the posttest.

The second hypothesis that vocational school attitudes toward problem solving was determined in two steps which are before and after application of the study (Table 4 and Table 5).

Table 4. The overall mean score differences of the questionnaire between the groups for pre-application

Group	Mean	SD	t-value	Sig (2 tailed)
The experimental group	3.82	.61	.67	.703
The control group	3.57	.36		

Table 5. The overall mean score differences of the questionnaire between the groups for post-application

Group	Mean	SD	t-value	Sig (2 tailed)
The experimental group	3.98	.32	5.06	.000
The control group	3.04	.26		

The normality test for the pre-application and post-application for the control and experimental groups are normally way (Shapiro Wilk's test $p > .05$). Also, the homogeneity of variances assumption is in normality limitations ($p > .087$). The mean of vocational school students' attitude of the experimental group towards problem solving for the pre-application is 3.82 (SD=0.61), on the other hand, the control group mean is 3.57 (SD=0.36). According to independent t-test, the mean differences is not meaningful ($t=0.67$, $p > .05$). On the other hand, the overall mean of vocational school students' attitude of the control group towards problem solving for the post-application is 3.98 (SD=0.32) while the control group mean is 3.04 (SD=0.26). According to independent t-test, the mean differences is meaningful, $t = 5.06$, ($p < .05$). So, this finding shows that there is statistically meaningful difference in the post-application of the study between both groups. We can say that the experimental and control group have different attitude on mathematics problem solving. The experimental group of the study have higher attitude than the control group toward problem solving.

Conclusions

In this paper, it was aimed to analyze the effect of graf calculator on vocational school students' ability on mathematics problem solving about linear equation in the mathematics lecture. One of the basic conditions of learning mathematics is to have enough ability in problem solving. According to the findings of this study, it can be said that using graf calculator in mathematics is one of the important alternatives to improve this ability. Also, our observations during to this research clearly showed that graf calculators had an essential advantage for our students because they have more time to concentrate on the problems and the concepts of mathematics without doing long algebraic operations.

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ONLINE MEDIA APPLICATION SELECTION USED IN DISTANCE EDUCATION WITH INTEGRATED FUZZY AHP AND FUZZY TOPSIS METHODS

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Abstract

Thanks to the developing technologies, most of the work in daily life can be carried out online. The turning point in the development of these online processes is the transformation of the Covid-19 virus into a global epidemic. With the announcement of the virus as a global epidemic by the World Health Organization, the functioning of many processes in the world has changed dimensions and applications that information, technology, and processes overlap more, have gained importance. Schools of all levels, all over the world, now have their education; and many private and public organizations had to do both their work and their meetings using online media applications. There are many online media applications (Zoom, Skype, Google Meet, etc.) used in the industry that have advantages and weaknesses relative to each other. As a result, schools and other private/public organizations faced a new decision-making problem. In this study, the weights of the criteria were calculated using the fuzzy AHP in terms of meeting recording, sound quality, image quality, time limit, and number of participants. Fuzzy TOPSIS method has been used to select from alternatives of Free Conference Call, Discord, Zoom, Skype, and Google Meet online media applications. In this study, in which the opinions of experts in the field were taken, it was observed that image quality was more important than other criteria, followed by the sound quality criterion. In order not to cause unfair competition for these online media applications, the alternatives are shown as OMA1, OMA2, OMA3, OMA4, and OMA5 without order. Considering the result of the fuzzy TOPSIS method, it was seen that the online media application alternative that meets the needs most is OMA1. With this integrated decision support system developed in the study, it is aimed to provide an idea for schools and other organizations to develop similar decision support systems in line with their own needs.

Keywords: distance education, online media applications, fuzzy AHP, fuzzy TOPSIS

Introduction

In our globalizing world, technology not only improves with each passing day, but also increases its speed of development. With this development, access to the internet has become easier and therefore internet usage has become more common. These developments have greatly affected the communication industry. First, voice calls and then video calls started to take place over the internet and many applications established to make these calls were put into service. Video call applications offer people the opportunity to video call anyone they want as long as they can access the internet. Although these applications were not preferred much in the earlier years because of high internet consumption and high speed internet requirement, over time, the cost of internet usage worldwide decreased and internet speed increased. Especially after the pandemic process that started in March 2020, it started to be very popular. Because people had to meet over the internet with those they could not meet face to face. Similarly, corporate firms, some government departments, or many organizations that had to hold meetings such as university senates had to hold their meetings over the internet. There are many corporate benefits of holding meetings over the internet using these applications. For example, a company needs an urgent meeting, but some employees are on vacation outside the city. In this case, long intercity trips, therefore economically costly expenses are required. If they do this meeting with video call applications, they will save time and avoid travel expenses. For these reasons, it is important to use such applications. However, since there are many such applications, it is necessary to choose among them. For example, it will not be beneficial for a company with more than 50 employees to use an application with a limit of 50 participants. In addition, it would be more beneficial to choose applications with high video and sound quality to make meetings more efficient. Expert opinions were used to determine such criteria and evaluate them together with alternatives. Our decision makers consist of 5 people. These decision makers are the human resources officers of important companies and coordinated the meetings held on the internet at the companies they work with during the pandemic process.

Video communication services provide the opportunity to make video calls with our acquaintances around the world. In this way, we provide the opportunity to meet with our loved ones even if we are far away. The same video calling applications are now used by companies. Today, there are video communication applications of many different companies. However, some of these applications are more preferred, while some are less preferred. The reason for this is the awareness of the applications and some differences in their content. Among the 5 alternative applications chosen in our study, the most ideal one will be chosen. Some criteria have been determined while deciding on the choice of the most ideal application. These criteria are combined in 5 main criteria by analyzing the contents of the applications and will be evaluated accordingly. Fuzzy AHP and fuzzy TOPSIS methods, which are frequently used in the literature, were used in the solution of decision-making problems (Denizhan & Yalçınar 2017, Eleren 2007, Eleren & Ersoy 2007, Erdin 2019, Kiraz et al. 2018, Özçakar & Demir 2011, Sofyalıoğlu 2009, Zhu et al. 1999). The weights of the criteria were calculated with the fuzzy AHP method, and the selection of the alternatives with the obtained criteria weights was made with the fuzzy TOPSIS method.

Methodology

The first study of fuzzy AHP was done in 1983 by Van Laarhoven and Pedrycz. The authors compared the fuzzy ratios expressed with triangular fuzzy numbers in these studies (Laarhoven & Pedrycz 1983). Buckley identified fuzzy priorities of comparison ratios using trapezoidal fuzzy numbers in his work in 1985 (Buckley 1985). Chang introduced a new approach for fuzzy AHP by using triangular fuzzy numbers in the binary comparison scale based fuzzy AHP in 1996 (Gültaş, 2007).

There are various fuzzy AHP applications in the literature according to the status of membership functions (triangular, trapezoidal, etc.) (Chang 1996, Laarhoven and Pedrycz 1983, Alkan et al.2016).

The stages of the method can be listed as follows:

Stage 1: Comparisons are made between criteria to create pairwise comparison matrices. The corresponding language matrix expressions are determined according to the importance of the criteria.

$$\tilde{D} = \begin{bmatrix} 1 & \tilde{a}_{12} & \tilde{a}_{13} & \dots & \tilde{a}_{1n} \\ \tilde{a}_{21} & 1 & \tilde{a}_{23} & \dots & \tilde{a}_{2n} \\ \vdots & \vdots & \vdots & \ddots & \vdots \\ \tilde{a}_{n1} & \tilde{a}_{n2} & \tilde{a}_{n3} & \dots & 1 \end{bmatrix}$$

Stage 2: Fuzzy geometric mean is determined with the following equation.

$$\tilde{r}_i = (\tilde{a}_{i1} \otimes \tilde{a}_{i2} \otimes \dots \otimes \tilde{a}_{in})^{1/n}$$

Stage 3: Criteria fuzzy weights is obtained using the equation below.

$$\tilde{w}_i = \tilde{r}_i \otimes (\tilde{r}_1 \oplus \tilde{r}_2 \oplus \dots \oplus \tilde{r}_n)^{-1}$$

Stage 4: With the following equation, criterion Best Non-fuzzy Performance (BNP) value is obtained by the area center method developed by Chou and Chang in 2008 (Chou & Chang 2008).

$$M_i = \frac{lw_i + mw_i + uw_i}{3}$$

Stage 5: The value of M is normalized using the formula below.

$$W_i = \frac{M_i}{\sum_{j=1}^n M_i}$$

A fuzzy MCDM method is required if it is desired to evaluate criteria of different quantities and qualities together and to sort by considering their weights. (Chen 2001) Pioneering studies using triangular fuzzy numbers in TOPSIS method started first with Negi's doctoral thesis in 1989 and then with a book that Chen and Hwang created and published together in 1992 (Chen & Hwang 1992).

There were sections that remained unclear in the fuzzy TOPSIS method, and over time, some researchers have worked on these sections. These uncertain parts can be briefly stated as the clarity of the fuzzy numbers used in the assessment, the constant or variable positive or negative distance values, the use of triangular or trapezoidal number systems. Chen, one of the researchers on the subject, published an article in 2000 and clarified these chapters. Actually, there is no difference between Chen and other researchers as a method, but the difference is due to the assumption that the fuzzy values used in grading are between 0 and 10, $v * j = (1,1,1)$ and $v_j = (0,0,0)$ (Chen, 2000).

We can list the stages of the method as follows:

Stage 1: Evaluating the alternatives according to the criteria and writing the relevant fuzzy values in the matrix.

At this stage, verbal values of the alternatives are written in the matrix with triangular fuzzy numbers in order to obtain a fuzzy decision matrix by considering the criteria.

Stage 2: The weighted normalized decision matrix is determined by multiplying the normalized fuzzy weights we previously found with the fuzzy AHP method with the relevant criterion value in the fuzzy decision matrix.

Stage 3: In the weighted normalized decision matrix that we found in the previous step, the largest and smallest value in the columns are fuzzy positive and negative ideal solutions, respectively.

Stage 4: The vertex method is used to calculate the distances to the positive and negative ideal solution.

$$dv(\tilde{m}, \tilde{n}) = \sqrt[3]{\frac{1}{3} [(a_1 - b_1)^2 + (a_2 - b_2)^2 + (a_3 - b_3)^2]}$$

In this method, the distances of all values in the weighted normalized decision matrix to the ideal solutions are calculated. The distance of each alternative is found by summing the rows in the found table.

Stage 5: By dividing the negative ideal distance value from the distance values of the alternative by the sum of the negative ideal distance value and the positive distance value, the proximity coefficient is found.

Implementation

First of all, criteria and alternatives were determined in the study. As a result of the survey conducted with the expert employees, the criteria were gathered in 5 main categories. These criteria are; Meeting Recording, Sound Quality, Image Quality, Time Limit, Number of Participants. Considering not to cause unfair competition, the alternative is designated as Zoom, Skype, Google Meet, Discord, and Free Conference Call, without order.

After that, initial matrices were created. Fuzzy AHP method was used to obtain the weights of the criteria. In this table, the initial matrix formed by evaluating the criteria among themselves by the expert opinions that was formed. While creating this initial matrix, triangular fuzzy numbers and linguistic variables in Table 1 were taken into account.

Table 1. Linguistic Expressions and Triangular Fuzzy Numbers

Linguistic Scale	Fuzzy Scale	Equivalent Scale
Equally important	(1,1,1)	(1,1,1)
Weakly important	(2,3,4)	(1/4,1/3,1/2)
Essentially important	(4,5,6)	(1/6,1/5,1/4)
Very strongly important	(6,7,8)	(1/8,1/7,1/6)
Absolutely important	(7,9,9)	(1/9,1/9,1/7)

Table 2. Initial Matrix

Criteria	Cr1	Cr2	Cr3	Cr4	Cr5
Cr1	1	0.25	0.2	0.5	0.333
Cr2	4	1	0.5	3	2
Cr3	5	2	1	4	3
Cr4	2	0.333	0.25	1	0.5
Cr5	3	0.5	0.333	2	1

The initial decision matrix created with linguistic expressions and the triangular fuzzy number equivalents of this matrix are presented in Table 3 and Table 4, respectively.

Table 3. Initial Decision Matrix with Linguistic Expressions

Criteria	Cr1	Cr2	Cr3	Cr4	Cr5
Cr1	E	1/Y	1/M	1/B	1/O
Cr2	Y	E	1/B	O	B
Cr3	M	B	E	Y	O
Cr4	B	1/O	1/Y	E	1/B
Cr5	O	1/B	1/O	B	E

Table 4. Initial Decision Matrix with Triangular Fuzzy Numbers

Criteria	Cr1	Cr2	Cr3	Cr4	Cr5
Cr1	(1,1,1)	(1/8,1/7,1/6)	(1/9,1/9,1/7)	(1/4,1/3,1/2)	(1/6,1/5,1/4)
Cr2	(6,7,8)	(1,1,1)	(1/4,1/3,1/2)	(4,5,6)	(2,3,4)
Cr3	(9,9,9)	(2,3,4)	(1,1,1)	(6,7,8)	(4,5,6)
Cr4	(2,3,4)	(1/6,1/5,1/4)	(1/8,1/7,1/6)	(1,1,1)	(1/4,1/3,1/2)
Cr5	(4,5,6)	(1/4,1/3,1/2)	(1/6,1/5,1/4)	(2,3,4)	(1,1,1)

The operations in the 2nd and 3rd stages of the fuzzy AHP are applied, in order to find the fuzzy weights of the criteria. Fuzzy and normalized fuzzy weights of the criteria are presented in Table 5 and Table 6.

Table 5. Fuzzy Weights of Criteria

	L	M	U
Cr1	0.009627	0.023569	0.039837
Cr2	0.097539	0.223354	0.478536
Cr3	0.270807	0.646977	1.434394
Cr4	0.015761	0.022587	0.050235
Cr5	0.030751	0.083513	0.223375

Table 6. Normalized Fuzzy Weights of Criteria

	L	M	U
Cr1	0.022679	0.023569	0.017893
Cr2	0.229781	0.223354	0.214939
Cr3	0.637966	0.646977	0.644272
Cr4	0.037129	0.022587	0.022563
Cr5	0.072443	0.083513	0.100331

Step 4 and Step 5 of the fuzzy AHP method in the introduction are applied to normalize the weights. As a result of the calculation, it has been observed that the most important criterion is Cr3. The importance degree of criteria is as follows, Cr3> Cr2> Cr5> Cr1> Cr4.

Table 7. Normalized Weights

	W
Cr1	0.024
Cr2	0.224
Cr3	0.639
Cr4	0.022
Cr5	0.091

Afterwards, the necessary calculations were made for the creation of decision matrices. Considering the fuzzy scales corresponding to the linguistic expressions presented in Table 8, the fuzzy decision matrix presented in Table 9 was obtained.

Table 8. Linguistic Verbal Expressions and Triangular Fuzzy Numbers

Definition	Fuzzy Scale
Equally important	(1,1,1)
Weakly important	(2,3,4)
Essentially important	(4,5,6)
Very strongly important	(6,7,8)
Absolutely important	(9,9,9)

Table 9. Fuzzy Decision Matrix

	Cr1	Cr2	Cr3	Cr4	Cr5
OMA1	(5,7,9)	(7,9,10)	(7,9,10)	(4,5,6)	(4,5,6)
OMA2	(2,3,4)	(5,7,9)	(7,9,10)	(5,7,9)	(2,3,4)
OMA3	(5,7,9)	(5,7,9)	(5,7,9)	(4,5,6)	(5,7,9)

OMA4	(2,3,4)	(7,9,10)	(2,3,4)	(2,3,4)	(1,1,1)
OMA5	(5,7,9)	(5,7,9)	(5,7,9)	(7,9,10)	(7,9,10)

The weighted normalized fuzzy decision matrix obtained as a result of the operations is presented in Table 10.

Table 10. Weighted Normalized Fuzzy Decision Matrix

	Cr1	Cr2	Cr3	Cr4	Cr5
OMA1	0.1133, 0.1649, 0.1610	1.6084, 2.0101, 2.149	4.4657, 5.8227, 6.442	0.1485, 0.1129, 0.1353	0.2897, 0.4175, 0.6019
OMA2	0.0453, 0.0707, 0.0715	1.1489, 1.5634, 1.9344	4.4657, 5.8227, 6.442	0.1856, 0.1581, 0.2030	0.1448, 0.2505, 0.4013
OMA3	0.1133, 0.1649, 0.1610	1.1489, 1.5634, 1.9344	3.1898, 4.5288, 5.7984	0.1485, 0.1129, 0.1353	0.3622, 0.5845, 0.9029
OMA4	0.0453, 0.0707, 0.0715	1.6084, 2.0101, 2.149	1.2759, 1.9409, 2.5770	0.0742, 0.0677, 0.0902	0.0724, 0.0835, 0.1003
OMA5	0.1133, 0.1649, 0.1610	1.1489, 1.5634, 1.9344	3.1898, 4.5288, 5.7984	0.2599, 0.2032, 0.225	0.5071, 0.7516, 1.003

After this stage, ideal negative and ideal positive solutions are determined according to the relevant formulas (Table 11). After determining the ideal negative and positive solutions, the proximity values of the targets to these values, dA^+ and dA^- are calculated (Table 12-13).

Table 11. Positive Distance of Online Media Applications

	Cr1	Cr2	Cr3	Cr4	Cr5
OMA1	0.029871	0.322477	1.196198	0.128469	0.581175
OMA2	0.103156	0.680799	1.196198	0.079805	0.745194
OMA3	0.029871	0.680799	2.210529	0.128469	0.445868
OMA4	0.103156	0.322477	4.542573	0.182724	0.917952
OMA5	0.029871	0.680799	2.210529	0.038212	0.321233

Table 12. Negative Distance of Online Media Applications

	Cr1	Cr2	Cr3	Cr4	Cr5
OMA1	0.306348	0.807206	4.379675	0.066167	0.385900
OMA2	0.021053	0.51282	4.379675	0.115999	0.219946
OMA3	0.306348	0.51282	3.40086	0.066167	0.587666
OMA4	0.021053	0.807206	0.843649	0.013516	0.017323
OMA5	0.306348	0.51282	3.40086	0.163511	0.711036

Table 13. Distance of Online Media Applications to Positive and Ideal Solution

	dA^+	dA^-
OMA1	2.25819	5.945296
OMA2	2.805152	5.249493
OMA3	3.495536	4.873861
OMA4	6.068882	1.702747
OMA5	3.280644	5.094575

The proximity coefficients obtained from the alternatives after the calculations are presented in Table 14. The order of the specified values in descending order is OMA1 > OMA2 > OMA5 > OMA3 > OMA4. In this case, the OMA1 alternative application will be the most suitable online media application.

Table 14. Proximity Coefficients of Alternatives

Alternatives	CCi
OMA1	0.724728
OMA2	0.651735
OMA3	0.582343
OMA4	0.219098
OMA5	0.608292

Results and Discussion

The online media application of the OMA1 alternative is the best application to be preferred as a result of the criteria determined by the experts and the methods applied. Among other alternatives, OMA2 and OMA5 applications, respectively, stand out in the preferences. The biggest factor in such results is the image quality criterion. In addition, the effect of sound quality criteria is high. The reason why the image quality stands out so much is that people want to see each other in the best way while making video calls. Likewise, the other thing they care about most is the ability to get the other's voice clearly and transmit their own voice clearly. Therefore, the effect of these criteria was higher. The reason for the lower number of participants limit is that the meeting does not need to be held with too many people. Similarly, the reason for the low time limit is that if the meetings are interrupted, the conversation can be closed and restarted after the break.

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OPINIONS OF THE SECONDARY AND PRIMARY EDUCATION ADMINISTRATORS IN THE TRNC ABOUT THE USE OF TECHNOLOGY

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Abstract

The aim of this study is to determine in detail the difficulties of administrators in state-owned primary and secondary education institutions in TRNC regarding technology use tools, and to examine the problems and views of principals and assistant principals on this issue. to evaluate, to determine the causes of these problems and possible solutions. Qualitative research method was used in this study. The maximum diversity sampling method was used from purposeful sampling in sampling selection. On the basis of maximum diversity sampling, different gender, age, seniority, branch, education level etc. Participants of the research were determined by paying attention to such features. The working group consists of 47 people. This study consists of 15 Principals, 15 Assistant Principals in primary education, 5 Principals and 12 Assistant Principals in Secondary Schools working in primary and secondary schools in Nicosia region. Semi-structured Interview forms were used as data collection tools. The data were analyzed with descriptive analysis method and presented within the framework of determined themes. Findings revealed, determining the problems they experienced (Lack of knowledge, financial difficulties, lack of repair unit of the ministry, in-service insufficiency of trainings, insufficient internet infrastructure, fear of spoiling the relevant tools, not every school having equal opportunities etc.). Another result of the study is the widespread use of technology usage tools. Since the facilities of the school are limited, the participants expressed the view that this can only be done by finding sponsor companies and donating technological tools to the school. The use of technological tools in the field of education is one of the conditions of the modern education system. In addition, another result that came out of the interview forums was that the participants firstly followed the technology and developed themselves and set an example for other teachers in accordance with their leadership qualities.

Keywords: Training manager, technology, technological tools, in-service training

Introduction

In today's world where knowledge and technology are increasing day by day, understanding in education also changes in parallel with these. In parallel with the developments in the world, it is necessary to follow the changes and developments in education in the TRNC. Thanks to technological tools that administrators can use efficiently, schools can be brought to a more modern level and the quality of education can be increased.

The concept of technology is a concept that started to be studied in ancient times. As the word meaning technology used tools and equipments, application knowledge covering their usage patterns is defined as the science of application. (TDK, 2020). Technology is a phenomenon that is effective in enriching education-training environments in which determined skills and interests are developed (İşman, 2008).

Technology has become a necessity, an obligation and a principle that should be applied continuously for the organization rather than being an alternative situation that can be used in order for developed organizations to exist, to achieve their goals and to achieve development due to the level of technological change reached in the 21st century and the expansion of their usage areas. (Şimşek and Akın, 2003).

Education systems have undoubtedly played a major role in ensuring technological change. In order to perform this role though their educational activities are required to utilize efficiently the technology (Alkan, 1997).

In terms of education, technology according to Simon; it is a discipline designed by humans to establish superiority over nature using science (Simon, 1983: 173). According to McDermott; technology in a concrete and empirical sense is basically a small group of technically competent people, with the help of an organized hierarchy, to gain control over the rest of the whole (people, events, machines, etc.) (McDermott, 1981: 142). When defining technology, James Finn says: "In addition to the use of machinery, technology is a point of view to produce solutions to problems arising from both human and goods, the difficulty level of these problems, technical solution possibilities, and economic values, with the management and control mechanisms." (Finn, 1960: 10).

In addition to being important in human life, technology has also gained great importance on education. The concept of technology in terms of education is explained with the following definitions:

Educational technology is all methodologies and techniques created to apply teaching principles (Cleary, 1976). Educational technology is the functional structuring of learning or training processes by employing relevant

knowledge and skills in order to dominate education and learning situation. In other words, learning is the job of designing, implementing, evaluating and developing teaching processes (Yaylacı and Yaylacı, 2006).

With the development of information technologies, education systems and educational activities in educational environments are also affected (Pala, 2006).

Researchers investigate the knowledge and skills that teachers have and should have about technology (Varank, 2009).

School administrators have to lead their teachers about technology. Valdez (2004) defines technological leadership as a combination of strategies and techniques that require technology-specific attention, encompassing an understanding of how technology can be developed in teaching practices and strategies to help teachers use technology in their classroom. On the other hand, Tanzer (2004) defines a technological leader as the person who coordinates, influences, directs and manages the organization in the effective and efficient use of technology in the organization.

The school administrator is one of the most important elements that play a role in the effective use of information technologies in school and in the learning-teaching process in this context. In terms of effective use of technology in school, teaching-learning process, management and support systems, evaluation system necessitates having a new perspective on many issues in social and moral aspects (Şeyhoğlu, 2005).

When we look at similar studies in the literature, M.Yılmaz, (2016) and A.Pala, (2006) examined the effect of teachers and administrators' having personal computers and Internet access on their computer self-efficacy beliefs and attitudes towards computer assisted teaching in their studies.

Education systems are expected to raise modern individuals who are technology literate and keep up with the information age. Recently, one of the issues that has come to the agenda is that teachers and administrators are expected to increase their ability to use new technologies in accordance with the information society. In the light of all these developments, what is expected from today's schools is to raise individuals who are equipped with the skills of accessing information and using it effectively and who can use technology. (Akkoyunlu, 2003; Seferoğlu, 2009)

Turkey and Turkish Republic of Northern Cyprus Universities did not reveal any research related to information management in universities. It has been observed that information management systems are studied in very few primary and secondary education institutions and the current situation has been tried to be revealed. According to the research of Muratoğlu (2005), among these studies, it has come to the conclusion that school administrators and teachers do not effectively implement knowledge management in schools, that making comparisons and forming an information team in schools is not done effectively, and that there is no serious information store and knowledge bank in schools in order to reach the desired information instantly.

Knowledge management has to be designed as an organizational process and constantly improved. This process has made knowledge management a necessity for all kinds of contemporary organizations. (Daglı, Silman & Birol, 2009)

Today's administrators are expected to know themselves while managing the school, to identify their strengths and weaknesses, to reflect on them and to have the skills to produce solutions to problems by doing the necessary studies. (Keman 2019)

According to Görgülü & all, it is important in terms of determining the variables that affect the school administrators' receiving and using education about information technologies and developing solutions for them (Görgülü, Küçükali, and Ada 2016).

When M.Yılmaz, (2016) Pala, A. (2006) and Çetin and Güngör (2014) examined the effect of teachers and administrators' having personal computer and Internet access on their computer self-efficacy beliefs and their attitudes towards computer assisted teaching. It is seen that both the self-efficacy beliefs and attitudes of having personal computer and internet access affect the use of technology tools positively.

The study is presented by using sub-problems in order to determine in detail the difficulties of the administrators in the primary and secondary education in TRNC Public Schools in using Technology Tools and to show possible solutions .

- What are the in-service training problems in the TRNC education system?
- What are the infrastructural problems in education and training in the TRNC education system ?
- What are the problems of lack of technical support in the TRNC education system?
- Financial difficulties in the TRNC education system?
- How can it be ensured that the use of technology tools of TRNC Administrators are popularized?

Method

Working group (Participants)

Qualitative research methods were used in the study. The aim of qualitative research is not to generalize but to obtain a holistic picture. In qualitative research, the subject studied is examined in depth and in detail. The working

group consisted of 47 people. The data were analyzed with the descriptive analysis method and the determined problems were shown within the framework of sub-problems. The data obtained according to the descriptive analysis approach are summarized according to predetermined themes. The data were analyzed considering the questions used in the interview and presented in the findings section.

The maximum diversity sampling method was used from purposeful sampling in sampling selection. On the basis of maximum diversity sampling, different gender, age, seniority, branch, education level etc. Participants of the study were determined by paying attention to such features.

The purpose of maximum diversity sampling is to create a relatively small sample and to reflect the diversity of the participants who may be a party to the problem studied in this sample to the maximum extent. The demographic information asked to the participants is shown in Table 1.

Data Collection Tool

Semi-structured interview technique forms were used as data collection tools. In this technique, the researcher prepares the interview form that he plans to ask in advance. Depending on the course of the interview, it may affect the flow of the conversation with different side or sub-questions. And it can enable the person to explain and elaborate their answers (Türnükli, 2000).

While preparing the interview form used in the study, care was taken to ensure that the questions were as clear as possible, easy to understand, to provide explanations and detailed answers in order to establish a more effective and efficient communication with the interviewees, and not to be multidimensional in order not to create an unnecessary question burden on the interviewee (Yıldırım & Şimşek, 2005).

In this study, the interview form sent to 15 primary school principals and 15 primary school assistant principals in Nicosia central schools and 5 principals in secondary schools and 12 assistant principals in Nicosia central schools via e-mail and received. The results obtained according to the answers given by the participants were grouped under certain headings and analyzed with Microsoft Excel program. (Table 1)

Validity

The collected data are written in detail and the results are explained in a clear and understandable way. The opinions of the teachers interviewed were frequently mentioned through direct quotations; the results of the research are explained based on these. Thus, the validity study of the study was conducted. Research findings are consistent and meaningful in themselves. The emerging concepts are of a nature to form a whole. In addition, the findings obtained are compatible with the conceptual framework. The researcher who conducted the study constantly questioned themselves and their research processes with a critical eye; checked whether the findings and the results of these findings reflect the reality (Yıldırım & Şimşek, 2005).

In this study, "semi-structured interview" technique was used as data collection method. Interview forms were sent to 47 participants from different schools in the Nicosia region. The data collected in the Interview form with 5 questions were written in detail and transferred to an Excel table (Table 4). The validity check was also made by explaining how the results were reached in a clear and understandable way.

Reliability

The researcher avoided directing the interviewed participants and tried to make the teachers speak in line with the subject and purpose of the study. The individuals who are the data sources in the research have clearly defined them, so other researchers who do similar research can take these definitions into account when creating samples. The data were stored so that they could be reviewed by others (Yıldırım & Şimşek, 2005).

In this study, the "descriptive analysis" technique was used to analyze the collected data. The data obtained according to this approach are summarized according to predetermined themes. The data were analyzed considering the questions used in the interview and presented in the findings section.

Participants were asked about their own demographic information in the interview form to identify the defects in the TRNC education system. These are information such as gender, age, seniority, education level, and branch. This information was transferred to the Excel program and analyzed. The results are shown in Table 1, Table 2, Table 3, Table 4.

For reliability, the data is kept in an Excel table so that the data can be viewed by anyone. A few examples of the questions in the interview form are shown in the findings section (Table 1).

The interview form prepared by the researcher consists primarily of one curriculum development specialist, one education management expert, one Turkish language expert and one assessment-evaluation expert.

Collection of Data

The interviews were held in Nicosia, between September and January in the 2019-2020 academic year. The opinions of 27 Assistant Principals and 20 Principals from different schools were requested. For this purpose, the

interview form containing 7 questions we have collected under 3 headings above was sent to the relevant participants by mail.

In the interview forms, managers were asked to indicate the technological tools they use as well as their demographic information. Participants were asked which tools and equipment they could use such as desktop computer, portable computer, tablet computer, camera, printer, smart board, projector, smart phone, internet. These tools are the most basic modern training tools used in education. These and similar tools are necessary to provide quality education.

Data Analysis

The "descriptive analysis" technique was used to analyze the data collected in the study. The data obtained according to this approach are summarized and interpreted according to predetermined themes. The purpose of this kind of analysis is to present the findings to the reader in an organized and interpreted form (Yıldırım & Şimşek, 2005).

In this study, the data were analyzed by considering the questions used in the interview and presented in the findings section. The questions were sent to the relevant participants by e-mail through interview forms and the results were also received back by mail. The results obtained according to the answers given by the participants were grouped under certain headings and analyzed with Microsoft Excel program. All tables are in the Findings section

Findings And Comments

Views of 47 administrators from different schools were requested. For this purpose, an interview form including 5 questions that we have gathered under 4 headings below has been prepared. Few of the questions in the interview form were shown in Table 4. Findings from the study were grouped according to interview questions under 4 main themes.

Table 1. Information About School Administrators

			n	%
School Type		Kindergarten	10	21,3
		Primary School	20	42,6
		Secondary School	17	36,2
Education Level		Undergraduate	28	59,6
		Master's degree	14	29,8
		PhD	5	10,6
Occupational Seniority		<15	19	40,4
		>15	28	59,6
Gender	Female	<40	7	14,9
		>40	21	44,7
	Male	<40	5	10,6
		>40	14	29,8
Total			47	100

When Table 1. is examined, the majority of the administrators out of the 47 people who participated in the interview were working in primary school (n = 20; p = 42,6%). We see that the education level of most of the managers remained at the undergraduate level (n = 28; p = 59,6%). It is seen that the number of doctorate managers is very low . (n = 5; p = 10,6%). It was observed that most of the administrators were women and over the age of 40 (n = 21; p = 44,7%). However, in the data obtained from the interview forms, it was observed that men over the age of 40 were in the minority (n = 5; p = 10,6%). It has been observed that the professional seniority (staff year) of the managers is mostly over 15 years (n = 28; p = 59,6%). When we correlate with the data in Table 2, it is seen that women over the age of 40 use more technology.

Table 2 . Use of Technological Tools by Managers

Technological Tools	Number of users	%
Smartphone	47	100,0
Internet	47	100,0
Desktop	47	100,0
Printer/Scanner	47	100,0
Laptop	15	31,9
Camera	13	27,7
Smart Board	7	14,9
Tablet PC	5	10,6
Projection	5	10,6
Smartschool Education Portal	28	59,6
MEB Education Portal	19	40,4
EDMS (Electronic Document Management System)	20	42,6

Difficulties experienced by the administrators in the use of technological tools in the TRNC, the responses of the relevant participants. All participants can use Smartphone, Desktop PC, Printer and Scanner (n=47, p=100) but it is difficult to use tablet PC and projection for them (n=47, p=100).

Table3: Problems experienced by administrators in educational institutions while using technological tools

Problems Experienced	n	%
Lack of in-service training	21	44,7
Ministry's lack of technical support	10	21,3
Inadequate internet infrastructure	7	14,9
Financial impossibilities	7	14,9
The necessity of expanding the use of technological tools	2	4,3
Total:	47	

When Table 3 was examined, it was seen that the most desired problem to be solved is inadequate in-service training opportunities (n = 21; p = 44,7%). Participants suggested the Ministry's lack of technical support and increasing the quality of in-service training (n = 10; p = 21,3%). Internet infrastructure and financial problems are the third major problems (n = 7; p = 14,9%). It was observed that the least desired problem is “expanding the use of technological tools” (n = 2; p = 4,3%).

Table 4. Interview Questions Asked To Managers

INTERVIEW QUESTIONS
1. Can you follow the ever-evolving technology that interests you in the field of education? What are the problems?
2. What technological tools do you use in your school?
3. What are the problems you have with the technological tools you use?
4. Have you attended any courses, seminars on the use of technological tools? Was it helpful? Your feedback.
5. What are your suggestions for popularizing technology use tools and minimizing problems?

How Is It Enabled To Disseminate The Technology Usage Tools Of Trnc Managers?

According to the opinions of the administrators working in the primary and secondary schools in Nicosia center under the TRNC Ministry of National Education, the technology use tools and the difficulties they have experienced evaluation form, the administrators are behind the educational-personal progress. They do not follow technological developments sufficiently. Unfortunately, some of the teachers working in primary and secondary schools in Nicosia center of the TRNC Ministry of Education are not innovative enough. Other problems are: lack of in-service training, financial difficulties, the ministry's failure to send sufficient number of technological tools. It

shows that among the participants of the study, who are women and whose seniority years are over 15, are more curious about the use of technological tools. It shows that he follows in-service trainings. Also, looking at the managers, it is observed that the young generation managers can use technological tools more easily.

Can It Follow The Continuous Developing Technology Related To The Managers 'Use Of Technological Tools In The Trnc, And Take In- Service Courses On This Site?

Among the responses given by the interviewees, the administrators did not follow the ever-developing technology, the Ministry of National Education did not open the necessary in-service courses, and some emphasized that the administrators did not find time due to the workload and some of them stated that the young people should now attend the courses as there is only a little time left for their retirement.

Conclusions And Recommendations

- According to the findings obtained from the interviews, the biggest task in solving the technology use tools and the difficulties of the administrators working in the primary and secondary schools in the center of Nicosia in the TRNC falls to the Ministry of National Education.
- The Ministry has to provide internet infrastructure and technological tools to every school under equal conditions.
- It is the direction of the administrators to follow technology, develop themselves and set an example for other teachers in accordance with their leadership qualities.
- It shows that women and those with a seniority of over 15 years are more curious about the use of technological tools.

Suggestions

TRNC Ministry of National Education And Culture administrators should plan in-service training courses regarding the use of technological tools that will not leave them behind technology and meet their demands and needs.

In case the TRNC Ministry Of National Education And Culture and the school's facilities are not sufficient, financial support should be provided for the purchase of technological tools from the school family association or sponsor companies.

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PARENTAL ATTITUDES OF CHILDREN WITHOUT NEURODEVELOPMENTAL DISORDERS AND INCLUSION OF CHILDREN WITH SPECIAL EDUCATIONAL NEEDS (SEN)

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Abstract

Over the last decade there has been a development on the inclusion of students with Special Educational Needs (SEN) in mainstream education. The general objective is to analyze the attitudes of parents of children without neurodevelopmental disorders regarding the inclusion of children with Special Educational Needs. Methods: This is a comparative and correlational study and aims to: Characterize and analyze the possible differences in attitudes of parents of children without neurodevelopmental disorders regarding the inclusion of children with SEN considering the three disorders. The results revealed that parents of children without neurodevelopmental disorders tend to show positive attitudes towards the inclusion of children with SEN. It was found that the type of disturbance and the description that is made of children with SEN have an influence on parental attitudes, which show more positive attitudes towards Hearing Impairment, followed by Trisomy 21, and Behavioral Disorder. Conclusions: Sensitizing parents of children without neurodevelopmental disorders plays an essential role in the messages they convey to their children promoting inclusion.

Keywords: Children without Neurodevelopmental Disorders

Introduction

In Portugal, efforts have been made to follow the inclusion policies of children and young people with SEN, and this progress is a positive factor for all, allowing the development of rich and profitable school communities (Correia, 2003). However, it is important to stress that the inclusive movement can only succeed if, in the first place, citizens understand it and accept it as a principle whose benefits reach everyone (Correia, 2008). Although the acceptance of students with Special Educational Needs (SEN) in mainstream schools is a widely supported goal, implementing inclusion in daily practice is sometimes challenging (Ferguson, 2008). For Omote, Oliveira, Baleotti, and Martins (2005), the insertion of a child with SEN in a regular class is only administratively determined, meaning that this child may not be welcomed and included by teachers and colleagues, and nor does it guarantee a quality education that is appropriate to the needs of each individual.

In this sense, Rodrigues (2003) reinforces the fact that there are factors in schools that are directly related to “resistance to change” and that can compromise the inclusion process. Since the school should not be just a place to study and get good grades, but a place to learn to live (Sampaio, 2012), we believe that, in general, the advantages of the inclusive philosophy seem to outweigh its obstacles. Despite the shortcomings in the system, students with SEN currently receive a more adequate education compared the one they had received until now.

With the success of the inclusive movement in mind, changes are required. These must be made up of not only material and human resources, but also of the attitudes of all those who are directly or indirectly involved. Thus,

it is essential to make a theoretical approach to them (attitudes), namely with regard to the attitudes of parents of children with typical development, which are the object of study in the present investigation.

The study of the concept of attitude dates back to the beginning of the 20th century, and remains lacking a conceptual definition that is universal (Pinheiro, 2001). However, it was possible to eliminate many of the definitions that were found to be inaccurate or inadequate, through the developments made over time (Lima, 1996). Despite the discrepancy between the various definitions of the concept of attitude, Lima (1996) says that among them there are three common points: they refer to subjective practices; they are always associated with an object; and always have an evaluative component, the latter being its main characteristic.

In Allport's (1935) approach, cited by Pinheiro (2001), about attitudes, these are considered a state of mental representation, which is organized through experiences and exerts a dynamic influence on the responses of individuals to all objects and / or situations with which it relates.

With various definitions as a starting point, it was possible to realize that attitudes could be a resource to explain human action, believing that they were responsible for a behavioral disposition to react to certain realities, in the presence of certain stimuli, inserted in certain social contexts (Ajzen & Fishbein, 1980). According to Gaad (2004), attitudes drive our behavior.

As individuals or as a group, what we believe in and how we feel about a particular subject, will largely determine what we will do about it. Thus, we can affirm that the more favorable the subjective attitudes and norms in relation to a behavior and the greater the perceived control of it are, the stronger the intention of people to perform that behavior will be (Ajzen, 1991).

Here, is where the Theory of Planned Behavior (Ajzen, 1985) comes to play. The Theory of Planned Behavior (Ajzen, 1985) states that when one intends to predict a person's intention in relation to a certain behavior, three variables must be taken into account: the attitude towards a specific behavior, the subjective norms, and the perceived behavioral control.

The attitude towards a specific behavior is understood as the degree to which the performance of the behavior is positively or negatively valued. Subjective norms are determined by the subject's normative beliefs and consist of the subject's perception of social influences. In other words, it is not only about the perception that "I" have in relation to the opinion of others about what "I" should or should not do, but also "my" motivation to live up to the expectations of others.

As for the perceived behavioral control, it refers to the perception that each person has of their own ability to perform a certain behavior, this, being determined by the presence of factors that can facilitate or hinder the performance of that same behavior.

In regards to parental attitudes towards the inclusion of children with SEN in mainstream education, and taking into account the three-dimensional model mentioned above (affection, cognition and behavior), we can define the attitudes of parents of children with typical development as follows : the cognitive component reflects their beliefs towards inclusive education, such as the rights of children with SEN to be educated in mainstream schools; the affective component reflects feelings, such as concerns about the effect of including a child with SEN in your child's classroom; and the behavioral component reflects the intentions to act in a particular way, such as inviting a child with SEN to your child's birthday party (de Boer & Munde, 2014).

Explicit and / or implicit messages and the parents' attitudes and behaviors, are essential to the success of inclusive education, given their potential impact on their children's attitudes and behaviors, and their potential influence on both the school's and teachers' responses and on the educational policies (Freitas, Arroja, Ribeiro, & Dias, 2015). Therefore, the role of parents is preponderant as co-builders of the educational system, at a political and social level, through their involvement and the complementarity they can have in educational intervention, and in the way they convey messages to the school and to their children. (Barbosa, Rosini, & Pereira, 2007; Batista & Emuno, 2004). When parents are reactive to inclusive education, there is a tendency to negatively influence their children's attitude and behavior (De Boer, Pijl, Post, & Minnaert, 2012), and it is in this sense that, increasingly, the involvement and support of this group of parents is considered a significant facilitator of inclusive education (Palmer, Fuller, Arora, & Nelson, 2001).

The Study

Following this train of thought, if parents demonstrate negative attitudes towards inclusive education, it is possible that this position has a negative influence on the construction of their children's attitudes towards peers with SEN (de Boer, Pijl, & Minnaert, 2010), possibly leading to a compromised inclusion process. Hereupon, the present study is part of a comparative and correlational methodology, and its main Hypotheses: Hypothesis 1: Parents have more positive attitudes towards the inclusion of a child with Hearing Disability compared to a child with Trisomy 21 or with a Behavioral Disorder, and have less positive attitudes towards a child with a Behavioral Disorder when compared to a child with Hearing Disability or with Trisomy 21. Hypothesis 2: Parental attitudes are more positive owing to the positive description of the child with SEN compared to a neutral description. Hypothesis 3: Previous contact with SEN is associated with more positive attitudes compared to its absence. Hypothesis 4: In the presence of previous contact with SEN, parents who have regular contact show more positive results compared to those

whose contact is sporadic. Hypothesis 5: Higher levels of optimism are significantly related to more positive attitudes. Hypothesis 6: Taking into account the Five Factor Model, it is expected that higher scores on the factors Agreeableness, Extraversion, Openness to Experience and Conscientiousness are associated with more positive attitudes, and that higher scores on the Neuroticism factor are related to less positive attitudes. The convenience sample consisted of 147 subjects, fathers and mothers of children between the ages of 6 and 10 years old from the 1st cycle of Basic Education of the Group of Schools in the Center-North of Portugal. The Protocol used consisted of four questionnaires: a Sociodemographic Questionnaire, the Children with difficulties at school questionnaire (Nota et al., 2014; Portuguese version, Pinto, 2016), the Revised Life Orientation Scale (LOT-R) (Scheier, Carver & Bridges, 1994; Portuguese version, Laranjeira, 2008), and the NEO-Five Factor Inventory (Costa & McCrae, 1989; Portuguese version Lima & Simões, 2000). The procedures were carried out with the collaboration of the class teachers of the selected schools. We chose to contact parents through teachers and students as it is the most effective way to access the desired sample.

After receiving the consent of the General Directorate of Education and the Director of the School Group, the investigation was initiated through a brief presentation of the objectives of the study to the school coordinators and the teachers of the selected classes. 250 questionnaires were distributed to the 6 schools, and a similar number of versions were handed out to the selected classes (63 Male Neutral versions, 67 Female Neutral versions, 53 Female Positive versions, 67 Male Positive versions), taking into account the number of students in each one of the classes. There were 4 occurrences with regard to the existence of twin brothers in the selected classes. In these circumstances, the questionnaires were delivered as follows: in one of the classes, two questionnaires were given to the brothers, one of which was answered by the father and the other by the mother. In the remaining cases, only a questionnaire was delivered for both the children.

Findings

Regarding the characterization of the sample, with regard to the role played by the subjects ($n = 145$), 125 mothers (85%) and 20 fathers (13.6%) stand out, with their age ($n = 142$) varying between 23 and 53 years old, with an average of 38.70 and a standard deviation of 5.08. In relation to academic qualifications, the highlight is the completion of Secondary Education (12th grade) with 21.8% of the subjects ($n = 32$) and the achievement of a higher degree (Licentiate, Master, Doctorate, and Post-Graduation) with 53, 1% of the subjects ($n = 78$). Regarding the age of the children, in relation to the first born child ($n = 143$), the age (in years) varies between 5 and 25 years old, with the average age of the first child being 10.81 years ($SD = 4.106$), with 4 omissions. Regarding the second born child ($n = 104$), the average age (in months) is 88.24 ($SD = 48.301$), varying between 0 and 264 months (equivalent to 22 years), and 2 omissions were recorded. As for the age (in months) of the third born child ($n = 21$), it goes from 3 months to 132 months (equivalent to 11 years), with an average of approximately 7 years (81.86 months; $SD = 36.189$). Finally, as for the age of the fourth born child ($n = 3$), it varies between 4 and 9 years old, with an average of 6 years ($SD = 2.646$).

Taking into account Hypothesis 1 formulated for the study of attitudes, the results indicate that it is possible to observe different attitudes towards the inclusion of children with SEN, with regards to the type of disorder. Thus, parents of children with typical development have more positive attitudes towards the inclusion of children with hearing impairment, followed by a child with Trisomy 21, and finally by a child with Behavioral Disorder, thus corroborating Hypothesis 1. In response to the second hypothesis, an attempt was made to analyze and compare the possible differences in the attitudes of the parents of children with a typical development depending on the type of description that is made of the child, whether it is neutral or positive. The results obtained showed that these parents demonstrate more positive attitudes towards the positive descriptions of each of the disorders (Hearing Impairment, Trisomy 21 and Behavioral Disorder), compared to the neutral descriptions of the same disorders. Hypothesis 2 is then corroborated. In Hypothesis 5, it was possible to verify a positive and significant correlation between optimism and hearing impairment for the Social Acceptance factor and for the Total, suggesting that higher levels of optimism are associated with more positive attitudes for the referred factors of Hearing Disability. Therefore, Hypothesis 5 was, in part, corroborated.

Regarding the relationship between parental attitudes and personality traits, in the correlational analysis performed, it was possible to verify that individuals with lower scores in the Neuroticism trait had more positive attitudes in the Social Acceptance of children with Hearing Disability and in the Academic Performance of children with Behavioral Disorder.

Individuals with higher scores in the Trait Agreeableness, showed more positive attitudes towards Social Acceptance, both of children with Hearing Disability and of children with Trisomy 21, and also for the total of the Behavioral Disorder. In turn, individuals with higher levels in the Conscientiousness trait showed more positive attitudes towards the Social Acceptance of children with Hearing Disability. Given that low levels of Neuroticism correspond to greater adaptation and emotional stability, and that high levels of Agreeableness and Conscientiousness correspond to qualities such as compassion and trust, respectively, these results partially corroborate Hypothesis 6, and for the rest of the traits there were no statistically significant differences for any of the factors in each of the disturbances.

Discussions/Conclusions

As previously mentioned, the scarcity of studies carried out in the context of the attitudes of parents of children with typical development towards the inclusion of children with special educational needs (SEN), namely in the national context, was the main driver for the execution of the present investigation. It was in this sense that we sought to analyze the influence that some variables such as the type of description that is made of the child with SEN (neutral or positive description), the existence of previous contact with SEN and its frequency (regular or sporadic), as well as the relationship between attitudes with optimism and personality traits have in the inclusion process.

Taking the objectives previously proposed for this study, and the contribution of conceptual references that support and prove the importance of studying the attitudes of parents of children with a typical development in view of the inclusion of children with SEN, the results obtained will be discussed below, in order to verify whether they are consistent with the results obtained in other investigations carried out in this area.

In general, there was a trend already verified in several studies (Barbosa, Rosini, & Pereira, 2007; Freitas, Arroja, Ribeiro, & Dias, 2015; Narumanchi & Bhargava, 2011; Pinto, 2016; Pinto & Morgado, 2012; Tafa & Manolitsis, 2003), on the expression of positive attitudes towards the inclusion of children with SEN in regular education, by the parents of children with typical development. However, some of the authors mentioned above tried to analyze whether the type of the child's disturbance will have any influence on the attitudes of these parents (Barbosa, Rosini, & Pereira, 2007; de Boer & Munde, 2014; Freitas, Arroja, Ribeiro, & Dias, 2015; Pinto, 2016; Pinto & Morgado, 2012; Tafa & Manolitsis, 2003).

In this sense, exemplifying the study by de Boer & Munde, 2014, the authors used the Attitude Survey toward Inclusive Education (ASIE) questionnaire, developed by de Boer, Timmerman, Pijl, & Minnaert (2012), which, like the Children with difficulties at school questionnaire (Nota et al., 2014), uses the description of children with specific SEN, in this case being, children with motor disability, cognitive disability, and PIMD (profound intellectual and multiple disabilities), to see if different types of disturbance will lead to different manifestations of attitudes. The authors concluded that, in fact, attitudes differ depending on the type of disorder, with parents showing more positive attitudes about the inclusion of children with motor disabilities and more negative attitudes towards the inclusion of children with multiple and profound intellectual impairment (PIMD). In the study by Barbosa, Rosini, & Pereira (2007), it was possible to verify that the parents of children with typical development perceive that children with hearing impairment, followed by children with mental disabilities are more likely to belong to a regular school class without having their presence impair the learning process of colleagues with typical development. This, partially corroborates the results obtained in the present investigation, taking into account that here, too, parents showed more positive attitudes towards the inclusion of children with hearing impairment, followed by children with Trisomy 21.

The progressive changes that have been observed over the last few years in the educational system, namely in the inclusion of children with SEN, are accompanied by a growing interest in the study of the attitudes of those who are directly or indirectly involved in this ever changing system. The inclusion of children with special educational needs in mainstream education is a topic of extreme interest and importance for the construction of a school "which belongs to all, and for all". In general, when we refer to parental attitudes, there is an immediate need to analyze variables commonly investigated, such as gender, age, academic qualifications, and socioeconomic status of parents. However, an attempt was made to advance to the study of variables that, unlike those mentioned, have been less analyzed. Hence the interest to analyze the influence of variables such as the type of educational need of the child, as well as the description that is made of that child and his / her disorder / disability. In addition, it was also sought to understand whether previous contact with individuals with SEN or people with some type of disability would have any impact on the attitudes of parents of children with typical development.

Despite the contribution made by the present investigation to the study of the attitudes of parents of children with a typical development in relation to the inclusion of children with SEN, this work also had some limitations. In this sense, we start by mentioning the sample size, collected for convenience. Right here, the difference between the number of mothers ($n = 125$) and the number of fathers ($n = 20$) responding to the questionnaire was evident. With regard to the versions of the Children with difficulties at school questionnaire (Nota et al., 2014), there was also a significant difference between the number of subjects who responded to the positive female version compared to the other versions, being that this one was only answered by 12 subjects and in the remaining versions the number of subjects was clearly greater, between 40 and 50 subjects per version, making it impossible to analyze parental attitudes towards the gender of the child described. However, we consider that the structure of the Children with difficulties at school questionnaire (Nota et al., 2014) makes a great contribution to the study of parental attitudes towards the inclusion of children with SEN in regular education, by gender and type of description that is made of each child / disorder. In this sense, there has been a widespread use of the term SEN / disturbance / "disability", to specify the disturbances that were intended to be analyzed, facilitating the parents' response and the interpretation of the results by the researchers.

The parents' personality and psychological well-being, the child's characteristics and the social context are among the factors highlighted as the main determinants that influence the way they deal with their children (Belsky, 1984;

Dessen, 1997), and in the way how, later on, children will deal with those around them. Finally, we consider that it could be advantageous, in a first instance, to raise the awareness and sensitizing of parents of children with typical development, since these parents have an essential role in the messages they transmit to their children and that, consciously or not, they also transmit to other members of the school community. We believe that the results presented here are, in a way, encouraging in view of the social advances of the inclusive movement.

Acknowledgments

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PERSPECTIVES ON DIGITAL INCLUSION: PARTICIPATION OF SENIORS IN SOCIAL NETWORKS¹

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Abstract

The research presented in this article had as main aims: a) to know the use of social networks by a group of elderly people, as well as b) to understand the representations of this target audience on the use of this type of technology during their daily lives. The qualitative study had a first phase of exploratory collection, which consisted of randomly analysing public profiles of Facebook users over 65 years of age. Taking this into account, categories of analysis were defined which catered for a more in-depth look at 6 profiles, of 6 elderly people, which have been observed over 6 months. At the same time, 8 interviews were undertaken with individuals of the same age group, users of social networks, in order to understand their representations on the topic. The data collected allowed us to understand some aspects of the use of social networks by this public, namely the lack of care in the disclosure of personal information, the integration of the use of Facebook in the daily lives of the elderly, the use of the network as a means of approach relatives, either to learn how it works or to contact those who are far away.

Keywords: Digital Inclusion

Introduction

Data from the World Bank shows the seriousness of the national situation in demographic terms. In 2014, Portugal is one of the 4 countries in the world with the greatest decrease in population. The National Statistics Institute (INE) recorded, in 2018, data from 2016 that point to an aging rate of 151 elderly people for every 100 young people (INE, 2019). The reasons are diverse, but a future with the increase in the retirement age is expected, as well as the need to captivate immigration, replacing young people who neither contribute to the increase in birth rates nor stop emigrating. With the departure of young people, children and grandchildren, seniors are left with less support, with smaller family structures and no longer have the safety of those closest to them (cf. Albuquerque and Rosa, 2015). Those closest to them become neighbours and / or professionals who deal with this population and who often function as the only support structure around. The massive use of information and communication technologies in Western societies has raised a set of social and theoretical concerns regarding inequalities in access by citizens, both due to different technologies and to the information conveyed by them. Aspects as digital exclusion and digital divides were introduced to respond to the need to map situations of inequalities in access and in the use of technologies. If, at first the digital exclusion is related to the inequalities among nations, afterwards it has been associated with the urgency to equate these inequalities within each national state, among citizens (Selwyn, 2004).

With the increase in the elderly population in Portugal (INE, 2014), this being a group particularly vulnerable to social exclusion, the focus of our research relates to the digital exclusion of older people (Gil, 2015; Cabral, 2017). Within the scope of this study, we try to understand behaviours and forms of interaction that older people seek through technologies.

Digital Cleavages And Social (Dis)Insertion

Since the 1990s, the concept of “digital divide” has occupied the minds of the scientific community. For a previous definition of the concept of “digital divide”, we turn to Warschauer (2011, p. 5), who highlights its relationship with social stratification due to inequality in access, adaptation and knowledge building through the use of

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information and communication technologies (cf. Warschauer, 2011, p. 5). It is interesting to analyse two basic aspects: access to the technology itself and access to understanding about the information conveyed on the network. The first could be translated as an analysis of existing resources and the second related to the way we understand technology and make use of it, which is highly variable.

Castells considers that the network has the function of enriching face-to-face social acts, or, in its absence, catering for the creation of an alternative form of relationship development. The author highlights a set of positive effects on internet access, with special emphasis on issues of social interaction and the accumulation of other sources of knowledge (Castells, 2004). Their analysis does not follow exclusively from the study of networks. However, if there are people without access, or with more difficulties in the informed and critical use of technologies, it is likely that the development of social cleavages is associated with the use of networks. At the same time, studies show that families connected to the Internet seem to be more likely to establish more social relationships, whether based on strong or weak ties (Castells, 2004; Hampton, Wellman, 2000). The notions of digital exclusion and digital divides were introduced to respond to the need to map situations of inequality in access and in the use of technologies (Selwyn, 2004).

The 1990s named the widening gap between those who had and those who did not have access to technology (cf. Rapaport, 2009). In Portugal (Rebelo, 2008), researchers showed that access to the Internet by the elderly population (men and women over 65 years old) was quite low. However, the same study notes that it cannot be inferred that these elderly people would not have contact with computers and mobile phones with internet access. On the contrary, they know the technologies, since these are devices commonly used by their children and grandchildren (Rebelo, 2008, p. 230). Bearing in mind these problems, one may also question whether the lack of knowledge in the use of technologies, namely social networks on the Internet, will not currently represent a new factor of social exclusion that will add to other factors already identified by authors dedicated to the analysis of exclusions. This was one of the main questions that drove this study.

Therefore, we may highlight two issues which are directed by Gaulejac and Léonetti (1994, p. 77) to explore the meaning of the concept of social insertion: why is it that more and more individuals are affected by the disqualification and the difficulty of inserting themselves into society? What can the state and each citizen do in relation to this process? In order to answer these questions, the authors point out three types of factors that contribute to the process of social disinsertion and that seem useful to map some positions of older citizens in relation to the use and social appropriation of social networks on the internet. The first set of reasons leading to social disintegration is mainly economical. In this domain, the authors consider that, at present, issues related to the difficulty of finding employment, precariousness or unemployment can dramatically and decisively affect the individuals' life paths. A second type of reasons, and which interests us particularly within the scope of our study, is associated with social ties. In fact, what is at stake in this case are family ties and other close relationships that, when broken, tend to leave subjects completely unprotected. A third set of factors are, in essence, symbolic and reach a particular relevance when articulated with some preconceived (or prejudiced) ideas regarding the elderly, i.e., the perceptions that are formed about the social utility of the roles that individuals play in society and that, when they do not correspond to their normative requirements, or do not conform to a given dominant ideology in a society, they leave individuals much more vulnerable to processes of social devaluation (Gaulejac and Léonetti, 1994, p. 78).

Bearing in mind these problems, one can also question whether the lack of knowledge in the use of technologies, namely social networks on the internet, will not currently represent a new factor of social exclusion that will add to other factors already identified by authors dedicated to the analysis of exclusions. This was one of the main questions that drove this study.

Communication and Facebook

Communicating seems to be a normal act that requires compliance with basic rules: one speech, the other responds. Throughout history, the individual's involvement as an emitter has assumed that one knows who the receiver was. We knew that another subject would be on the other side of the telegraph, that it was the inhabitants of our village who heard the church bell, we could even characterise the listeners of a radio program, etc. In reality, until recently, the means of communication most used by the elderly were the telephone, television and radio (cf. Pasqualotti, Barone and Doll, 2012). This raises the question of the appropriation of the elderly and the way they build relationships with technological objects. Although it can be assumed that culture and communication participate simultaneously in the creation of experiences, values, social practices, it is nonetheless important to highlight, for analytical purposes, the dimensions of communication which are directly related to culture. We do this by focusing on Jean Caune (2008) who highlights, in this sense, some of the features of communication in its relationship with culture. The first involves overcoming the idea that a means of communication represents only a vehicle for transmitting information to recognise that the subjects actively participate and are involved in the communication process. This is as much as communication induces subjects to assume their social political positions. The second feature of communication most directly associated with culture is that communication is at the basis of the community. Rescuing the perspective of John Dewey (1916), who argued that communication was at the origin of

the social bond, as it was the means through which individuals shared their beliefs, aspirations and goals (Caune, 2008, p. 40), the symbolic dimension of communication should be highlighted, by observing that it is from this that realities are built, maintained or transformed. In this perspective, it is legitimate to recognise that language and the symbolic dimension of communication are essential for the creation of social realities. Therefore, knowledge and the sharing of social experiences are only possible in and through the communication process (Caune, 2008, p. 40).

If we use digital media, do we know for sure who we are sending a message to? In reality, digital tools have transformed content into blocks of information with (almost) a life of its own. They are transported along the network quite exponentially. “The first thing that good shareholders (pay attention: shareholders only own shares and it is possible to get rid of what they do) in the morning is to open the newspapers on the capital market pages to find out if it is time to keep the their actions or dispose of them. The same thing also occurs with other types of actions: relationships” (Bauman, 2006, p. 31). These, like other actions, have entered our daily lives in a very consolidated way. In such a way that we do not even realise we are undertaking it. Our difficulty in discerning the importance we attach to information means that our actions are often inconsequential. We share many messages and advance information to new paths without separating the essential from the accessory.

We can look at the characteristics of the internet and soon realise that freedom stands out as the main value (cf. Domingo, 2015, p. 78). The freedom to view, share or just browse. However, it is interesting to reflect on the freedom to control information. Debates around access to social platforms and the information they reserve are frequent. Much has been said about the access and use of information which is published by governments. Therefore, the conception that until a few years ago was about the value of freedom, seems to be quite questioned today. The guarantee of freedom of movement and actions is currently more unprotected.

It is interesting to see how the individual makes access to his/her information available to everyone, in an almost voluntary way, giving space to the emergence of a consented dictatorship. Like the new state which controlled the individual as a whole, both in public and in the individual's private life, facebook has mechanisms to undertake this and, at this moment, the users themselves are the ones who voluntarily place the possibility of control over their own lives, whether in the hands of the state, or any person or group that appropriates the information they publish. We ask ourselves, as Norberto Bobbio did in his famous work, *The Future of Democracy*, “Who controls the controllers?”.

Participation, as a digital inclusion strategy, is an issue that goes beyond technology. What makes an individual to be autonomous in the network? Have your own Facebook profile? Participating in the network can be a strategy to fight against digital divides, being ourselves, without following others, although networks depend on followers. The technologies emerged to supply needs for this reason, even Facebook when it appeared in 2004 (Kirkpatrick, 2010) aimed to promote relationships between students in a certain context. In a short time it went beyond the university campus.

Initially assumed as a platform for young people, it has been replaced in this field by other platforms, such as *Instagram* or even more recently *TikTok*. The latter are networks which promote faster interaction and greater access to more dynamic digital objects. “Among young users of social networks, the results of 2018 show an inversion of the networks visited most frequently, with Instagram placing itself in the first position and Facebook in the second” (Fernandes, 2019)

We know that, in Portugal, 80% of internet users make use of social networks (INE, 2018) and we also know that the number of elderly people who use social networks has also been increasing. We also know, from INE data, that the number of elderly people over 65, who use social networks, is very similar to the number of young people aged 13 to 17, which reflects the growing interest and need for this technology within that age range. The same source adds that participation in social networks is more frequent in Portugal than in the United States.

Increasing in number, the age group of the elderly / retired people has become a group with more literacy and skills. In addition, it is also much more open to welcoming new forms of communication, taking into account that the family organisation has also been changing. With children working and grandchildren attending school all day, seniors seem to try to embrace other ways of interacting with family and friends. The trend is therefore for an increase in Facebook registering and access. This seems to happen because, on the one hand, this age range tends to adhere to the internet late, and for this very reason they opt for a more widespread-used platform; on the other hand, because the experience in using images and video allows them to maintain their social life and contact with their children and grandchildren (cf. Fisher In Sweney, 2018).

Methodological Proposal

The study presented in this article reports a descriptive research with a qualitative base structure that analyses publicly available profiles on the social network. The methodological path of this research followed the aims outlined in the project: to draw profiles of senior users on senior social networks (+65 years); to make an analysis of the use of social networks by seniors, describing and systematising the published content; to relate the use of social networks to the needs of socialisation and interaction by seniors; to make the elderly population aware of

the need for a meaningful and safe participation in social networks; to identify the social interests and needs implicit in seniors' use of the network.

After undertaking an exploratory period developed in order to identify if there are differences and aspects in common between the various users of the network over 65 years old, a more concrete period of information collection was started in a more structured and systematised way. We move forward with a more comprehensive / descriptive logging and analysis logic. In this way we consider it pertinent to create and use an individualised registration instrument. Therefore, many of the dimensions of analysis were discovered on an emergent basis and throughout the collection period, leading to several reformulations and validations of the dimensions themselves. The registration form is therefore made up of the following dimensions: Identification - information provided by the user in his profile; characterisation of identifying images: profile and mural; People you interact with and who you add as “friends”: number, type, groups; Type of messages you send and respond to; Personal information made available through messages - habits, tastes, routines; User type.

In terms of the organisation of the study, we started by defining the profile of the users to be observed: we randomly selected individuals who were proven to be over 65 and who use the Facebook social platform. We defined 6 months as the period of observation of the messages. Bearing in mind that one of the dimensions to be analysed was the type of information shared, we realised that one of the selection criteria, in addition to the priority of age, over 65, could be related to the ease of access to profiles, i.e., due to the user's availability to make his profile and page public. The sample selection ended with the definition of a group of 6 seniors. All analysis of the profiles was done anonymously, so that all confidentiality is guaranteed. In this paper we identify elderly using a fake name.

The project demanded, in parallel, that we asked senior users about the interests, needs and difficulties in using social networks. Only through this strategy was it possible to develop data triangulation in order to understand the users' real perceptions, motivations and interests. At this stage of the study, it was possible to understand what motivates these users and what, from their own point of view, promotes interactions, as well as satisfaction, anxieties or problems arising from their use. It was intended to know, in depth, according to their perspectives, the path of 8 seniors in relation to the use of technology and which surroundings were built. The intensive and biographical character needed to fully understand the research question forced us to make use of the interview as an instrument of data collection and the creation of a script that would allow us to effectively know this age group. The “listening technique”, highlighted by Ferrarotti (2013, p. 52) becomes an essential methodology in the whole process of collecting and understanding stories, through interviews that “generate rich understandings of biographies, experiences, opinions, values, aspirations , people's attitudes and feelings” (May, 2004, p. 145).

Within this study, essentially “primary biographical materials” were used (Ferrarotti, 2013, p. 89), i.e., interviews were conducted by the researcher. Being aware of the weaknesses that the non-use of secondary materials (biographical documents) implies, we understand that the interest is centred on the senior's look at what technology has meant to him, in each moment of life, and what relationships he/she has created with it. Therefore, it is a study with the subjectivity that each report about ourselves reflects, but with the valorisation of the voice in the first person.

Thus, the following dimensions were defined for the interview guide: identification data; childhood / youth technologies path; today's technology and social needs; technology and values; technology and Facebook today (motivations, learning use, interactions, changes and representations).

The definition of the group of interviewees was based on a principle of selection by convenience, according to the proximity of the interviewers team members. It was also determined that the interviewees were over 65 years old and were users of social networks. This being said, a group of 8 interviewees was formed, being retired and aged between 67 and 84 years, identified in this paper as “E” plus a number, from 1 to 8.

Data Analysis

The research developed resulted, as it has been said, from the articulation of a set of data collected from two different sources: the observation of the profiles of 6 seniors, publicly accessible on Facebook, and the interviews carried out with 8 seniors and users of social networks. All subjects are over 65 and retired. The analysis was structured according to several thematic dimensions, to which we will be referring to the most relevant ones, taking into account the principle of economy of text.

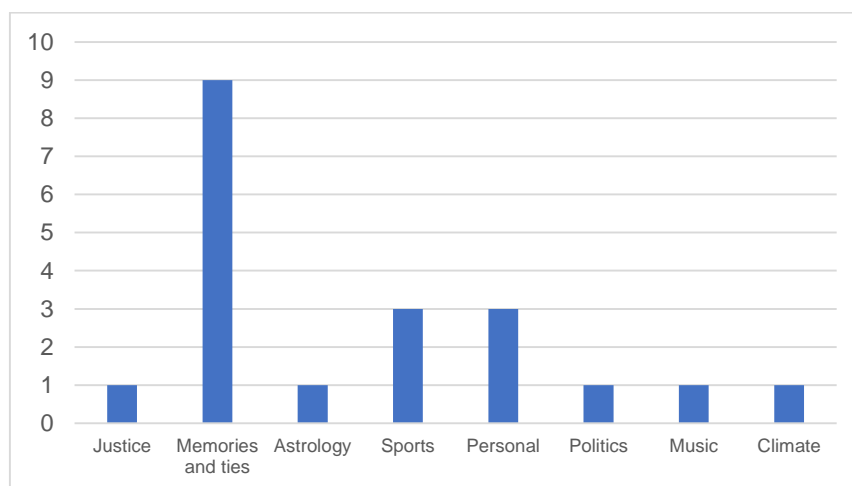
What can we know about users through their “profiles”

When we look at the profiles of seniors on Facebook, we realize the difficulty in obtaining detailed biographical information about them. However, some of the messages they publish reveal much more about different aspects of these users' lives. Let us look at some examples. In general, users provide information on their profile such as sex, year and date of birth, the city where they are born, where they currently live, the place where they worked and the institutions where they studied. In some cases, users also record their connections with family members, including the relationship degree they hold. But there are users who make a differentiated appropriation of the “profile” space. For example, Jo, in addition to revealing the information previously mentioned, adds, in this space, another set of information referring to relationships that he establishes or established and that, from the

biographical point of view, result in a detailed presentation of himself: the date of his marriage, the name of the spouse that is associated with the link of the wife's profile on Facebook, links to the profiles of other family members (son and nephews, among others). Within the section "life events", we can observe from the date of birth, the places, dates and institutions where he studied and worked, as well as the evolution of his marital relationship, from dating, de facto union, engagement and marriage and, finally, a phrase that you want to be associated with your personal identity: "I am... I, the only one. Let no one doubt!".

Other users share personal information in different places on the Facebook page and in the messages they post. Sometimes they have conversations where they publicly share information about their daily lives. For example, Ange, when he publishes a painting he did, receives the following comment: "XXX: How can you do it with two grandchildren?! Isn't "your good life over?" Very beautiful!". At another time, Ange is not shy about sharing her daily routine: "So it is like this: I take them to school at 8 am. I will walk my 6 / 7km. After a good cup of coffee and toast, I get home and take the notebook and pens! At 4 pm I am leaving to pick them up and take them to football or tennis, etc. etc." These dialogues on Facebook allow not only to identify the routines, but also to infer about the presence or absence of users in their home, as well as the life of their interlocutor who, following the conversation, also reveals his/her daily routines.

Thematic analysis of messages by profile reveal new information. As an example, see Graph 1, where it can be seen that Jo presents a higher frequency of messages on issues related to the past, memories and affective ties. The memo section includes several references to relationships that the user has maintained, or maintains, which in turn helps us to characterize the profile of this user.



Graph 1 – Jo's message themes

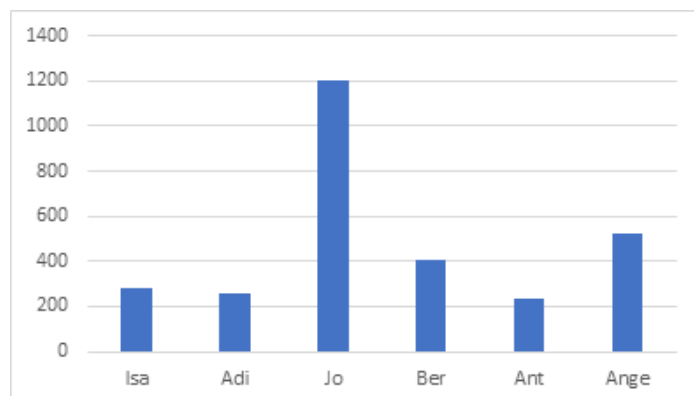
As for the group of respondents, all reported having children and grandchildren, which could have predicted the possibility of a dynamic family life. We came to realize, during the interview, that three of the interviewees live alone and the remaining five with their spouses and that they do not always feel accompanied. This aspect is highlighted in a very particular way by two seniors who refer that "the two children are no longer at home" (E2) or "I already took care of them, because they are now in England, everything is in England" (E4). Only one elderly person stresses that he relates daily to family members when he says: "my granddaughters are always here with me, I am always surrounded by them" (E7). This aspect matters because, as we will see later, the search for contact with the family can be one of the most important factors in order to start using the social network.

The profile photos

The use of the images in the profile seems to differ from user to user, and there is no room within this space for conclusive generalizations. There are users who make use of Facebook applications (frames with Christmas effects, or related social and political causes, for example) to frame their own photo on the profile; others prefer to highlight, from photographs, their artistic qualities, by publishing artwork they have created; others also select photographs that capture moments of leisure, or publish photographs of their home, or images that depict moments of greater affection with other people with whom they have a closer relationship. Despite the diversity, we believe that the images published in the profile by users are truly motivated by their sole desire to present themselves to others, with a concrete communicative intentionality that is not always possible to unveil.

The number of “friends”

The number of “friends” added on Facebook can be an indicator of their use and also be conditioned by the criteria assumed by the user himself/herself, such as care in the selection of people who belong to his group, the integration of family members, security issues, among others.



Graph 2 – Number of “Friends” on Facebook

The number of “friends” registered on Facebook differs among each subject that we observe. We noticed, within the analysed profiles, that in addition to people there are also institutions that present themselves as profiles and, therefore, have been added to the group of friends. In one of the analysed cases - Ange- maintains in his group of friends a set of libraries which probably represent the contacts established during her active life, since she was a librarian. This example leads us to think that Facebook can fact as a means of connecting to work field, while one is retired, thus favouring that the rupture between professional activity and retirement takes place gradually.

The analysis of online profiles aroused our interest in understanding the criteria and the way in which the elderly add “friends”. To this end, the interviews brought us complementary data to the research.

We observe that there is not always a perception of how many “friends” you add and that the knowledge you have about them differs between users. Several interviewees mentioned this aspect: “I don't think two hundred I know (Laughter) me, some who I have, but I don't even know who they are. (...) I accept it because they know me, I don't know them” (E1); “Oh, I don't know... I have many! I have many because they were friends of my husband and mine... I have many... And some make others (E7).

“Being a friend” and “being known” are two perceptions that some users do not distinguish on the social network. One adds another because one knows the other person, but in reality one doesn't really know who one is: “I have a hundred and such, I am friends with everyone here, nurses and everything. (...) Yes, I do not accept anyone who is not known...” (E1). However, other elderly people make informed choices about who to add: “I only accept those I know, and I look at each person's page to see if they have many friends added (E8); “No, I don't accept everyone, I only accepted friends I knew”. (E3)

Habits, tastes and preferences

Generally speaking with technology communicating is a priority for these individuals. Some of the interviewees report that their friends and family are the most frequent recipients: “What can I do ?! Some things ... send messages to my friends! (mobile phone)” (E7). The need for communication is then transferred to social networks. The analysed profiles seem to predict some of the respondents' replies. We have already seen that within some analysed messages, the past and memory are recurrent topics in users' messages. In this sense, it is not surprising that the recovery of contacts, which have been lost throughout life, or that are now distant, or even the desire to maintain contact with family members, are factors that seem to motivate some of our interviewees: “Face is about communicating with people from my homeland, that I found people from my time and newer ones, I met them again, they are in different lands, and that, since I can't meet them personally, because for many years I didn't know about them, isn't so?” (E2); “Communicate with the family, learn...” (E2); “Talk to friends and family, when I see that they have a green ball” (E8); “...what I like most is really being able to communicate with people from afar” (E8); “I really enjoy writing on Facebook about my childhood, for example, when I remember my own childhood moments” (E4).

On the other hand, seniors clearly state what they do not want to see or dislike. See the following excerpts: “Ads annoy me” (laughs) (E8); “... If you only use it for games, to play, look, I don't go in, if you just use it to play, if you just use it to discover people you don't know to create those bonds there and who have other goals... (E2); “I spend my life saying that I don't want friends, it's not about not wanting friends, it's my age, sometimes it's not appropriate for people who ask me to be friends” (E4).

Message Types

There are different types of behaviour among users regarding the messages they post. Some just share what they receive, others oscillate between sharing and creating new posts. This aspect may be related to the proficiency in using the platform, but also to the conscious choice about the modes of use.

Among the analysed profiles, sharing posts is the most used dynamic: the post can be shared, just as it was read, or there may be an addition in message format. For example, within Ant's profile, who seems to have a greater tendency to publish political themes, she doesn't create messages, she just shares them. Ange is the only one who proves to be more motivated or proficient in sharing messages created from scratch, of the 43 messages analysed, 13 were built from scratch. However, there are messages that encourage more sharing, as it happens when Isa shares a perception test where the image of a woman is supposed to be identified.

The type of use of the social network also seems to be associated with the desire to keep in touch with family members and memories. The interviewees reinforce this idea: "I do... Well, photographs and so I still don't put... I put only a few that I see, and the memories I share"; "I write many comments for my dear one who is already in heaven, unfortunately, for my granddaughters, for my children, news, I write about what comes from animals, I comment a lot... (laughs)" (E7); "And now we get together and that's it, and we share anything and the family... Well, many of my friends on Face are my family, so instead of using the phone, you use Messenger and call and exchange news and stuff... and sometimes we have fun with jokes and anecdotes and that's it" (E2).

Where am I?

In the analysis we made of the spaces of the senior users, it seemed easy to identify the locations where they are at different times. The trips to the restaurants, the photos of the food or the places they visit, or even where they spend holidays, allow the recognition of the physical spaces that the subjects frequent or where they are at a given moment. The following photo helps us to illustrate this issue:

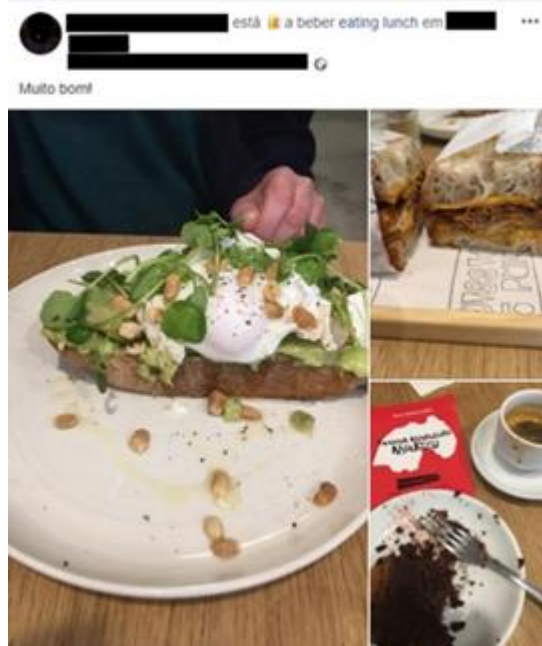


Figure 1 – Ang reveals where she is and what she is eating

Another example emerges from the analysis of Ber's space, who, for the purpose of denouncing what she considered to have been a poor service in a restaurant, publishes a photo of the invoice she paid. See the figure below.



Figure 2 – Ber publishes pictures where he reveals what is up to at that precise moment

The issue which arises is that, even if they are not aware that data is being provided from the places where we are located, or from the spaces they attend, users provide information to the public, disclosing a document that is prepared with another end and with elements that identify it. They also publish photographs with other people without totally realising if they are aware of this fact and agree with it.

We can conclude that, in general, users do not show particular care in hiding information about their location, either with regard to the places where they are passing through, or those they usually visit. Throughout the analysis, only one specific context denoted this concern that happened when a generalist television report about a case of fraud and false Facebook profile was broadcast. This period led to the closure of some of the profiles, which we have been analysing, to the public. This allows us to understand the importance of other means of communication on a large scale for the conscious use of these social platforms.

Frequency of use

The access records of the analysed profiles reveal that these elderly people regularly use Facebook. Whether to comment, or to share what already exists, or to build new posts from scratch, the profiles are active and promote the circulation of various messages. Being aware that it is not possible to assess the frequency of use by the elderly on Facebook, we understand the pertinence of asking respondents about this frequency. From their answers, it appears that there is a very frequent and regular use of the social network. For them, these resources seem to have entered their daily habits and are now assumed to be an integral part of their daily lives.

Facebook as a platform to promote self-esteem and appreciation

Several times we realised that the sharing of messages or content on the network can aim to promote self-esteem and appeal to the personal appreciation of the user / issuer. We refer to messages from which praise is expected, for example, in the case of Ange: "Today I was super radiant!! Xxxxxx Xxxxxx following me on IG and like the portrait I did !!".

The sharing of paintings created by Ange, or of poetry written by Adi, is almost always followed by very positive comments from others, such as "I like it", "I love it", or more explicitly - "How beautiful!" among others which are more or less long. And when Adi humbly notes that she does not deserve such comments and that he has much to learn, she receives even more praiseworthy comments which allows her to confirm her successes.

Often, when personal valuation is not called for, another type of recognition is requested, through photographs of personal property, as Jo does when he shows the house he rebuilt, the boat and the old car he keeps recovered, etc. Above all, these are the type of posts that receive comments from friends with whom they interact on Facebook.

Another strategy to talk about yourself that users resort to is to publish pre-written messages that circulate frequently on social networks. The publication of videos with quotes or phrases with messages that morally elevate a set of behaviors is quite repeatedly used based on processes of identification of users who expect new reactions. The following figure is intended to illustrate this dimension.



Figure 3– Ant's message

This user, like many others, often makes use of quotes accompanied by images to characterise feelings, experiences, supposedly his own, and to disseminate them among other users.

Indeed, the validation of our action by the “Facebook Game”, which is a game of identities, is very present in the conveyed and exchanged messages. One writes to convey an idea, but that transmission is conditioned by what one thinks to receive from the other.

What causes interactions

According to our analysis, interactions often change depending on the type of message. In several situations, there are clear differences regarding the quantity and quality of interactions and feedbacks. For instance, Ange provides two separate messages with 20 minutes difference. In a first message, she publicly shares a musical preference that has had no reaction from anyone. Then, after 20 minutes, she shares a picture she painted that receives 15 reactions with icons: 14 “Likes” and 1 “I love”.

It seems that shares directly related to themselves tend to be more prone to interactions, opinions or feedbacks. Users' daily lives are also a topic that provokes comments. A “good morning”, from the café where you attend, the photograph of the place you are at the moment, can receive a greater number of messages than other posts, which shows that mobility in accessing technologies is preponderant and promotes greater interaction. When a user writes his own text, for example poetry, the decoration of his home, the “likes” and “adores”, as well as the complimentary comments, go off. Another type of messages that calls for interaction are tests carried out from Facebook applications. The type of posts that appeal to the recognition of the subjects' abilities, or to test those abilities, based on challenges launched from Facebook applications stimulate reactions and comments often emerge.

Ant's case is interesting. He uses the network every day, or to share something from someone else, or to express his opinion on the matter. Interestingly, we realise that Ant never responds to comments from his friends about his publications. The interaction, therefore, seems to be weakened with the unidirectionality in communication. The fact that Ant publishes mainly political messages, which are more controversial, does not mean that he receives more responses or reactions.

There is also another aspect that causes interactions and that is related to notifications, whose objective is not only centred on the warning for reading, but that effectively promotes an answer and an action on the part of the elderly, as mentioned by the interviewee 1 : “Yeah ... when sometimes I hear the sound, I log in to see it, sometimes I have someone like my stepson who sends me hmm sometimes my nieces also say it and I answer there or like it or whatever.” (E1)

Integration and communication on the social network

Although at different speeds, the elderly increasingly adhere to social networks and Facebook in particular is a space in which young people have less importance than before. We saw this aspect in the theoretical reflection component of this article. From the point of view of the elderly, it is important to understand how they joined a platform. Here, we systematically record the reasons and contexts that, according to the subjects interviewed, led them to join Facebook. Among these is the importance of “not being left behind” and the influence of the children, or grandchildren, as you can see from the voice of some interviewees: “I never had that interest in experimenting, because after that is always the same, look on Facebook. My son gave me the phone, and then I even said, “Abel everyone has Facebook, why don't you install it to me here” and that's when he installed, “Mum, it's ready, you already have it here”. (E1); “Look, you know, I saw the others who have it and I told him. (...) Yes, I said to Abel, to my son like this - “Abel, if they all have it, why can I have it too, why? ” (E1) “I started to see how my grandchildren used the computer and decided to try it out” (E8); “But it was she [daughter] who taught me, I took it and I didn't know how to use it, I didn't know what to do (E4); “I... It wasn't me... This account was created by

my husband, and I continued using it... only I changed my name, didn't I? (E7) It was... it was... it was... Then my husband was really ahead all of us (laughs)." (E7). The influence of family members can be indirect when, for example, the main motivation is to contact them when they are away: "I created Facebook 12, 15 years ago. That was when my son went to England." (E4).

It was recurring to realise that, according to some interviewees, the information that circulates on Facebook is of little depth and even of little use. As E3 states: "Because of what I saw on Facebook today, it is all useless, sterile conversations that do not lead... Say... No, they do not form people, they do not inform, they are all sterile things, false things, false profiles..." (E3).

In parallel, we have already seen in the literature review that the new communication contexts have created situations in which the sender does not have a clear idea about who reads the messages he/she publishes, making them circulate through the network, dependent on others' shares, "likes", etc. Respondents 3, 4 and 6 show that they have this perception: "I mean people put themselves behind a screen and say what they want, but face to face they wouldn't say it, and that's the big problem, it's the big difference between us talking here face to face or talking behind a door, it is not the same..." (E3); "Yes, because now they are able to say things on the mobile phone that unfortunately we don't say when we are with the person. And then they are wrong, because we write I love you on the internet and then do not show it in person. There is a lot on Facebook that doesn't matter, they just want to talk about this and that. And he went there and goes I don't know where and then he goes there. It is very difficult" (E4); "Yes it is, like those chains I receive, in which she says send I don't know to how many people, she sends it to me and I always send it to her. She doesn't know whether to send it to others or not, so I just send it to her".

On the other hand, networks allow communication to become faster and more immediate. One of the interviewees recognises this aspect well: "It made it easier for me. (...) I had to be waiting to call England at a certain time, so as not to pay and at this moment if I want to go to WhatsApp, Messenger and I connect the camera and I can see them, that made it easier for me (E4).

Changes in relations

On this issue of the impact of technologies on interpersonal relationships, most references are negative and do not reflect the idea that technology has brought advantages. In fact, there is a very particular concern with grandchildren, young people and the maintenance of intergenerational relations. There are elderly people who report that the use of networks causes behaviours considered to be unusual: "The other day I was at the window and I saw a boy waving his arms, talking and I didn't see that he had the hearing aids. I didn't realise it and I thought the guy was not doing well at all." (E4); others are concerned with the distance associated with the use of these technologies: "When I talk to my grandson, Martim, I turn on the camera and I am not able to see his eyes! He is always looking at the keys on the computer responding to friends. I have to say: Martim, look at your grandmother because I like to look you in the eye. And I say to Martim: TURN OFF. END IT. (...) And I think this is driving us away from each other. We are old and we are completely alone. There are the elderly and there are the youngsters. The youngsters are not interested in the elderly and the elderly also have difficulties in getting close to the youngsters" (E4), or as one of the interviewees says, "Ah yes, nowadays young people only speak through cell phones and Facebook, even when they are together they don't talk, it used to be different in the past we went to the street to play the spinning top, the marble, things that nowadays no longer exist. We had a lot more contact with each other, nowadays virtual contact is the basis" (E8).

From the perspective of our interviewees, the privilege of being present meant another way of organising life. Whereas technology caters for quick and immediate contact with someone, people before had to define, in advance, meetings and commitments: "So that's what I say, it was privileged hmmm... Let's say... It was privileged the person's presence. So we already knew that at 1pm we were all drinking coffee in a certain place and talking, playing the naval battle, exchanging impressions and agreeing (...). Dividing people, that is, today people do not privilege personal contact, today the privilege among young people it is not personal contact, the exchange of ideas, say ... Empathy. This is what we are doing here, this is not what they privilege, they privilege this (points to the cell phone). They speak through WhatsApp, speak through Facebook, which one is it? LinkedIn? LinkedIn, isn't it? (E3). Among the group of interviewees, only one elderly person mentions the fact that he did not have any negative changes, emphasising the coexistence as a positive context: "In principle, nothing has changed, that is to say... it has given me more possibility to live with... coexistence." (E5)

We know, and history records, the changes that new technological resources, as well as the interaction on social networks, have been conditioning our lives. However, our constant ability to adapt to new contexts also allows us to welcome new habits and fit them into our daily lives at ease, leaving little room for us to perceive the before and after.

Final Considerations

One of the objectives of this article was to be a contribution to research on social networks with older audiences. This social interaction resource has come to be seen as an integrating means of this population in a technological world that is still a remote one. In this study, we tried to explore a set of observation indicators for the identification

of user profiles on the network which allowed us to characterise ways of use by the elderly, their behaviour and interactions on the network. With this, we got closer to the representations of these users in relation to their relationship with Facebook and other technologies.

We note the concern of the elderly with the youngest, particularly with their grandchildren. The seniors specifically refer to the excessive time spent in front of the screen and the way in which intergenerational communication is impaired. Sometimes there is a certain impotence to intervene in this field and some resilience due to the fact that the elderly assume, which is part of the behavior of this generation. However, grandchildren, in many contexts, are the ones who help grandparents to integrate into social networks.

Among some elderly people, there is an awareness of the dangers and problems associated with the use of social networks, such as the credibility of information, isolation, messages that circulate with little or no depth. Even so, several elderly people emphasize access to information as a positive aspect and that keeps them active on social networks. However, while analyzing the profiles on Facebook, we did not find this awareness with regard to the amount of personal information that users disclose on the networks, making it public. During the period of analysis of the profiles, we noticed that the elderly provide personal information which can be appropriated by others: interests (hobbies, favorite foods, outings they like to do, etc.); political inclinations; times of entry and exit from home; weekly routines; socioeconomic aspects; vacation locations; existence of material goods; names and profiles of close family and friends, including your childhood friends. In addition to these aspects, we found that some have the locator activated, making it possible to know, at each moment, where the elderly person is.

In this specific data collection, for methodological reasons, we had to limit the analysis of messages in time, but the perception was that if we focused on certain users, we would be able, with some ease, to profile the person and understand his/her habits, routines, tastes ... aspects that make them clearly vulnerable to criminal actions, such as scams.

Facebook, a platform that allows the recognition of the qualities and characteristics, ways of thinking of each one, assumes a particular role for the elderly. We are talking about a group that has lost the possibility of being socially recognised in relation to tasks within employment and other types of achievements, such as the children who are raised, the building of the house, the grandchildren occupied at school, as we have already seen in the theoretical part of this article.

Finally, we want to highlight an aspect that makes us think about the need to rescue humanity in this virtual context. Many of the published posts seem to have as main communicative intent the expression of the emitters as singular subjects, unique, in some cases, good and worthy of recognition. It cannot be said with any certainty, in relation to the cases which were analyzed, that this is an attitude assumed also in face-to-face relationships, or that it is motivated by isolation, to which many of these people are subject. It seems to us, in any case, a call for the recognition of individuality in a diffuse community, in which some of the "friends" have never met before. One feels, however, that it is important to be part of this community, because we need it to exist.

The reinforcement of individuality in the narratives of these subjects, either through statements about themselves and about their character traits, the manifestation of their talents and moral values, the expressions of personal pride, or in relation to what they do, or what they have, in relation to their loves, the expression of the experiences of the beautiful, with photographs published here and now, the affirmation of policies and ideals, all this seems to be directed towards reinforcing an individual identity, in the face of a community of recipients, either imagined or real. They seek to belong to a community where it is possible to find one or more interlocutors capable of appreciating their identity, where one can speak to and praise others through a "like", a "smile" or a throbbing red heart. Yes, we are unique, but we don't like to be alone.

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PROGRAMMABLE ROBOTS IN THE EDUCATION OF INFORMATICS AND THEIR USE BY ELEMENTARY SCHOOL TEACHERS IN THE CZECH REPUBLIC

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Abstract

This paper presents the results from research focused on the usage of programmable robot kits for teaching programming and algorithmization, which was a part of research named „The usage of educational materials in informatics“, which was focused on different types of educational tools and materials in informatics. The data were collected by a questionnaire among Czech teachers of a secondary grade of elementary schools and its equivalent in grammar schools. Results shows that majority of teachers use programmable robot kits not only in the subject of informatics but also in afterschool hobby groups. Findings also point out, that teachers have a positive attitude towards using robots in education. Also, they find that programmable robots are a good way how to develop computational thinking and interest pupils in the field of computer science and technology.

Keywords: robots in education

Introduction

The Czech Republic is one of twenty European countries, which is reforming its ICT (Information and communications technology) curriculum for primary and secondary schools. The new ICT curriculums should include and extend topics, that support development of computational thinking. These are basics of algorithmization, programming and robotics. These changes are supported by the European Parliament and the Council, these institutions are recommending focusing more on digital literacy in education. The computational thinking consists of an important set of skills, which can help students to get a future job in the era of industry 4.0, also they can utilize these skills in daily life for problem-solving. The changes in the Czech Republic should come into force in 2020 (MŠMT, 2014), however, due to implementation problems – such as economic demands of revision and availability of educational materials and methodical support, this change was postponed and included in the new document Education Policy of The Czech Republic until 2030+ (MŠMT, 2019).

Schools in the Czech Republic can adjust their learning plans from a set of compulsory and optional educational areas, which are stated in the national curriculum. Currently, the topics of programming are only suggested, but not mandatory. Therefore, not all schools are teaching programming and not every teacher have experiences with the education of programming. In the Czech curriculum, there is not stated a standardized method of how to teach programming, therefore teachers can choose from different kinds of programming languages or educational aids. One of the current trends in educational aids is programmable robots.

Programmable Robots

In this paper, the term educational robots also include programmable building kits, educational robotics, robotics toys, programmable electronic and microcomputers. Programmable robots can be used not only for teaching programming and algorithmization, but they can develop computational thinking, digital literacy, creativity, technical skills. Programmable robots help pupils with an understanding of the concept of digital society (Mališ et al., 2020). The possibilities of use vary on the kind of programmable robots. Some of the programmable robots connect different fields and subjects, e.g. Arduino also includes knowledge from electronics, Lego Mindstorms implements construction.

For education, teachers can choose according to their preference, pupils age and their needs. The best choice is robots, which were created specifically for educational purposes. They often offer methodical support, an inspiration for lessons and are supported by the teacher's community around the world. The research in the Czech Republic shows, that most favoured robots are building kits from company Lego (Baťko, 2018). Concretely Lego WeDo, which is intended for younger children and can be programmed by iconic programming language, and Lego Mindstorms, which offers more variety of builds and can be programmed not only by iconic programming languages but by higher languages e.g. C++, Java (Mališ et al., 2020). Another example is the Ozobot. This robot is programmable with visual editor OzoBlockly or with drawn lines and colour codes. Programmable microelectronic is a good choice for intermediate programmers. Microcomputer BBC micro:bit and Arduino are

one of the most common examples. Both are open-source kits, which support a variety of visual and textual programming languages.

Most of the programmable robots support the use of visual programming languages, which are usually used in places, where is not needed any deeper knowledge of programming or for educational purpose. The visual programming languages (e.g. Scratch, Blockly) are simple to use. They use “drag and drop” principle, where a user is building their algorithm like a puzzle from a list of available function blocks. These blocks are divided into different shapes and colours. This visualization helps users to focus more on problem-solving and minimize mistakes and syntactic errors (Tsukamoto et al., 2016). Visual programming languages are getting popular in education because, in comparison with textual programming languages, they bring more benefits to pupils such as they improve positive attitude towards programming and pupils show more enjoyment from programming (Tsukamoto et al., 2016, Mladenović, 2017, Sáez et al., 2016).

The Study

This main purpose of this research was to collect data about the current state of programming education with the focus on the new trends in ICT education such as the use of visual programming languages, online programming lessons, and programmable robots. This paper brings the findings of the use of programmable robots in the lessons of informatics. For the research was used a structured electronic questionnaire, which was sent out to respondents during the spring of 2020. For the evaluation of was used descriptive data analysis (Chráska, 2016). The presented findings are based on data collected from 7 items of the questionnaire:

- Do you teach programming?
- Do you use programmable robots in lessons or a hobby group?
- Which programmable robots do you use?
- How much do you agree with these statements? Rate these statements on a Likert scale, where 1 – strongly disagree, 2 – disagree, 3 – neutral, 4 – agree, 5 – strongly agree.
 - Item A: Programmable robots develop computational thinking among pupils.
 - Item B: Programmable robots are a suitable way of how to motivate pupils to program.
 - Item C: Programmable robots distract pupils in the lessons.
 - Item D: Programmable robots are developing an interest in technologies among pupils.

Findings

Questionnaire was shared with 100 teachers, who are computer science teachers in a secondary of elementary schools and its equivalent in grammar schools. From the respondent group, 54 of respondents are certified teachers of informatics. From the group of 100 respondents, 55 of them do teach programming at school, and only 33 of teachers do use programmable robots. These, who do not use them, were not allowed to fill the part of questionnaire, which was dedicated to programmable robots.

Most respondents (28) use programmable robots in lessons, 8 of them do use it also in a hobby group, only 3 respondents do use programmable robots in a hobby group. The most used programmable robots are building kits from Lego, followed by Ozobot. Advanced programmable robots as micro:BIT and Arduino are also quite popular, more exactly by teachers, who do lead hobby groups. Detailed visualization is shown in Figure 1.

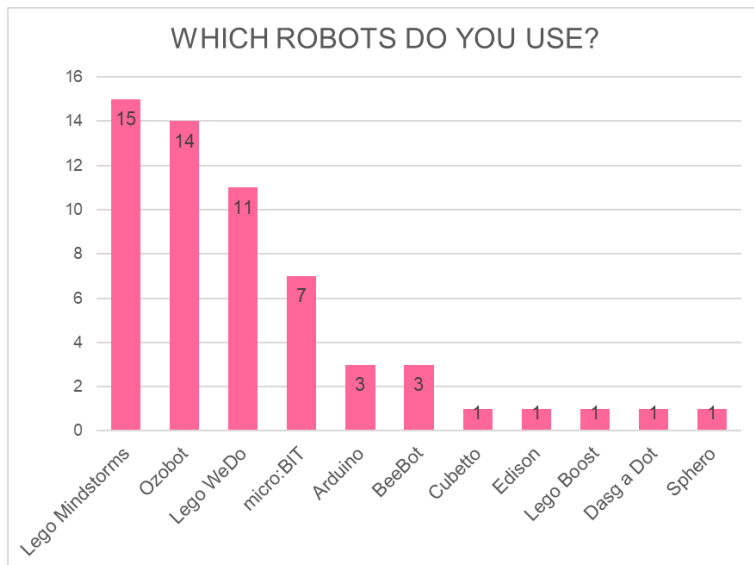


Figure 1. What are the most common programmable robots at Czech schools?

As the Figure 2. shows, majority of teachers do agree with statements item A, B, D. These statements support the positive benefits of programmable robots in education and show us, that teachers find out programmable robots as a suitable way how to develop computational thinking. On the other hand, respondents in majority disagreed with item C, that means programmable robots do not distract pupils in the lessons. This distraction may be caused by lights and sound effect, but these features can be also turned off in settings.

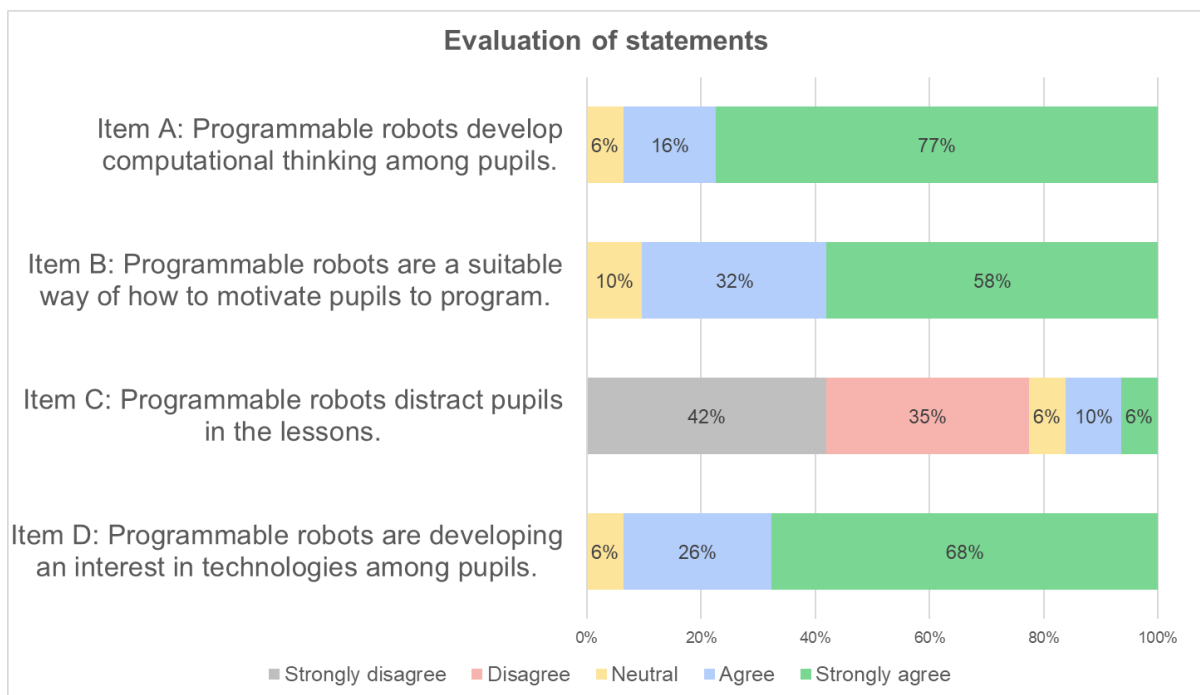


Figure 2. Visualization of scale rated statements.

Conclusions

With the Industry 4.0, which is focused on the use of robotics, smart machines, and the internet of things, we can expect changes in the jobs sector. There is going to be more demand for people with the knowledge of programming and algorithmization. Schools must react to these changes and focus on the development of new important skill, computational thinking. Therefore, the Czech Republic is changing its ICT curriculum, which should consist of new mandatory topics – programming and basics of robotics. Nowadays programming is not compulsory, and teachers are free to use any suitable way to teach it. One of them is the use of programmable robots, which also support other technological skills.

The results show, that about half of respondents do not teach programming at all, one-third of respondents do use programmable robots in their lessons or in a hobby group. As the most used programmable robot was stated building kit Lego Mindstorms, followed by Ozobot, Lego WeDo and microBIT. Majority of teachers also agreed on the positive benefits of the use of programmable robotics in education. They agreed that programmable robots do motivate pupils to program, that programmable robots are developing interest in technologies and also, that they are suitable way, how to develop computational thinking.

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SELF-EFFICACY AND HAPPINESS LEVELS OF INDIVIDUALS PARTICIPATING IN RECREATIONAL COURSES

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Abstract

The aim is to examine the levels of self-efficacy and happiness of individuals attending Arts and crafts courses to assess their free time. For this purpose, the universe of the research consists of individuals who receive training in free courses offered by the Metropolitan Municipality in the Izmit District of Kocaeli province. The research sample consists of 153 volunteer trainees who attend courses of Serdar neighborhood, as it can be reached using the appropriate sampling method from the non-selective sampling method. After obtaining permissions, the Data Sheet, The Oxford Happiness Scale developed by Hills and Argyle 2002, and the self-efficacy-eficacy scale developed by Sherer et al. were applied to the volunteer participants. Since the data obtained showed a normal distribution when analyzed in the SPSS 21.0 package program, parametric tests were used for independent groups; t-test and one-way analysis of variance. The margin of error was $p < 0.05$. The analyses gender, age, having children, marital status, income level, see treatment common treatment type, the type of the course they attended and according to work status both happiness and self-efficacy in terms of there was not a significant difference. But while Happiness Scale scores did not differ significantly depending on educational level; significantly higher scores were obtained in favor of those with a bachelor's degree in terms of self-efficacy. As a result, it was determined that self-efficacy scores increased as education increased. In addition, it was thought that it would be appropriate to plan more detailed and experimental studies in terms of evaluating the contribution of free time activities.

Key Words: Happiness, Self-Efficacy, Recreational Activity, Course Training, Trainee.

Introduction

At the heart of all the efforts that people make throughout their lives is happiness. Happiness is defined in the dictionary of the Turkish language institution as a state of feel proud from achieving all aspirations completely and continuously (TDK, 2020). Some philosophers, on the other hand, have explained happiness in the form of spiritual goodness and peace (Özgen, 1997). In fact, happiness is a result of living life well. It has been explained that the science of psychology, which investigates human emotions, thoughts and behavior, mainly focuses on mental diseases and problems (Myers & Diener, 1995). Although Psychological Science is focused on human problems, it has also been noted that there are three types of missions, such as improvement, a better quality of life by solving problems, and developing people's strengths (Luthans, 2002; Seligman & Csikszentmihalyi, 2000). While Psychology has followed problem-oriented approaches in the past, positive psychology studies are increasing today. Along with the development of positive psychology, positive emotions and ways to be happy have also begun to be explored. In Psychological Science, it has been reported that happiness is studied under the name of "subjective well-being" and is a characteristic of personality, for which research focuses on the relationship between personality and happiness (Kangal, 2013). In addition, research has suggested that people who have friends in social terms and have strong relationships will feel healthy and happy because they are not alone and will be far from unhappiness (Suhail & Chaudhry, 2004). It has also been mentioned that the concept of happiness has two dimensions, cognitive and emotional (Myers & Diener, 1995). It has also been noted that people with negative emotions, especially in the emotional dimension, have low motivation to achieve (Solmuş, 2005). Studies have shown that having social relationships, efficient evaluation of their free time, self-confidence, and high levels of self-realization are important for happiness (Lewis, Francis & Zeirbertz, 2002). It has been stated that achieving goals in life is a factor that increases happiness, especially as a result of the difficulty of the goals set by the person and the achievement of the difficult goals, happiness will also increase as a result of the individual's self-efficacy (Myers & Diener, 1995). A person's self-efficacy actually expresses self-belief in dealing with problems that may occur now or in the future. It is explained that this self-belief will also return to people as a skill or competence (Maddux & Gosselin, 2003). Coping skills are adequate, however, it has been claimed that those with low self-sufficiency will not be able to activate coping skills (Yıldırım & İlhan, 2010). Self-efficacy has also been reported to differ from self-confidence in that people have beliefs that they have all the skills necessary to successfully perform a job, and that it is related to a particular action (Kurbanoglu, 2004). In the development of self-efficacy; first of all, it is stated that the person's experience related to success is effective. In

addition, what was learned from them by observing other individuals and external physiological arousal and verbal encouragement of others, i.e. emotional dimension, were considered important (Bandura, 2001; Sakız, 2013). Self-efficacy means that belief in people is positive; it shows that they are more resilient in situations where they encounter life difficulties, that their problem-solving skills are stronger, stress-resistant, and therefore have a higher positive mood. Conversely, low self-efficacy has been reported to indicate that people are in a negative mood (Gordon, Lim, McKinnon & Nkala, 1998; Kurbanoglu, 2004; Pajares, 2002). Based on all these explanations; for the levels of happiness and competence and for the strong relationship from a social point of view, group participation is important in recreative activities. Again, in the information of the literature, it is important to conduct a loved activity in free time, given explanations that emphasize the importance of observing others and doing something for self-efficacy. Based on this information, the happiness and self-efficacy status of individuals participating in recreational activities during their free time was curious. From this point of view, it is aimed to investigate the levels of self-efficacy and happiness of individuals who are located in the Serdar neighborhood of Izmit District and participate in different courses. In line with the main purpose of the research, answers to the following questions were sought.

- Does the level of happiness and self-efficacy of individuals participating in various courses during their free time differ significantly according to socio-demographic variables?
- Does the level of happiness and self-efficacy of individuals attending various courses during their free time differ significantly depending on the type of course they attend?
- Are feelings of happiness and self-efficacy related?

Method

Study Group: The universe of the research consists of individuals who receive training in free courses offered by the Metropolitan Municipality in the Izmit District of Kocaeli province. The sample of the study consists of 153 volunteer trainees who participate in KO-MEK courses in the Serdar neighborhood, as it can be reached using the appropriate sampling method from the non-selective sampling method. After obtaining a research permit from the Metropolitan Municipality in the 2019-2020 academic year for research, trainees attending the Serdar neighborhood course center were informed about the research. 153 trainees who voluntarily participated in the post-informational study were applied to the fact sheet, the Oxford Happiness Scale developed by Hills and Argyle in 2002, and the self-efficacy- efficacy scale developed by Sherer et al. A total of 153 volunteers, 142 women and 11 male trainees, participated in the study.

Data Collection Tools

Personal Information Form: A 12-question information form was applied that questioned the socio-demographic characteristics of participants, the type of course they attended, whether there was an activity they attended outside the course, and whether they had any illness and was prepared in the light of literature information.

Oxford Happiness Questionnaire (OHQ): The Oxford Happiness Questionnaire was developed by Argyle, Martin and Crossland (1989), and the adaptation study to Turkish was made by Doğan and Akıncı Çötök (2011). The scale evaluated on the total score was changed to 5 likert for easy response when adapting to Turkish, while the original was 6 likert type. The total score that can be obtained from the scale consisting of 29 items ranges from 29-174. As the score rises, happiness increases. Happiness on the scale is categorized on three levels. In the adaptation study for Turkey, the internal consistency coefficient was found to be 74 (Doğan & Akıncı Çötök, 2011). In this study, cronbach Alpha coefficient was found to be 0.82.

Self-efficacy- Efficacy Scale: It was developed by Sherer et al (1982) and adapted into Turkish by Gözümlü and Aksayan (1999). The sum of the scores that can be obtained from the 23-point and 5-point likert type answered scale is the highest 115 and the lowest 23. Scale; 2,4,5,6,7,10,11, 12,14,16,17,18,20,22. items are scored in the opposite direction. In the adaptation study for Turkey, the reliability coefficient of the test was found to be 92 (Gözümlü & Aksayan, 1999). For this research, cronbach Alpha coefficient was found to be 0.87.

Data Analysis

The SPSS 22.0 package program was used in the analysis of the data obtained from the research. Since the sample number is more than 50, the T test was used for binary cluster comparisons from parametric tests, and one-way variance analysis was used for more than two cluster comparisons, as they fit the normal distribution when analyzed by the Kolmogorov-Smirnov Test. The Tukey test was used to find the source of differentiation. The relationship value between the scales was determined by Pearson correlation analysis.

Findings

In this section, the scores obtained by the research group from the Oxford Happiness Scale and self-efficacy competence scale are analyzed in accordance with the research questions and presented in tables. Looking at Table 1, there was no significant difference between the scores taken from both the happiness scale and the self-efficacy scale according to gender, marital status and whether or not they worked in a job [Table 1].

Table 1: T-test analysis of happiness and self- efficacy scores according to socio-demographic characteristics

Variable		N	%	Happiness Mean±Sd	Self- efficacy Scale Mean±Sd
Gender	Woman	142	%92.8	102.41±16.26	89.41±13.18
	Man	11	%7.2	103.00±21.49	81.09±13.33
	P Value			.931	.070
Marital status	Married	107	%69.9	102.94±17.11	88.85±13.84
	Single	41	%26.8	101.75±15.25	88.97±12.23
	P Value			.683	.957
Working status	Yes	29	%19	102.52±21.49	91.86±14.16
	No	124	%81	102.44±15.16	88.09±13.13
	P Value			.982	.105

In Table 2, when looking at whether the research group participated in any activities other than the municipal course programs, 20.9% participated, while 79.1% did not participate in any activities other than the course. When the data in the table were analyzed, there was no significant difference between self- efficacy and happiness scores depending on participation in extracurricular activities, whether to play sports, whether to receive treatment in any subject [Table 2].

Table 2: T-test analysis of happiness and self- efficacy scores according to recreational activity, health and sports status of participants

Variable		N	%	Happiness Mean±Sd	Self- efficacy Mean±Sd
Operating out of KO-MEK	Yes	32	%20.9	102.72±21.49	89.94±14.16
	No	121	%79.1	102.39±15.16	88.51±13.13
	P Value			.935	.610
Regular sports	Yes	43	%28.1	105.81±14.16	89.93±14.25
	No	110	%71.9	101.14±17.35	88.37±12.98
	P Value			.089	.536
Any treatment condition	Yes	38	%24.8	101.05±14.55	85.10±14.06
	No	115	%75.2	102.92±17.27	90.03±12.89
	P Value			.515	.061

In Table 3, there were no significant differences between both self-sufficiency and happiness scores of the research group, depending on age and income level. However, while there was no significant difference in Happiness Scale scores according to education levels, self-efficacy scale scores were found to be significantly higher in favor of undergraduate graduates ($p=0.004$, $p<0.005$) [Table 3].

Table 3: Variance analysis of happiness and self- efficacy scores according to socio-demographic characteristics of participants

Variable		N	%	Happiness Mean±Sd	Self- efficacy Mean±Sd
Education	Primary School	50	%32.7	102.54±19.15	84.68±13.32
	Secondary School	12	%7.8	96.17±20.86	82.67±16.00
	High School	50	%32.7	100.22±12.31	90.98±12.88
	Undergraduate	41	%26.8	106.93±15.98	93.00±11.26
	P Value			.132	.004
Income	2000 tl and below	25	%16.3	103.04±15.69	88.92±2.89
	2001-2500 tl	34	%22.2	102.09±20.41	84.88±2.29
	2501-3000 tl	46	%30.1	100.96±11.66	87.15±2.00
	3001-3500 tl	26	%17.0	99.04±19.39	94.27±2.25
	3501 tl and above	22	%14.4	109.54±15.76	91.78±2.49
	P Value			.238	.056

Age	18-24	28	%18.3	101.78±11.55	90.25±11.26
	25-34	27	%17.6	104.89±15.59	87.67±13.22
	35-44	43	%28.1	102.05±17.07	90.67±13.69
	45-54	37	%24.2	201.22±18.02	89.22±13.69
	55-65	13	%8.5	104.92±17.67	83.77±15.68
	65+	5	%3.3	92.00±29.67	81.00±11.68
	P Value			.717	.422

Table 4 participants; child status, self-sufficiency according to the type of course they attended ($p=.296$, $p>0.05$) and Happiness ($p=.951$, $p>0.05$) no significant differences were found between the scores [Table 4].

Table 4: Variance analysis of happiness and self- efficacy scores according to the type of course participants attended and the state of having children

Variable		N	%	Happiness Mean±Sd	Self- efficacy Mean±Sd
Child status	No child	42	%27.5	101.19±13.49	90.90±11.06
	1 child	21	%13.7	107.09±15.11	89.14±13.71
	2 children	6	%43.1	101.68±18.63	87.09±14.22
	3 children	19	%12.4	100.74±15.09	88.74±15.36
	4 and more	5	%3.3	110.40±23.99	92.80±9.094
	P Value			.592	.632
The type of courses attended	Crafts	73	%47.7	101.78±18.63	87.62±14.08
	Culinary arts	23	15.0	103.65±17.17	91.00±10.92
	Personal development	44	%28.8	103.18±14.20	90.93±12.52
	Art and design	13	%8.5	101.69±11.79	84.46±14.89
	P Value			.951	.296

In Table 5, there was no significant difference between the self- efficacy and happiness scores of the trainees participating in the study according to the year of sports [Table 5].

Table 5: Results of variance analysis of average happiness and self- efficacy points of participants according to the year of sports

Variable		N	%	Happiness Mean±Sd	Self- efficacy Mean±Sd
Year of sport	0-3 Year	18	%11,8	104.72±16.85	14.77±3.48
	4-10 year	3	%2,0	101.00±16.09	6.55±3.78
	10 year and more	6	%3,9	106.33±14.29	14.78±6.03
	P Value			.899	.581

In Table 6, the correlation analysis between the happiness and self- efficacy scales of the research group was found to be positively significant between the Happiness ($p=0.006$, $p<0.05$) and self-sufficiency ($p=0.006$, $p<0.05$) scales. It has been determined that the level of self- efficacy increases as happiness increases, and the level of happiness increases significantly as self- efficacy increases [Table 6].

Table 6: Correlation analysis between happiness and competence scales

		Total happiness	Total self-sufficiency	Mean ±Sd
Total happiness	Pearson Correlation	1	.223**	102.46±16.61
	Sig. (2-tailed)		.006	
	N	153	153	
Total self- sufficiency	Pearson Correlation	.223**	1	88.81±13.32
	Sig. (2-tailed)	.006		
	N	153	153	

** . Correlation is significant at the 0.01 level (2-tailed).

Discussion And Conclusion

In this study, it was aimed to determine the self-efficacy and happiness levels of individuals participating in different courses during their free time.

Looking at table1, the level of happiness and self-efficacy did not differ significantly according to the gender and marital status variable of participants who attended various courses as a free time activity. Similar to these findings, the literature also shows that there are studies that do not find happiness levels different in terms of gender (Can & Cantez, 2018; Demirtaş, 2018; Keskin & Orgun, 2006). According to these results, the variables of gender and marital status can be said to have no significant effect on both happiness and self-efficacy.

Although different results have been found in studies, gender, age, income, education, health and faith are also explained as some factors affecting happiness in theoretical publications explaining happiness (Kangal, 2013). Again, in different publications, the effect of some variables on happiness is given as a percentage ratio. Of these, it has been reported that genetic factors affect happiness by 50%, demographic characteristics by 10%, and recreational activities by 40 % (Kaygusuz, 2018).

The number of women participating in this study is 142, while the number of men is 11 people. This is considered a limitation of our research. However, due to the lack of sufficient research in the literature, research data has been analyzed, considering that it will contribute to the field. In the wider population, it is recommended to evaluate the results by conducting studies in which the number of men and women is close to one. Again, in Table 1, the absence of a difference in terms of marital status and working status in any job, as well as the difference in the ratio between married and single and working and non-working people, such as the gender variable, was analyzed in order to present information to the field, accepting another limitation of the study. In addition, it was thought that married and single or non-working individuals actively participated in these courses and showed no difference between groups as a result of being social.

Table 2, 4 and 5 was examined in participants for the courses they attend and participate in any other activity except to participate in on a regular basis, to do sports, if the sport is doing sports year, the child's condition and treatment of any disease due to a significant difference between happiness scores and self efficacy according to to see see was not there. Looking at the literature, it was found that there were studies that found the level of happiness of those who participate in recreational activities and play sports significantly higher than those who do not play sports (Başar & Sarı, 2018; Doğan, 2018; Doğaner, 2017; Güven, 2018; Yıldız, 2015). Studies have also shown that women who participate in recreational activities such as pilates and zumba during their free time find the happiness level significantly higher in favor of those who play sports (Cabbaroğlu, 2019).

In Table 3, there was no significant difference between happiness and self-efficacy scores of individuals participating in recreational courses according to age and income levels. While there was no significant difference between happiness scores according to the educational status of the participants in the same table, self-efficacy scores increased significantly in parallel with the increase in educational level. Looking at the literature; similarly, women who participated in recreational pilates and zumba exercises during their free time did not show a significant difference in happiness level in terms of age (Cabbaroğlu, 2019). In terms of education, it has been observed that people with graduate education have significantly higher levels of happiness (Bülbül & Giray, 2011). Again, although not according to the level of education; another study comparing the level of happiness and self-efficacy according to the faculties of vocational education stated that there were no significant differences (Can & Cantez, 2018).

Table 6 includes an analysis of the relationship between happiness and self-efficacy scales. As can be seen from the table, there is a positive meaningful relationship between both scales. This indicates that the level of happiness increases significantly as self-efficacy increases. Looking at publications related to self- efficacy; there are also studies that have found a positive moderate relationship between happiness and self- efficacy (Can & Cantez, 2018; Demirtaş, 2018; Doğan & Eryılmaz 2013). In particular, adolescents ' self-efficacy beliefs for managing positive and negative emotions and interpersonal relationships have been noted to drive their positive expectations about the future and contribute to experiencing more positive emotions (Caprara, Steca, Gerbino & Paciello, 2006). It has also been suggested that happiness is evaluated as a subjective state of well-being and that one of the important variables affecting the subjective state of well-being is the perception of social self-efficacy (Özbay, Palancı, Kandemir & Çakır, 2012). Judging by this information contained in the literature; as a result of conducting recreational activities in groups, adaptation to the environment is achieved. It was thought that along with group adaptation, it also increased the level of happiness in parallel with an increase in social self- efficacy and an increase in social self- efficacy. As a result, it was important to increase the different recreational course programs available in terms of increasing happy individuals in society.

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STUDENTS' PERSPECTIVES OF DISTANCE EDUCATION

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Abstract

This study was carried out within the scope of the Basic Information Technologies Use (BITU) course given to formal education students in classroom and distance education environment. The aim of the study was to determine the perspectives of students regarding the course and distance education environment. Case study, which is one of the qualitative research methods was used in this research. The sample, which was a group of 303 students, contained 273 freshmen from the Faculty of Agriculture (FA), the Faculty of Forestry (FF), the Faculty of Fisheries (FoF), and 30 students from various associate degree programs, who repeated the course. Data were collected through the interview forms. During the analysis process, “data reduction”, “data display”, “conclusion drawing/verification” steps were carried out. The study revealed that the students generally found the course necessary, and that distance education was considered to be positive mostly due to the location independence, and negative mostly due to the internet connection problems and lack of communication. While more than half of the distance education students thought that they learned the subject efficiently, the majority of them preferred taking the course in the formal education environment. The study revealed that the rate of attendance and watching recorded lecture videos was not as high as expected. From the findings of this study, it can be suggested that arrangements be made to increase the level of communication in the distance education environment, and that students be encouraged to do more hands-on activities.

Keywords: students’ perspective; distance education; formal student; Basic Information Technologies Use; distance education environment

Introduction

Distance education has shown its significance once again with the increasing number of studies in this field in recent years. Thanks to hardware and software innovations, this extremely important system has become more accessible and affordable, as well as being easier to use. Therefore, it is considered that distance education has become the mainstream (Simonson et al., 2019). According to a report by Allen and Seaman (2003) the rapidly growing distance education system was positively welcomed by instructors and administrators. Subsequent reports from the same researchers suggest that distance education is a component of higher education seen as a normal activity (I. Allen & Seaman, 2004). Other reports prepared by these authors in different years indicate the rapid progress and acceptance of distance education (Allen & Seaman, 2007; I. E. Allen & Seaman, 2017)). While distance education is growing extremely rapidly, it can be argued that there are two different approaches to distance education by students (Simonson et al., 2019). In one of these approaches, students, instead of distance education, prefer the classroom environment, where extra-curricular communication can be provided. The other approach is to increase the opportunities for distance education and even switch completely to the distance education system (Picciano & Seaman, 2007). Students’ opinions vary, because the rapid development in distance education or internet access does not guarantee quality education and student satisfaction (Swan, 2001). Therefore, the opinions of the students who are the main users of the environment can be determined, and new arrangements can be made if necessary.

In terms of distance education environment, there are various studies in which students' views have been evaluated. In the study conducted by Northrup (2002) with 52 graduate students taking an online course, flexibility and convenience were expressed as the two factors that had a positive effect on choosing the environment. Northrup (2002) also reported that it is extremely important for students to organize their own learning and to receive timely feedback from the instructor. In a qualitative study with graduate students who took a web-based distance education course, Hara and Kling (2000) determined that the students were uncomfortable mostly with communication and technical problems. In the study with 285 participants who attended in two different distance education programs: “Management Science” and “Education”, Tricker et al. (2001) determined three reasons for students' participation in the course, which were “course content”, “personal development”, and “professional development”. One can see that satisfaction of the students from the course was expressed in different ways in two different sections of the study, and yet both groups were satisfied with the flexible study opportunity. In addition, some of the students in the study emphasized to the instructors that they were satisfied about the access. Among the student expectations were the high quality of the course materials, feedback and communication. In his study, Young (2006) investigated students’ views of an effective distance education in higher education and grouped twenty-five items in the following seven items: adapting to student needs, providing meaningful examples, motivating students to do their best, facilitating the course effectively, delivering a valuable course,

communicating effectively and showing concern for student learning. There are studies in which students' views were determined within the scope of different courses given in distance education environment in associate and undergraduate degree programs such as Turkish Language, Internet Programming, The Principles of Atatürk and the History of Turkish Revolution and common compulsory courses (Akbaba et al., 2016; Kan & Fidan, 2016; Tuncer & Bahadır, 2017). Fincham (2017) investigated the views of students who had successfully completed their postgraduate education in the Full Distance Learning environment. It was concluded that the participants were to become successful in self-regulation, self-motivation and organization in order to be successful in this environment. Thomson (2010) conducted a study with teachers and students as regards how good or appropriate distance education is for gifted students. It was found out that distance education environment is an environment that can provide individualized and differentiated learning opportunities when compared to the classroom environment. The study revealed that students can learn at their own pace, control the learning process better, and participate in self-directed and independent learning in this environment. Limniou and Smith (2010) aimed to get an insight into how virtual learning environment was assessed by lecturers and students in engineering education, and what their expectations were. On the other hand, Khoo et al. (2010), conducted a study with lecturers and students in an attempt to determine the necessities for efficient online environment. Their study revealed that the pedagogical, managerial, social and technological fields associated with the instructor's roles are of vital importance. Leonard & Guha (2001) mentioned in their study what teachers ought to do in distance education, which argued that students usually want to attend online courses, but they may not have the opportunity to do so. According to their study, distance education teachers are to address the negative perspectives of students that distance education is not efficient.

As is seen, there are a variety of studies on students' views of distance education. Developing technologies have brought student-oriented studies in distance education (Simonson et al., 2019). This study aimed to determine the perspectives of formal education students with respect to distance education. For this purpose, we determined, in this study, the views of two different groups of formal education students about Basic Information Technologies Use (BITU) course which they took in distance education environment and in formal education environment. Marsh (2001) stated that the assessment about education made by students is valid and reliable, and that it is very useful in terms of arranging teaching practices. In terms of addressing the arrangements that can be made in the distance education environment, it is extremely important to determine the perspectives of students in the study who are the main users of the system. It is considered that this study will contribute to determining students' perspectives and new regulations that academic staff can apply.

Method

Research Pattern

In this study, a case study pattern, which is one of the qualitative research methods, was used to determine the views of formal education students as regards the course and distance education environment who took BITU course in two separate environments. This pattern is defined as an in-depth analysis of a given situation or event for the assessment of it in a certain period of time through data collection tools such as interviews and observations (Creswell, 2007). In the case study, an event or phenomenon is analyzed naturally by focusing on how and why questions (Yin, 1984).

Working group

The research included a total of 303 students studying at Faculty of Agriculture (FA, n = 172), Faculty of Forestry (FF, n = 94), and Faculty of Fisheries (FoF, n = 7) in 2019-2020 Fall Semester. 30 participants, who repeated the course, were enrolled in different associate degree programs (ADP, gastronomy and culinary arts, marketing, public relations, accounting). 94 students at the Faculty of Forestry took the course in a computer lab in a formal education environment. The rest of the students completed the course in distance education environment. 61% of the students were female and 39% of them were male. The students ranged between 19 and 22 years of age.

Data Collection Tools

A six question semi-structured interview form prepared by the researcher was used in order to collect data. After the interview form was prepared, the opinions of 3 experts in the field of distance education were received and the form was finalized.

Data Analysis

At the end of the course, which lasted for fourteen weeks, the students who volunteered were asked to fill out the semi-structured interview forms to determine their views. Attention was devoted not to write students' names in the forms. In the research, we conducted qualitative data analysis process, which consists of the basic steps "data reduction", "data display", "conclusion drawing/verification" that were identified by Miles and Huberman (1994).

The researcher first examined all the data and created codings. Afterwards, categories and subcategories were established for the codes. By reviewing the data, codes and categories were arranged, and thematic codes were generated using percentage and frequency values. In order to promote the reliability of the study, another researcher was made to create the codes (Miles & Huberman, 1994) and the agreement percentage was calculated 85%. After discussing the codes which were different, the codes took their final form.

Findings

The perspectives of the students at the end of the BITU course which they took in the distance and formal education environments are detailed in this section. Students' views regarding the course are shown in Table 1.

Table 1: Students' views on BITU course

Category	Sub Category	Code	Department/Type of Environment			
			de n	f	fe n	f
Necessary	Application	Use in business life	57	23,17	32	29,09
		Use in daily life	45	18,29	41	37,27
		Fast / easy application	21	8,54	7	6,36
	Benefit	Required to be computer literate	67	27,24	11	10,00
		Self improvement	37	15,04	11	10,00
	Awareness	Realizing not knowing	5	2,03	4	3,64
Unnecessary	Content	Subject outside the field of study	6	2,44	2	1,82
		Known topic	3	1,22	-	0,00
		Too much information	3	1,22	1	0,91
		Subject to be learnt individually	2	0,81	1	0,91

Both formal and distance education students evaluated the course they took in two categories: “necessary” and “unnecessary”. The category of “necessary” contained three sub-categories: “application”, “benefit” and “awareness”. However, the category of “unnecessary” involved only one sub-category: “content”. In the sub-category of “application”, distance education students thought that the course was necessary mostly because it would be used in business (n=57). In the sub-category of “benefit”, they most frequently mentioned (n=67) that the course was beneficial because the age in which they lived required to be computer literate. On the other hand, formal education students stated that the knowledge they learned during the course would be mostly used in their daily life (n = 41). There are not many opinions about the category of “unnecessary”. In this category, both groups of students stated that the course covered the subjects which were from outside their field of study.

The statement of the female student coded with S35, studying at FA, who took the course in the distance education environment, mentioning the codes of "required to be computer literate" and "use in business life" in the sub-category of “benefit” was as follows:

“I think the BITU course is quite significant and essential for me, because it’s the age of science and technology, computers are used everywhere now. Everyone needs to know how to use a computer, or else we can’t keep up with this age. For example, I believe that I will have to use it in my career in the future. As is in every other field, you can’t do without a computer in our field of business...”

The statement of the male student coded with S215, studying at FF, who took the course in the formal education environment, mentioning the unnecessary aspect of the course because of its familiar topics was as follows:

“.. I think this course isn’t necessary because people at the age of information already know how to use a computer. I already knew what was told during the course, why should I spend time with the things I know?”

Table 2: Students' perspectives of distance education

Category	Sub Category	Code	n	f
Advantage	Flexibility	Location independence	40	9,57
		Chances for watching the recorded videos	37	8,85
		Time independence	28	6,70
		Comfort	13	3,11
		The right for absence from classes	12	2,87
		Individual study	11	2,63
		Different simultaneous activities	2	0,48
	Accessibility	Ease of access	6	1,44
		Appealing to students with different characteristics	5	1,20
	Saving	Financial savings	5	1,20
		Saving time	4	0,96
	Others	Silent environment	10	2,39
Advantage Total			173	41,40
Disadvantage	Technical	Internet connection problems	38	9,09
		Audio-Video problems	24	5,74
		No internet access	11	2,63
		Not being able to print out the content	5	1,20
		Complicated system	1	0,24
	Personal	Not being able to learn	16	3,84
		Not owning a computer	20	4,78
		Reluctance to attend	13	3,11
		Distraction	11	2,63
		Computer illiteracy	2	0,48
	Discipline	Not taking the lesson seriously	17	4,07
		Lack of discipline	12	2,87
	Application	Not being able to do simultaneous hands-on activities	13	3,11
		Theoretical learning only	8	1,91
	Interaction	Lack of communication	25	5,98
		Not being able to ask questions instantly	15	3,59
		A sense of virtuality	9	2,15
		Not being able to make eye contact	5	1,20
Disadvantage Total			245	58,61

As seen in Table 2, students taking the course with distance education evaluated the environment in two main categories as “advantage” and “disadvantage”. The category of “advantage” includes the sub-categories of “flexibility”, “accessibility”, “saving” and “others”. Among these categories, “flexibility” included the codes related to a more comfortable working environment, and the most common one was the code of location independence. While “accessibility” referred to the opportunity for accessing to the course, “saving” referred to saving money or time. In addition, the students identified silent environment as an advantage. The category of “disadvantage” includes the sub-categories of “technical”, “discipline”, “personal”, “practice” and “interaction”. The most frequently mentioned code in this category was the code of “internet connection” problems (n = 38) among technical problems. 1 student stated that the system was complicated. 24 of the students emphasized that they could not learn enough with the available system. In addition, there were 17 students who stated that they did not take the course seriously because of the distance education environment. 13 of the students mentioned the negative aspects of not doing simultaneous hands-on activities while attending the course on the internet. “Lack of communication” (n = 16) and “being unable to ask questions instantly” (n = 15) were also rated among the negative aspects.

The male student coded with S105, studying at FoF, mentioned the codes of "audio / video problems", "unwillingness to participate" and "not taking the lesson seriously" in the “disadvantage” category as follows: “I think it is very unfortunate to offer the BITU course via distance education. I can say it is a loss for us. I tried to attend the first lesson. The lecturer’s voice, and therefore the lecture wasn’t quite understood. So, I did not even remember the other lessons afterwards. Because it was via distance education, I started to think as if there were no lesson, and so I didn’t take it seriously. I didn’t have any enthusiasm to participate. I felt it was unnecessary to attend the class in front of the computer.”The female student coded with S180, studying gastronomy and culinary

arts in ADP, regarded distance education as an advantage and made the following statement concerning the codes of "location independence", "revision opportunity" and "financial savings":

"I think distance education is very good. It gives an advantage to those who can reach it. You don't have to meet the requirements like transportation and food. You can attend the class at home or in the dormitory without physically going to school. You can watch the lecture as much as you like if you miss a class or don't understand it."

Approximately 80% of the formal education students stated that they had a positive opinion about the classroom environment as seen in Table 3. On the other hand, nearly 20% of the students stated that they were not satisfied with the classroom environment due to the reasons shown in Table 4, and that they wanted to take the course in the distance education environment instead.

Table 3: Students' views on the formal education environment

Category	Sub Category	Code	n	f
Advantage	Interaction	Being able to ask questions instantly	14	12,28
		Communication with the lecturer	13	11,40
		Peer communication	5	4,39
	Discipline	Taking the course seriously	15	13,16
		Compulsory attendance	14	12,28
	Practice	Simultaneous hands-on activities	14	12,28
	Personal	More permanent learning	14	12,28
		No obligation to have a computer	6	5,26
	Physical environment	Adequate hardware tools	15	13,16
		Environmental Comfort	4	3,51

Of the 94 students who took the course through formal education, 75 students rated the classroom environment as advantageous. The category of "advantage" included the sub-categories of "interaction", "discipline", "practice", "personal" and "physical environment". In the category of "interaction", the students most frequently mentioned "being able to ask questions instantly" and "to communicate with the lecturer", and least frequently "to communicate with their classmates". While there were 15 students who stated that taking the course in the classroom environment was effective in taking it seriously, 14 students expressed the benefit of simultaneous hands-on activities. 14 of the students stated that they had learned more permanently in this environment, and 15 stated that the classroom environment was equipped sufficiently.

The male student coded with S250, studying at FF, who took the course in the formal education environment, mentioned the codes of "being able to ask the lecturer instantly", "learning more permanently" and "obligation to attend the lesson" as the advantage of formal education as follows:

"I am glad that I've taken the course in the classroom because I can ask questions to the lecturer instantly when doing hands-on activities. Since they are subjects that I do not know, if I ask the lecturer right away, they become more permanent. This is how I can learn. Also, we have to attend the classes; otherwise, we would fail. This is important for me to attend the class. I might think of not doing so if I weren't obliged to."

Table 4: Reasons why formal education students wanted to receive distance education

Category	Subcategory	Code	n	f
Preference for Distance Education	Flexibility of distance education	Location independence	12	33,33
		Chances for watching the recorded videos	11	30,56
		Time independence	5	13,89
	Classroom environment	Inadequacy of physical equipments	4	11,11
		Temperature	2	5,56
		Noise	2	5,56

Table 4 shows the reasons for preferring the distance education environment stated by 19 of the students who took the course in the classroom environment. The students stated that they preferred distance education because they found it more flexible. Besides, they considered some of the aspects in the classroom environment negative. The sub-category of "flexibility" in distance education includes the codes related with location and time independence, and chances for watching the recorded videos. In the category of "classroom environment", 4 of the students stated that the classroom was physically inadequate, while 2 of them expressed that the temperature and noise were at a disturbing level. On the other hand, the female student coded with S260, who took the course in the formal

education environment, mentioned the codes of "location independence", "time independence" and "temperature of the classroom environment" regarding her desire to take the course in the distance education environment instead of the classroom as follows:

"I think it would have made more sense if the course had been offered via distance education. I normally get bored after a while. The classroom gets hotter especially as the lesson progresses. The heat makes me uncomfortable. But if the course were via distance education, I wouldn't have to be stuck in the classroom, and I would watch the lecture any time I like ..."

Table 5: Shows the learning environment preferences of distance education students and their reasons.

Category	Subcategory	Code	n	f
Preference for DE (n = 59, 28.23%)	Flexibility	Location independence	21	7,09
		Chances for watching the recorded videos	20	6,76
		Time independence	15	5,07
		The right for absence from classes	13	4,39
		Comfort	8	2,70
		Individual study	8	2,70
		Different simultaneous transactions	2	0,68
Preference for Formal Education (n = 150, 71.77%)	Content	Visual elements	5	1,69
	Education process	Permanent learning	40	13,51
		Chances for hands-on activities	25	8,45
	Discipline	Compulsory attendance	27	9,12
		Sense of responsibility	15	5,07
	Technical	No technical problems	25	8,45
		No internet problems	15	5,07
	Personal	Loving the environment	14	4,73
		Not having a computer	10	3,38
	Interaction	Lecturer-student communication	33	11,15

According to Table 5, only 59 of 209 distance education students preferred distance learning, while 150 students wanted to take the course via formal education. The desire for formal education was expressed by the codes in the categories of "education process", "discipline", "technical", "personal" and "interaction". Among these categories, "having the chance of permanent learning" and "doing hands-on activities in the education process" constituted the most frequently mentioned category. However, "student-lecturer interaction" was the least frequently mentioned category of interaction. The study revealed that the main reasons for preferring distance education consisted of the codes that provided flexibility such as "location independence", "chances for watching the recorded videos" and "time independence". Five students, on the other hand, expressed the advantages of the visual imagery used in the content.

The male student coded with S47, studying public relations in ADP, who preferred having taken the course in distance education environment mentioned "time independence", "chances for watching the recorded videos" and "benefit of visual elements" as follows:

"Distance education must be available. Because I can learn it whenever I want, watching it again and again without missing anything. We can rewind or forward the lecture video. These videos also have pictures, clips, etc. which help me learn the content much better .."

The female student coded with S19, studying at FA, mentioned "compulsory attendance", "sense of responsibility", "chances for hands-on activities" and "permanent learning" as the reasons for her preferring formal education as follows:

"I would prefer the course to be formal. I would attend it because it would be compulsory to be in the classroom. For now, I don't feel responsibility. I have things to do and don't even think about the lesson. I usually get the desire to postpone watching it. If it were in the classroom, I would have a chance to try it while the lecturer is teaching, so I could learn and wouldn't forget the subject.

The students in both groups emphasized the importance of attendance to the course. Only 2 of the formal education students did not have absences, and 21 of them did not attend the course at all, due to the reasons that they were repeating the course and attendance was not compulsory for them. The maximum absence limit was specified as 5 weeks during the course, and the other students were absent for 1 week (n = 7), 2 weeks (n = 15), 3 weeks (n = 17), 4 weeks (n = 19) and 5 weeks (n = 13). Table 6 lists the reasons for the absence of students taking formal education.

Table 6: The reasons for formal education students' not attending the course

Category	Code	n	f
Personal	Going to the hometown	30	30,61
	Illness	22	22,45
	Repeating the course	21	21,43
	Arbitrary absence	8	8,16
	Using the right for absence from classes	4	4,08
	The obligation to work	4	4,08
	Family-related reasons	2	2,04
Classes	Morning classes	5	5,10
	Course day	2	2,04

Table 6 shows that students' not attending the lessons were mostly due to personal reasons and that the most frequently mentioned reason in this category was that they had been to their hometowns (n = 30); in other words, location change. This code was followed by "illness" (n = 22) and "exemption from attendance due to repeating the course" (n = 21). In addition, the classes started in the afternoon and there was another class in the morning. Students mentioned that changes in the schedule of the morning class had an effect on attendance. The female student coded with S217, a formal education student, mentioned "going to the hometown" and "morning classes" as the reasons for her two absences during the semester as follows:

"I had been attending all classes since the beginning of the semester, then I missed my family after the midterm exam and went to my hometown. As for my second absence, the chemistry class in the morning finished too early, so I did not want to attend the class because I had to wait for it for 3 hours at school."

In the distance education environment, class participation was divided into two: synchronous course and recorded videos.

Table 7: Number of synchronous attendance and watching recorded course videos

Synchronous attendance			Watching the recorded videos		
Week	n	f	Week	n	f
1-2 weeks	26	20,31	1 week	9	7,09
3-4 weeks	24	18,75	2 weeks	9	7,09
5-6 weeks	11	8,59	4 weeks	8	6,30
7-8 weeks	11	8,59	Never watching	40	31,50
10-11 weeks	11	8,59	All the classes he/she had not	61	48,03
14 weeks	6	4,69			
Never attending	39	30,47			

Table 7 reveals that 39 students never attended synchronous classes, and only 6 students attended the classes without absence during the entire semester. As for recorded course videos, 61 students who watched all the recorded videos of the classes that they had not been able to attend synchronously, whereas 40 students did not watch any videos at all.

Table 8: Reasons for not attending synchronous classes in the distance education environment

Category	Code	n	f
Technical	Internet connection problems	31	14,90
	Telephone connection problems	20	9,62
	Inability to login to the system	15	7,21
	Audio / Video problems	10	4,81
Personal	Not owning a computer	18	8,65
	The obligation to work	11	5,29
	Illness	6	2,88
	Distractibility	4	1,92
Discipline	No obligation to continue	20	9,62
	Forgetting to attend the class	11	5,29
	Not feeling responsible	9	4,33
	Not knowing that there is a class	7	3,37
Others	Coincidence with other courses	20	9,62
	Urge to watch videos later	15	7,21
	Day of the class	6	2,88
	Finding the course inefficient	5	2,40

Table 8 shows the reasons for students' not attending synchronous lessons in distance education environment, which were technical problems, personal limitations, discipline problems and others. The reasons for not attending synchronous lessons were most frequently attributed to technical problems, among which internet connection problems was the most common ($n = 31$), while the second most frequently mentioned reason was the problems encountered due to the connection via mobile phone ($n = 20$). In the category of "discipline", "being exempt from attendance" ($n = 20$), and "coinciding with another class" in the category of "the others" ($n = 20$) were most frequently mentioned. "Getting distracted during the class" and "finding the course inefficient" were the least mentioned codes.

The statement of the female student coded with S89, studying at FA, mentioning "courses coinciding with each other" as the reason for her not being able to attend synchronous classes was as follows:

"I'm actually curious about this course. I find it boring to watch it later as a video, and I want to listen to the lecturer live. However, since a required course of ours coincided with it, I had to attend that one. I've attended the lectures a few times instead of my own classes, and I liked it. But if I don't attend the classes in my own program, I'll fail so I have to prefer them."

Table 9: Reasons for not watching recorded videos

Category	Code	n	f
Technical	Inability to login to the system	15	14,42
	Internet connection problems	14	13,46
	Telephone connection problems	7	6,73
	Audio / Video problems	6	5,77
Personal	Not owning a computer	5	4,81
	Priority of other chores	2	1,92
	Reluctance	2	1,92
	Distraction	1	0,96
Discipline	Finding the course unimportant	7	6,73
	Not knowing that there is a class	6	5,77
	No obligation	6	5,77
	Leaving everything to the last moment	6	5,77
Video content	Long records	4	3,85
	Known content	4	3,85
Way of learning	Studying from lecture notes	12	11,54
	Hands-on activities	5	4,81
	Research from the Internet	2	1,92

Table 9 classifies the views of students in the distance education environment about recorded videos and the reasons for not watching them in five categories. According to the table, "technical problems" were the most frequently mentioned code as a reason, which was also similar to the reasons for "not attending synchronous classes". The study revealed that 15 students could not log into the system, and 14 students had internet connection problems. Some students preferred different methods such as studying from lecture notes ($n = 12$) and doing hands-on activities ($n = 5$) instead of watching videos.

The statement of the male student coded with S78, studying at FoF, mentioning "not being able to log into the system" as the reason for his not watching the recorded videos and preferring to study from the lecture notes was as follows:

"Because I know that the lecture has already been recorded, I usually think I can watch it later, so I usually don't log in during the informatics class. However, the right time has never come. I wanted to watch and study the recorded videos some time before the exam, but I couldn't log in even though I tried a lot. For some reason, I always delayed watching them, and after a while I gave up. Instead, a friend of mine had lecture notes, and I studied from the printout. I felt it was much easier to have papers in my hand..."

Finally, the study investigated the effects of different environments on students' beliefs that they had learned what was taught in the course. Table 10 illustrates that 15 out of 94 students studying in the classroom environment did not think that they had learned the course content, whereas 79 participants who accounted for the majority of the students believed that they had learned it.

Table 10: Belief in learning the content of the course in the classroom environment

Category	Subcategory	Code	n	f
Being able to learn (79 people)	Education process	Classes with hands-on activities	29	24,17
		Efficient class	10	8,33
	Interaction	Lecturer's attention	20	16,67
		Opportunity to ask questions instantly	18	15,00
	Personal	Student's interest in the course	15	12,50
		Prior knowledge	4	3,33
Not being able to learn (15 people)	Personal	Not attending the classes	10	8,33
		Distraction	3	2,50
		Not practising again	2	1,67
		Health problems	1	0,83
		Disliking computers	1	0,83
	Class	Long duration	5	4,17
		Too much content	2	1,67

Table 10 shows that the students who believed that they had learned the content of the course most frequently mentioned that “the educational process focused on hands-on activities”, “the lecture was efficient”, and “the interaction in the process was high”. In addition, as an effect on the realization of learning, 15 students expressed their own interest in the course, and 4 students mentioned their prior knowledge. 15 students who thought that they did not learn the subjects in the course mostly associated the situation with themselves. In addition, 5 students stated that they could not learn due to the long duration of the lecture and 2 students mentioned the excessive content. The male student coded with S278 mentioned “the hands-on activities in the course” and “opportunity to ask questions to the lecturer instantly” as the reason for his successful learning as follows:

“I think I have learned the topics covered in the BITU course, especially the parts we did hands-on activities. I may have forgotten the verbal narratives in the first weeks. But afterwards, when we went on applied Office training, I didn't forget anything, because the lecturer made us practise everything and always asked us if we understood it or not, and when we got stuck, we asked the lecturer for help and completed the process. ”

While 106 of the 209 students who took the course in the distance education environment believed that they learned the subjects, 103 students thought that they did not learn them.

Table 11: Belief in learning the content of the course in the distance education environment

Category	Sub Category	Code	n	f
Being able to learn (106)	Personal	Watching lecture videos again	24	9,76
		Attending the classes	23	9,35
		Loving the course	22	8,94
		Prior knowledge	15	6,10
		Individual effort	15	6,10
	Course	Content	20	8,13
Teaching methods		8	3,25	
Not being able to learn (103)	Personal	Not attending the classes	23	9,35
		Not taking the lesson seriously	12	4,88
		Disliking the environment	10	4,07
		Distraction	5	2,03
		Not understanding	2	0,81
	Interaction	Lack of communication	20	8,13
		Not being able to ask questions instantly	15	6,10
	Education process	Lack of hands-on activities	12	4,88
		Long duration	2	0,81
	Technical	Internet connection problems	10	4,07
		Audio / video problems	6	2,44
Problems related with attendance via mobile phones		2	0,81	

According to Table 11, the vast majority of students thinking that they learned what was taught associated the reason for their learning with themselves. Among the most frequently mentioned codes were “watching the lecture videos again”, “attendance”, and “loving the course”. In addition, students mentioned that content of the course (n = 20) and teaching methods (n = 8) also contributed to their learning. In the category of “not being able to learn”, while students most frequently associated its reason with themselves, they also mentioned interaction, lack of

hands-on activities during the educational process, duration of the lecture and technical problems as the reasons for “not being able to learn”.

The female student coded with S17 stated that she could not learn because of the distance education environment and listed the reasons for her failure as “not attending the class” and “internet connection problems”.

“Frankly, I would have learned better if I had taken this course in the classroom. I don't quite think I learned much when it was online. There are different reasons for this. At first, I started the term very enthusiastically because I wasn't computer literate and it would be useful to learn it. But in the first weeks when I tried, the internet always disconnected. I stay in the dormitory and the internet connection in the dorm is very poor, so it is difficult or impossible to connect. But, sure, this is not an excuse. I could have tried harder to attend the classes and been to the library at the campus. I knew both computers and the internet were available there. But I did not attend classes.”

Discussion and Conclusion

In the study, within the scope of the BITU course, formal education students were trained by the same instructor for 14 weeks in the classroom and distance education environment. Students' views about the course and the environment were analyzed, after which the following results were achieved.

The majority of the students who took the course in the distance education environment (94.31%) and in the classroom (96.36%) considered the course to be necessary. Both groups of students mentioned that the course was essential with the sub-categories of “application”, “benefit” and “awareness”. A small number of students thought that the course was unnecessary due to its content. The students who took the course in the distance education environment considered the course to be necessary mostly due to the reasons of “required to be computer literate” (27.24%) and “use in business life” (23.17%). On the other hand, students who took the course in the classroom environment found the course necessary mostly due to “use in daily life” (37.27%) and “use in business life” (29.09%).

The views of 209 students, who were formal education students but took the course in distance education environment, were grouped in two sub-categories as “advantage” and “disadvantage”. In these categories, a total of 418 codes were created. 58.61% of the students' statements were in “disadvantage”, while 41.40% were in “advantage”. Participants mentioned the disadvantages more frequently. The advantage category was grouped into 4 sub-categories: “flexibility”, “accessibility”, “savings” and “the others”. Among these categories, the most frequently mentioned sub-category was “flexibility”, which was followed by “location independence” (9.57%), “chances for watching the recorded videos” (8.85%), and “time independence” (6.70%). The least mentioned codes in the category of “advantage” were “being able to do something else at the same time” (0.48%) and “saving time” (0.96%). The category of “disadvantage” consisted of 5 sub-categories: “technical”, “personal”, “discipline”, “hands-on activities” and “interaction”. The first sub-category in coding was “technical” (18, 9%) and the second was “interaction” (14.35%). The most frequently mentioned codes were “internet connection problems” (9.09%) and “lack of communication” (5.98%). In the category of “personal”, “not being computer literate” constituted the least frequently mentioned code. In summary, the students considered the environment to be positive mostly due to “location independence”, and negative mostly due to “internet connection problems” and “lack of communication”. There are similar results from other studies. Hara and Kling (1999) found out that one of the frustrations experienced by students in the distance education environment was technological problems and the other was little or late feedback that was provided by the instructor. Balaman (2018) determined that students experienced technical problems in the distance education system. Kan and Fidan (2016) established that watching recorded videos again, permanence, convenience, as well as time and location independence were the most frequently mentioned positive aspects related to distance education. Among the most frequently mentioned negative aspects were lack of practice, lack of communication, failure in paying attention and technological problems. Fincham (2017) stated that students expressed the advantages of full distance education as flexibility, independence and convenience. Lack of face-to-face communication was considered to be a major limitation. Motiwalla and Tello, (2000) stated that students were satisfied with the flexibility, and access to content anytime and anywhere in distance education. The study by Akbaba et al. (2016) indicated that 76.6% of the students did not find distance education useful. In the study of Shea et al. (2001), it was found out that students expected more communication in distance education. Ross et al. (1990) formed two separate groups in his study. The students in the second group, who had more interaction, made more positive evaluations, whereas the other group was not satisfied with the education and stated that they could not learn much. Tuncer and Bahadır (2017), on the other hand, stated that, regarding the issues they encountered, students most frequently mentioned connection problems, which was followed by the lack of internet access access or computers.

While most of the students (79.78%) who took the course in the classroom environment as they used to found it advantageous, some (20.21%) stated that they preferred distance education instead of classroom environment. The

reasons for being satisfied with the classroom environment consisted of 5 sub-categories: “interaction”, “discipline”, “hands-on activities”, “personal” and “physical environment”. Among these subcategories, students most frequently mentioned “interaction” (28.07%), after which “discipline” was the second most common (25.44%). It is evident that interaction was a very important component in both educational environments. The students who participated in the study of Limniou and Smith (2010) stated that it was necessary to provide a more interactive learning environment and individual feedbacks so as to solve the difficulties related to the course. In the study, 12.28% of the students stated that, as the course was in the classroom environment, compulsory attendance provided some discipline. The least mentioned codes were “environmental comfort” (3.51%) and “peer communication” (4.39%). The fact that students requested distance education instead of the classroom environment was due to the flexibility of distance education and the disadvantages of the classroom environment. 33.33% of the students who desired to take the course via distance education stated that it was appealing because of the location independence, and 30.56% of them mentioned chances for watching the recorded videos. There were also students who found the current classroom environment physically inadequate (11.11%), too hot (5.56%) and noisy (5.56%).

Most of the formal education students who took the course in the distance education environment (71.44%) stated that they preferred to take the course in formal education environment. 59 students who wanted to take the course through distance education mentioned the flexible structure of distance education and the effect of the content. The most frequently mentioned codes of the students who wanted to continue the course in distance education environment were “location independence” (7.09%), “chances for watching the recorded videos” (6.79%) and “time independence” (5.07%). “Being able to do something else at the same time” (0.68%) and “the effect of visual items (1.69%) in the course content” were the least frequently mentioned codes. The sub-categories of “education process”, “discipline”, “technical”, “personal” and “interaction” were also mentioned by the students who wanted to study in the formal education environment. “Education process” (21.96%) was the most frequently mentioned sub-category among them. The students who preferred the formal education environment also believed that they learned more permanently in the classroom environment (13.51%) and they had chances to do hands-on activities (8.45%). The codes of “student-lecturer interaction” (11.15%), “feeling of discipline in the students because of compulsory attendance” (9.12%) and “not having to deal with technical problems in the classroom environment” (8.45%) were also frequently expressed as regards class preference. Young (2006) claimed that adaptation to students’ needs, motivating students, and effective communication are among the most important components for effective distance education. It is essential that an efficient teacher, in this environment, establish a trust-based communication with his students and create a flexible but structured classroom environment. It is evident that these components are compatible with the codes mentioned by the students in terms of the environment preference. As a result of the meta-analysis conducted with different articles, M. Allen et al. (2002) concluded that student satisfaction in the face-to-face education environment was slightly higher than distance education. Evidence from the research indicates that individual differences in learning style may have an impact in distance education. Khoo et al., (2010) argued that online learning is a social and interactive environment where participation in the learning community is provided. In order for this to happen, individuals in the environment must be keen on learning from one another. It should be noted that the differences in the learning styles of the students may have reflected on their preferences for environment in this study. In addition, in some of the studies which revealed the results about the positive aspects of distance education it is evident that the study group consisted of a highly motivated older age group with self-discipline (Chen et al., 2008; Dibaise, 2000; Hardy & Boaz, 1997). Chen et al. (2008) argued that students of older age group are more likely to engage in higher levels of mental activity, such as analysis and synthesis, although they interact less with other participants. In this study, however, the participants who were in the first year of university were not in the older age group. It can be inferred that students’ age may reflect on the preference for the environment.

“The importance of class participation” was frequently mentioned in both student groups. However, the study revealed that some of the students taking the course in the formal education environment did not attend the classes for up to 5 weeks, which was the maximum absence limit, and that the percentage of the students who attended all the classes during the semester remained at only 2.13%. The reasons for not attending the class in the classroom environment consisted of the codes which were dependent on the students, such as “going to the hometown (30.61%) and “becoming sick” (22.45%), both of which were the most frequently mentioned codes. It is expected that this will reflect positively on the distance education environment that provides time and location independence for the course. However, the analyses revealed that the rates of attending the classes in the distance education environment or watching the recorded videos after the classes were not as high as expected. While the percentage of the students attending the synchronous courses throughout the semester remained at only 4.69%, 30.47% of the students did not attend any synchronous classes at all. While the number of students who watched the recorded videos of all the courses that they had not attended did not exceed half of students (48.03%), 31.50% of the students never watched any recorded videos. The study by Akbaba et al. (2016) revealed that the majority of students

(89.3%) did not attend the classes regularly and 40.3% of students associated this with the lack of compulsory attendance.

The reasons for students' not attending synchronous classes included "technical", "personal", "discipline" and other sub-categories. Among these reasons, students most frequently mentioned "technical problems". Similarly, the study by Shea et al. (2001) indicated that students expected technical support in the distance education environment. The study revealed that 9,62% of the students did not attend the classes because attendance was not compulsory and that the courses of 9,62% of the students coincided with another course. This result suggests that neither students nor those who prepare class timetables care about distance education courses sufficiently. The reasons for not watching the recorded videos were similar to the reasons for not attending synchronous classes. Moreover, the major reasons for students' not watching the recorded videos were "preferring other learning methods such as studying from lecture notes and doing hands-on activities" or "putting off watching all the videos until the exam date". Akbaba et al. (2016) also revealed that nearly half of the students studied from the textbook. While students' learning beliefs were quite high in the classroom environment (84.04%), they were slightly lower in the distance education environment (50.71%), yet still more than half. According to the study of Leonard and Guha (2001), most of the students in the online courses meet their academic needs and improved their technological skills. In the study of Tuncer and Bahadır (2017), more than half of the students (62%) had negative thoughts about learning with distance education. The students who stated that they had learning problems in the classroom environment associated this with "not attending the lesson", "being distracted", "not doing hands-on activities after the class", "health problems", "disliking computers", and "too long duration and too much content". On the other hand, distance education students associated the reasons for their learning with their own personal efforts such as "re-watching the recorded videos", "attending the classes regularly", "loving the lesson", and "prior knowledge". As for the reasons for not learning, students mostly associated their not learning with the reasons about themselves. "Not attending the classes", "not taking the course seriously", and "disliking the environment" were the most frequently mentioned reasons, while "interaction" (14.23%), "not being able to do hands-on activities during the education process" and "technical problems" (7.32%) were among the others.

Recommendations

As a result of this study, the following suggestions can be made: arrangements can be made to eliminate the lack of communication in distance education, because the use of interactive hands-on activities in distance education is not only effective in learning but also increases motivation (Berge, 1999; Northrup, 2002). The 21st century student requires creating educational opportunities that allow interaction with educators and peers, regardless of time or place. Various tools are available for this purpose (Beldarrain, 2006). Thanks to these tools, it is possible to increase the interaction in the environment. Technical support can be provided in the environment. It is evident that students often complain that they cannot do hands-on activities simultaneously in distance education. This perception can be changed, and one can enable students to realize that they can do hands-on activities about what they have learned after watching the lectures. Moreover, students can be encouraged to attend or follow the classes.

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THE DEPENDENCE OF THE VIABILITY OF THE STUDENT ON THE QUALITY OF HIS REFLECTION

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Abstract

The article presents the results of research on the dependence of the student's viability on the quality of his reflection. The life of a young person in a digital society takes place in a variety of economic, political, social and cultural reforms, which often give rise to stressful situations that do not have a favorable impact on the quality of his life. Rapid changes in society complicate the process of socialization of the individual, create difficulties in adapting to new complex conditions of life and determine uncertainty in the future. In the end, a state of chronic stress exhausts a person and destroys their health.

Adapting to the adverse conditions of life for the psyche, a young person is forced to develop a huge range of psychological defense mechanisms that allow him to survive in a situation "here and now" without prospects for personal growth. One of these mechanisms is pathogenic reflection, which helps to survive psychological difficulties, to drown out the fear of failure for a while, to relieve psychological stress from feelings of guilt, shame, and resentment. However, as the results of the study showed, pathogenic reflection and the following protective behavioral tactics do not contribute to improving the student's viability.

Based on a deep analysis of the results of an empirical study, the article shows the dependence of the student's viability on the quality of his reflection.

Key words. Reflection, sanogenic reflection, protective, reflection, vitality of the individual student.

Introduction.

Since ancient times, people have noticed a direct connection between the emotional state of a person and the state of their health. Frequent chronic stress can lead to depletion of the adaptive defense system of a person, which in turn can cause various psychosomatic diseases.

In this regard, the viability of the individual as the ability to ensure personal well-being, development and stability becomes popular. It allows the individual to maintain his stability in a very unstable society (D. I. Feldstein), its integrity and independence, as well as self-affirmation and self-respect. Viability actualizes intrapersonal resources of a person on the basis of mental health potentials and corrects negative behavioral patterns, as well as the choice of constructive behavior programs that ensure the formation of positive socio-psychological attitudes in various areas of human life. In this regard, the search for factors that increase the viability of the individual becomes significant. From our point of view, such a factor is sanogenic reflection. Through the mechanism of sanogenic reflection, a person can manage their emotions, since their awareness, analysis and correction allows you to change or weaken inappropriate emotional reactions. In a stressful situation, sanogenic reflection helps to reduce the suffering from experiencing the corresponding emotion (Morozuk S. N.) (1; p.67). Through sanogenic reflection, it is possible to improve a person's mental health, increase the level of subjective control over various life situations, and, as a result, the level of personal viability.

In our study, the scientific problem of studying the dependence of the viability of the individual on the quality of reflection in the student's age is posed. From our point of view, the period from 18 to 25 years is one of the most important stages in the chain of Mature ages. It is here that a person acquires the basic knowledge and skills necessary for the implementation of future professional activities. During this age period, a system of value orientations develops that determine the core of the personality, the content of social activity and a General approach to the world, to other people and to oneself, which gives meaning and direction to the social position of a young person. In this regard, the purpose of our research was to determine the dependence of the student's viability on the quality of his reflection.

Experimental methods.

The research is based on the hypothesis that: first, there is a connection between the viability of the individual and reflection; and, secondly, the quality of reflection depends on the viability of the student. Achieving the intended goal and testing the hypothesis involves setting and solving the following tasks:

1. to Study the features of viability in modern students;
2. To examine the quality of reflection among modern students;
3. Identify the relationship between vitality and reflection in students;
4. Prove the dependence of students' viability on the quality of reflection.

The research was conducted at the Moscow state pedagogical University. The respondents were 50 students: 25 students of the faculty of history and 25 students of the faculty of mathematics.

The research methods used: a projective "Cognitive-emotional test" (Orlov Yu. M., Morozyuk S. N.) (2). the purpose of the method: to study the features of cognitive processes in students who represent the protective reflection of a person that occurs as a result of experiencing emotions of fear of failure, guilt, shame, resentment. The cognitive-emotive test refers to projective research methods and measures the amount and type of reflection about emotions. The test contains a set of statements that can be correlated with certain mental actions that occur in response to the appearance of a certain emotion. These mental actions or acts in psychology are called mechanisms of mental protection, which is understood as unconscious mental processes aimed at minimizing negative experiences. Defense mechanisms are at the heart of resistance processes. The procedure of the survey. The test contains 20 indicators. The phrases included in the questionnaire are numbered and the content of each indicator can be determined by searching for the corresponding test item using the key. Subjects need to imagine situations that were in the past, and reproduce the experience. Then, in accordance with the brief instructions for each section of the test, mark on the form (see Annex 4) those code numbers of phrases that are most similar to the thoughts they are currently having in connection with the representations of a particular situation. Only one answer can be given to each item: select this item. The lack of choice means "no."

And the method "Viability of an adult" (Makhnach A.V.) (3). The purpose of the method: to assess the severity of each of the components of viability in students and the overall, integral indicator of viability. The procedure of the survey. The test is designed for use in an adult audience from 18 years of age to later age. Structurally, the test consists of 120 questions (see Appendix 1), with which the Respondent may agree or disagree to varying degrees. The frequency of statements concerning certain characteristics of health, behavior, and character is measured on a four-step Likert scale with values: 1 - "no", 2 – "rather no than Yes", 3 – "rather Yes than no", and 4 - "Yes". It takes from 15 to 20 minutes to complete. The test claims relate to the following six areas of human characteristics and their social environment: self-efficacy, perseverance, locus of control, coping and adaptation, spirituality, family and social relationships.

Results and Discussions.

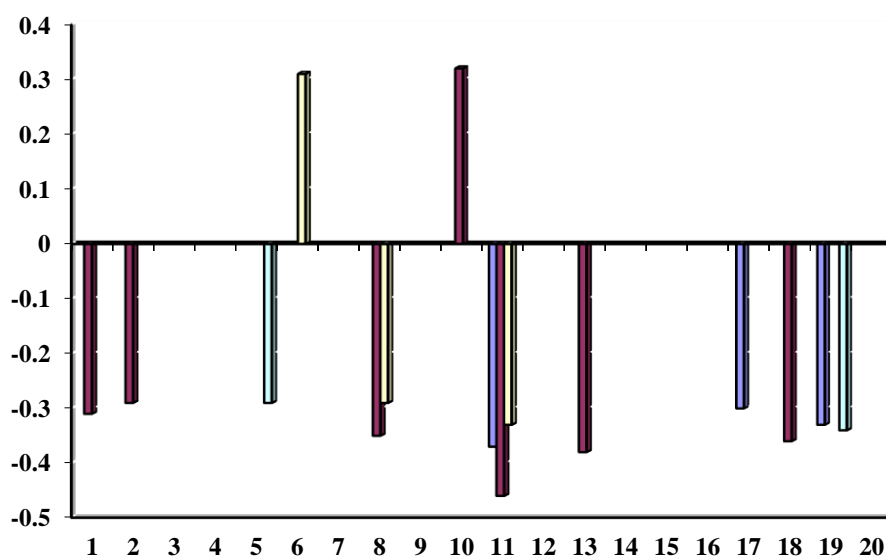
At the first stage of the study, we determined the severity of individual indicators of protective reflection in a group of respondents using the method of Y. M. Orlov, S. N. Morozyuk "Cognitive-emotional test" and individual indicators of viability using the method of A.V. Makhnach "Viability of an adult". In the second stage of the study, we compared the results obtained using two methods and established a link between defensive reflection and the severity of viability indicators. The correlation of defensive reflection in respondents with the severity of their viability indicators (according to R-Spearman) is shown in table 1.

Indicator of CET (Orlov Yu.M., Morozyuk S.N.)	Indicators of viability (Machnach A.V.)					
	Self-efficacy	Persistence	Internal locus of control	Adaptation	Spiritual life	Social and family ties
Volume of defensive reflection from the fear of failure	-0,15	-0,07	-0,25	-0,31*	0,03	-0,12
The amount of defensive reflection from guilt	-0,01	0,17	0,13	-0,29*	-0,01	0,01
The amount of defensive reflection from feelings of shame	-0,18	0,02	-0,05	-0,19	0,16	-0,21
Volume of defensive reflection from feelings of resentment	-0,04	-0,11	-0,01	-0,18	0,15	0,23
Aggression against others	-0,06	-0,07	-0,15	-0,26	-0,08	-0,29*
Aggression against yourself	0,19	0,02	0,31*	-0,11	-0,04	-0,06
Rationalization of object deprecation	-0,18	0,01	-0,11	-0,24	-0,01	0,06
Rationalization by circumstances	-0,20	-0,07	-0,29*	-0,35*	0,02	-0,20
Projection on the other	-0,10	-0,20	-0,01	-0,23	0,18	-0,10
Protection from guilt	-0,18	-0,24	-0,11	0,32*	0,13	-0,12
Protection from feelings of shame	-0,27	-0,37*	-0,33*	-0,46**	0,09	-0,05
Protection from the fear of failure	0,13	-0,18	-0,22	-0,18	0,02	-0,13
Protection from envy	-0,17	-0,11	-0,15	-0,38**	0,12	0,17
Protection from resentment	-0,05	0,03	-0,11	-0,08	0,03	-0,21
Avoiding the situation	-0,04	0,03	-0,08	-0,24	-0,16	0,10
Self-Deprecation I	0,06	0,14	0,17	0,01	-0,08	0,11
The arousal of guilt in others	-0,02	-0,30*	-0,14	-0,14	0,21	-0,04
Sanogenic thinking	-0,18	-0,21	-0,25	-0,36**	0,22	-0,22
Mismatch of other people's behavior with expectations	-0,08	-0,33*	-0,11	-0,21	0,20	-0,34*
Appealing thinking	-0,01	0,03	-0,03	-0,20	0,22	0,01

***Tab 1:** The correlation of defensive reflection in respondents with the severity of their viability indicators (according to R-Spearman)

Note: statistically significant relationships** - at the $p \leq 0.01$ level; * - at the $p \leq 0.05$ level

indicators of viability (Machnach A.V.)



*Fig.1: indicator of reflection (Orlov Yu. m., Morozyuk S. N.)

Note: 1 – the volume of defensive reflection in the reproduction of guilt; 2 – the volume of defensive reflection in the reproduction of resentment; 3 – aggression against others; 4-aggression against oneself; 5 – rationalization devaluation of the object; 6 – rationalization of circumstances; 7 – protection from guilt; 8 – protection from feelings of shame; 9 – protection from envy; 10 – self – deprecation of the Self; 11 – arousal of guilt in others; 12 – sanogenic thinking; 13 – inconsistency of the behavior of others to expectations; 14-appealing thinking

The analysis of the research results showed that the more respondents are inclined to build expectations in relation to other people, the more shy and touchy they are, the more inclined they are to manage other people through imposing a sense of guilt on them, the less they have the ability to actively engage in the development of new ideas, master new activities, work out skills, finish what they started, set new goals and achieve them.

This is confirmed by the presence of reliable feedbacks of the indicator "Perseverance" (Makhnach A.V.) with indicators of defensive reflection "Protection from feelings of shame" ($r=-0.37$), "Arousal of guilt in others" ($r=-0.30$), "non-Compliance of the behavior of others with my expectations" ($r=-0.33$) (table 1, figure 1).

From our point of view, this is due to the fact that the focus and fixation of respondents on negative experiences does not allow them to look beyond their "psychological blinkers" and redirect their attention to creation. Therefore, an uncontrolled sense of shame, as a key obstacle in a person's life, does not allow them to effectively cope with difficulties and be reborn whenever circumstances are beyond their capabilities.

In addition, we found that the more shy respondents are and tend to devalue the circumstances, the less they tend to find positive solutions for themselves and others, control their lives and events, and perceive themselves and others positively, and, accordingly, they are also prone to auto aggression.

This is confirmed by the presence of reliable negative associations of the indicator "Internal locus of control" (Makhnach A.V.) with indicators of defensive reflection "Protection from feelings of shame" ($r=-0.33$), "Rationalization by circumstances" ($r=-0.29$) and positive reliable associations "Aggression against oneself" ($r=0.31$) (table 3 and figure 1). In other words, by fixing respondents on their negative emotions, any deviation from the action plan leads them to think about the hopelessness and impossibility of completing the task. This in turn makes them more convinced of their personal failure and leads to deeper negative experiences.

We also found a link between protection from fear of failure, shame, envy, and guilt with the adaptation of respondents. The more pronounced the respondents' indicators of defensive reflection from fear of failure, shame, envy, guilt, the less they are able to constructively solve problems. Low ability to emotional self-regulation does not allow them to cope with the requirements of the environment, effectively interact with the social environment. They also tend to devalue existing situations. This is confirmed by the presence of negative relationships between the indicator "Adaptation" (Makhnach A.V.) and the following indicators of protective reflection: "the Volume of protective reflection from the fear of failure" ($r=-0.31$), "the Volume of protective reflection from guilt" ($r=-0.29$), "Rationalization by circumstances" ($r=-0.35$), "Protection from a sense of shame" ($r=-0.46$), "Protection from envy" ($r=-0.36$). There is a predominant positive Association of this indicator with "protection from guilt" ($r=0.32$). Also important is the presence of feedbacks between the indicator "Sanogenic thinking" and "Adaptation" ($r=-0.36$). According to A. V. Makhnach, adaptation is associated with certain cognitive and behavioral strategies used by an individual to manage needs in adverse conditions. Viable individuals feel more confident that they can successfully cope with adversity, adverse conditions, and often use a set of strategies, usually emotionally focused and problem-solving. This set of strategies (as it seems to them) is sufficient to achieve their goals. But, turning to the concept of sanogenic thinking, we can state that such strategies can be pathogenic in nature, since emotionally-oriented strategies form a further dependence on the experience of various emotional States.

Attention is drawn to the presence of feedbacks of the indicator "family and social relationships" with the indicators of defensive reflection "Aggression against others" ($r=-0.29$) and "non-Compliance of the behavior of others with my expectations" ($r=-0.34$). In other words, the more aggressive respondents are towards others and the more they build expectations towards them, the less actively they participate in social relations, improve models of family communication, care and discipline, maintain emotional closeness between family members, and form positive family relationships.

According to A.V. Makhnach, warm, trusting interpersonal relationships are a source of emotional support from society and serve as the basis for viability. Thus giving up the resource of family and social ties, it is more difficult for respondents to organize a support system for better coping with stress and traumatic situations.

Thus, respondents in this sample are prone to self-aggression and feelings of guilt (trying to protect themselves from it). They also experience fear of failure, shame, envy, aggression against others and tend to build expectations for them. At the same time, they are less active, creative and internalized, not sufficiently self-organized, and the value of family and social ties is relegated to a secondary plan. They replace sanogenic thinking with a set of certain tactics and strategies that allow them to locally manage their needs in adverse conditions and are emotionally-oriented.

Insights (Conclusions).

The problem of the viability of the individual is one of the most urgent in recent times. In an era of significant changes in various spheres of human life, increasing contradictions in society, dynamism and instability of modern processes, special requirements are placed on the inner strength of a person, which allows him to respond adequately to the realities of modern times and be ready for various changes.

The results obtained provide an expanded understanding of the features of viability in modern students. Theoretically analyzed and empirically confirmed data prove the negative impact on students' viability of fear of failure, shame, envy and guilt. It has been proved that the main behavioral strategies that students choose in adverse conditions are pathogenic in nature and form a dependence on the experience of various emotional States. This

does not allow them to cope with life's difficulties and manage their behavior with dignity and without compromising their health.

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*** Table 1. Correlation of defensive reflection in respondents (according to Orlov Yu. M., Morozyuk S. N.) with the severity of their viability indicators (according to Makhnach A.V.) (according to R-Spearman) (n=50)**

*** Figure 1. Relationship of protective reflection indicators to respondents ' viability indicators**

THE EFFECT, IMPORTANCE AND FUNCTIONS OF MUSIC IN CINEMA: EXAMPLE OF CAHIT BERKAY IN THE CONTEXT OF TURKISH CINEMA

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Abstract

In general, this study focuses on an example of Cahit Berkay who has an important place in the context of film music and the importance, effect and functions of music in the Turkish Cinema. Essentially of the study within the frame of literature review, music, cinema, the relation between music and the field of arts, Turkish Cinema and music, also provides information relates with Cahit Berkay in the context of music in Turkish cinema. The research part of the study, to measure the effects of the soundtracks composed by Cahit Berkay, “Selvi Boylum ve Al Yazmalım” and “Çöpçüler Kralı” movies detected by sample for purpose, versions separated from music with technical method and original music versions interview group (limited to Near East University Vocational School of Health Services Year 2 students) viewed; reactions of students, content analysis technique afrom qualitative research methods, has been measured within the framework of their responses through written opinion forms with predetermined structured questions. Furthermore, a semi-structural interview technique used from qualitative research methods again, face to face interview performed with Cahit Berkay pre-prepared open-ended questions; the collected data have been evaluated by content analysis method.

Keywords Cinema, Music, Turkish Cinema, Cahit Berkay, Selvi Boylum Al Yazmalım, Çöpçüler Kralı.

Introduction

Performance of the art of cinema with music is limited to the recent period in terms of history. According to Provenzano's point of view (2008: 5), the music composed for movies cannot be categorized and counted as a different type of music, since it cannot be considered separately from the movies. In other words, cinema soundtracks are specific to the movies for which they are made and are identified with them. According to another view, music has a unique feature of transfer and is open to connotation. If this feature is combined with visual elements, a unity in emotional transfer is achieved (Burt, 1994: 10).

Uni-dimensional demonstrations were also conducted before movies and filmmaking, and music was used during these demonstrations. Since then, the practice has always been changing in the combination of music and the visual, but the aim has always been the same. The main point is to increase the effect of the message in the visual element and to reveal its emotions. Music is a tool that can create great changes in humans emotionally, albeit in a short period of time, and this is a scientifically accepted fact (Doğan, 2009: iii).

Music is in a direct or indirect relationship with emotions in every environment, and it often does this without notice. In this context, music determines what will be felt about what is seen by directing and increasing emotions. According to Konuralp (2004), seeing and hearing are always functioning jointly, and this explains how music is seen as an integral part of the art of cinema. In cinema films, the practice of music is constantly changing and improving. The development of the cinema / music relationship in the world cinema and its change over time was reflected in the Turkish cinema culture, albeit with a delay.

Literature Review

Theoretical Framework

In the study, information is given first within the framework of literature review on music, cinema, the relation between music and cinema art branches, Turkish cinema and music, and in addition, in the context of music in Turkish cinema, Cahit Berkay. In the research part of the study, in order to measure the effects of soundtracks composed by Cahit Berkay, two versions of the films "Selvi Boylum ve Al Yazmalım" and "Çöpçüler Kralı", one isolated from film musics with technical methods and the other with film musics, were shown to the interview group (related group was restricted to sophomore students of the Near East University Vocational School of Health Services). The responses of the interview group were tried to be measured by using content analysis technique,

which is one of the qualitative research methods, within the framework of their responses through written opinion forms containing pre-determined structured questions.

In addition, face-to-face interviews were conducted with Cahit Berkay, using open-ended questions and semi-structured interview technique, which is one of the qualitative research methods, and the data obtained were evaluated by the content analysis method.

Research questions are as follows:

1. What is the place of music among the influencing elements (script, actors / acting, visual effects, etc.) in the movie?
2. What is the importance and function of music in the movie?
3. Does the soundtrack have the function of transferring / strengthening the emotions that the movie / scenes want to give?
4. What is the role of soundtrack in the correct transfer of emotions that the movie / scenes want to give?
5. What are the main factor(s) in the success of the soundtrack composed by Cahit Berkay and the formation stages of the soundtrack?
6. How is it that soundtrack is more prominent than film, and what is the place of the soundtrack composed by Cahit Berkay from this aspect?

Turkish Cinema & Music

Cinema, which is one of the indispensable industries of all countries, states and societies in the world, emerges as a structure which sees the production and presentation of domestic movies in Turkey for more than 70 years. Like the Hollywood of American cinema and Bollywood of Indian cinema, Turkish cinema is also famous for Yeşilçam. Although there are different approaches about why the name “Yeşilçam” is used, the most realistic and plausible approach is the name of the street where film production companies and directors operating in the cinema sector were located before the 1980s (Why is Turkish Cinema Called Yeşilçam ?, 2019).

The reason for the popularization of cinematography in Turkey is that, while people in large cities such as Istanbul, Ankara and Izmir could reach visual arts (plays, dramas) easily, people living in rural areas could not watch this kind of daily pleasures. Theater plays, folk tales, novels and stories have been adapted to cinema films and shown in rural areas, so that people in these regions could see these cultures and have fun. Financial gains were accepted as the reward for this endeavor.

Turkish cinema is basically divided into 3 parts. The first part includes the period from the 1930s, which was accepted as the beginning, to the end of the 2nd World War. Muhsin Ertuğrul, who was a dominant personality in the early years of the republic, is known as “One Man” in Turkish Cinema with his own adaptations. After the end of World War, the “Yeşilçam period” started as the main building block in Turkish cinema between 1950 and 1980. In the Yeşilçam period, due to the absence of post-war production in the world, producers moved away from American and European films, and there was a tendency towards Egyptian films. One of the problems of the group of artists, including Yılmaz Güney, in the beginning period of Yeşilçam was that they experienced identity problems in the cinema sector which was developing as Anatolia and the West. It was not easy to appeal to both cultures and achieve a balance (Gümüşkemer, 2018: 6).

Turkish cinema, just like other world cinemas, has evolved and changed over time in line with both material and artistic concerns. At first, adaptation of tales and stories attracted public attention. Keloğlan fairy tales, Tarkan, Ayşecik and Magic Dwarves are films that have been created in this style. After this trend, comedy and drama films appeared in the medium term. Kemal Sunal, Hülya Koçyiğit, Türkan Şoray, Edis Hun and many others left their marks on this period. Kemal Sunal, who played a role especially in current films, came to the fore in this period. On the other hand, the movies of Zeki Alasya-Metin Akpınar pair broke box office records. After this comedy and drama current, Turkish cinema, which was distressed in material matters, drifted towards a different path with increasing chaos, economic troubles and murders in social life. With the advent of sexually themed films, Aydemir Akbaş became the new “favorite performer” of Yeşilçam. On the other hand, the songs of famous names (Orhan Gencebay, Ferdi Tayfur, İbrahim Tatlıses) were turned into films that told the story of the song, and Turkish cinema tried to save itself by paying a last effort thanks to the popularity of such singers. In these films made with the win-win logic, the singers planned to add their fame by making their voices heard by masses who did not have an interest in them before. However, these final efforts of Yeşilçam did not turn out fruitful, and this period ended and a new period began (Arslan, 2001: 11).

“Music” is undoubtedly its only unchanging assistant in the adventure of Yeşilçam films. The music, which carries the catchy and emotional effects of the movies to the peaks, has been the supporter of Turkish cinema not only in the Yeşilçam period but also in every period. Several names such as Atilla Özdemiroğlu, Cahit Berkay, Melih Kibar, Esin Ergin have brought immortal musical works to Turkish cinema (Turkish Film Music Composers, 2019). Especially the music that Cahit Berkay made, even overshadowed the visuality of the films from time to time. For example, the music that playing in the background while Kemal Sunal runs from the police with the wheelbarrow in the movie “Çöpçüler Kralı” still leads to the visualization of the scene. The main theme music in

the movie *Selvi Boylum Al Yazmalım* is also still in the minds. In the first note, Türkan Şoray's glance towards Kadir İnanır comes to life in the eyes of everyone. Berkay, who has composed several soundtracks like these, is one of the best-known film music composers of Turkish Cinema (Cahit Berkay: It comes with every new generation style, 2019).

Research: The Importance & Functions of Film Music': Example of Cahit Berkay in the Turkish Cinema Cahit Berkay

Cahit Berkay was born and raised in Isparta in 1946, and migrated to Istanbul with his family in the late 1950s. He finished high school and university education in Istanbul. In his musical journey which began with mandolin, he took his first step in professionalism by joining Selcuk Alagöz's orchestra in 1964. Berkay, one of the first members of the band Mongols, which is one of the first rock bands in the history of Turkey, was playing acoustic electric guitar, bağlama and ıklığ in the band. Berkay's best-known works have been the music he made for cinema movies. Berkay, who left his mark in every area of the Yeşilçam generation, made music for several movies. He worked with names such as Cem Karaca, Barış Manço, and Selda Bağcan throughout his career, which earned him over 200 awards.

During his career, Berkay released 3 albums consisting of his own film, series and cinema musics, apart from the albums he made with his bands. When these albums, which contain many timbres familiar in Turkish cinema, are listened, Kemal Sunal's mouthful smile, the first look of Türkan Şoray to Kadir İnanır driving a red truck, and the sad scenes of the movie “Buzlar Çözülmeden” are recalled in memories.

Some of the soundtracks composed by Cahit Berkay are listed alphabetically below (soundtracks composed by Cahit Berkay, 2019):

Acı Günler (movie, 1981), Aile Kadını, Arkadaşım, Aşkların En Güzeli (movie, 1982), Baş Belası (movie, 1982), Bedel (movie), Birkaç Güzel Gün İçin, Bodrum Hâkimi, Cevriyem, Çark (movie), Çöpçüler Kralı, Davaro, Deli Deli Küpeli, Derviş Bey, Devlerin Aşkı (movie, 1976), Dila Hanım (movie), Doktor Civanım, Garip (movie), Gazap Rüzgârı, Gülen Adam, Her Şeye Rağmen (movie), Kanca (movie, 1986), Kılıbık, Kırık Bir Aşk Hikayesi, Kibar Feyzo, Mavi Mavi (movie), Mine (movie, 1982), O Kadın (movie, 1982), Ortadirek Şaban, Postacı (movie), Selvi Boylum Al Yazmalım (movie), Şaban Pabucu Yarım, Şabaniye, Tomruk (movie), Tutku (movie, 1984), Uzun Bir Gece (movie, 1986).

Methods

In the study, it is aimed to measure the effects of soundtracks composed by Cahit Berkay. In this framework, 2 cult films, “Selvi Boylum Al Yazmalım” and “Çöpçüler Kralı”, the former being a drama and the latter being a comedy, have been chosen purposefully. In both movies, the scenes where emotional states increased and scenes which came forward were determined and isolated from their music by technical methods. The musical and non-musical versions of the prepared sections were viewed by the sampling determined within the framework of convenience case sampling in qualitative research.

Convenience case sampling or convenient sampling is based on elements that are fully available, and rapidly and easily accessible (Baltacı, 2018: 259). With this method, the study gains speed and practicality (Yıldırım & Şimşek, 2008; Dolunay, 2018: x).

In this framework, the population of the research has been determined as sophomore students (400 people) of the Near East University Vocational School of Health Services. The sample was chosen by identifying 20% of the population randomly (80 people).

The interview group was identified by convenience case sampling, but the following factors were taken into account in orientation to the group:

- Individuals between the ages of 18 and 25,
- Individuals who have not received psychology or communication education.

The point in choosing this age interval is the intolerance of young generation in focusing. To exemplify, the patience and motivation of digital migrant generation x in a 10-minute scene of a movie can be compared with the tendency of digital resident generation y and especially generation z to reach the conclusion instantly and pass on to another stimulant in a very short time with the effect of technological facilities, which turn into a habit. In this framework, it is aimed to determine whether the music will be effective in focusing of the young generation, especially by concentrating on the 18-25 age range.

On the other hand, preferring individuals who have not received psychology or communication education can be explained as follows: The education fields in question were thought to be guiding in terms of watching movies and perceiving emotions in the scenes. In this framework, individuals who were not educated about psychology or cinema were preferred, and it was aimed to obtain an evaluation of the situation by the audience from a more general viewpoint.

Following the demonstrations, written opinion forms with pre-prepared structured questions were provided to the sample. The data obtained from these forms were evaluated by content analysis technique. In this framework, the

differences in the emotional transfer, the effects it creates between the musical and the non-musical versions of the films shown, and the importance of music in cinema were tried to be measured.

“Interview” is used as a professional technique or an assistant tool in several fields such as journalism, law, and medicine, and especially in all research fields of social sciences (Kahn, 1983: v; Tekin, 2006: 101). Interview, which is a data collection technique frequently used in qualitative research, provides the opportunity for the interviewees to express themselves directly. The researcher, on the other hand, has the opportunity to make a comprehensive observation about the person(s) he / she interviewed (McCracken, 1988: 9; Tekin, 2006: 102).

Interview is a technique that provides detailed answers and ensures collection of one-to-one information by asking questions covering all aspects of the research subject (Johnson, 2002: 106; Tekin, 2006: 102).

Interviews can be divided into three groups: unstructured, semi-structured and structured (Punch, 2005: 166; Tekin, 2006: 104). Structured interview is a research technique in which questions are prepared and options for answers are not changed during the interview.

In this framework, the data obtained through written opinion forms within the framework of structured interview conducted with the sample were analyzed by content analysis technique.

Content analysis is a research technique in which valid comments from the text are revealed as a result of successive processes (Weber: 1989: 5; Koçak & Arun, 2006: 22).

On the other hand, in the context of the subject of the study, an interview was held with Cahit Berkay in order to obtain detailed information about the films that Cahit Berkay made soundtracks and to question the effect of the music in the films.

Within the scope of “purposeful sampling in qualitative research”, an in-depth interview was held with Cahit Berkay. The study has been constructed on the effect of his soundtracks.

In semi-structured interviews, pre-determined questions are used. Although in a more limited scope than unstructured interview, it is possible to detail the targeted data / responses by using spontaneous questions in the light of the course of the interview. In the study, semi-structured in-depth interview method was preferred. In this framework, interviews were conducted in the light of the questions prepared in the study. In the light of the course of the interviews, spontaneous questions were also included and the data were detailed. Data obtained within the framework of semi-structured in-depth interviews were analyzed by content analysis.

Examination of Movies

In the structured in-depth interviews held with the interview group,¹ the analysis of the data obtained through opinion forms² was conducted using the themes below which were determined as a result of the detailed examination of responses.

As the population/interview group is too broad for conducting in-depth interviews, direct citations were made from participants at the rate of 5% after ratios in content analysis.

Movie Watching Frequency

Interview group stated that they watched movies frequently (every day, once) at the rate of 38,8% (n 31);

I5: “I watch a movie at least every day.”

I9: “I watch movies every day, there is at least one movie.”

31,3% (n 25) stated that they watched movies very frequently (every day, more than once);

I8: “I watch movies a lot, I take pleasure in it. 2-3 times a day.”

And 28,7% (n 23) stated that they watched movies in normal intervals (4-5 times a week).

I13: “I like watching movies, I see 4-5 movies a week.”

No participant stated that they watched movies rarely (2-3 times a week) whereas 1,3% (n=1) stated that they watched movies very rarely (once a week).

The Factors That Affect the Film³

The factors that make an impact in the movie are considered within the framework of story / script, acting / actors, and visual effects. On the other hand, music is an important factor that cannot be neglected in terms of the impact of a movie (Doğan, 2009: 11).

Interview group stated that the most important factor of a movie in influencing the audience is the story/script with 83.3% (n 67), whereas 67.5% (n 54) stated that it was the acting/actors, 62.5% (n 50) mentioned music, and 46.3% (n 37) said that it was visual effects.

¹ Since the age range and education level of the interview group are certain, the demographic characteristics table is not needed. Participants consist of 60% women and 40% men.

² Written opinion form and questions were revised and finalized based on the opinions of Asc. Prof. Dr. Ahmet Güneşli from Faculty of Education of Lefke European University, who is expert on methodology, and Lecturer Kerem Kuban from Yaşar University Faculty of Communication, who is a film therapy specialist.

³ The interview group was informed that multiple elements could be counted in the relevant question; and the interview group expressed multiple elements.

In this approach, it is noteworthy that music stands out more than visual effects, which has become a very important element in cinema, and is expressed very closely with an important element such as acting / actors:

İ31: *"I think the scenario, acting and music are important for the impact of the movie."*

İ49: *"The story and music of the movie is very effective."*

İ60: *"I think these are scenario and actors."*

İ73: *"Visual effects, acting, music are supportive."*

The Importance and Functions of Cinema/Film Music'

70% (n 56) of the interview group emphasized that the use of music is absolutely necessary in a movie and they do not prefer to watch movies where music is not used:

İ3: *"Music is important in the movie, movies without music do not interest me much."*

İ6: *"I think music is a must, movies are not meaningful without music."*

İ17: *"I don't like watching movies without film music, it is absolutely necessary."*

The percentage of those who state that music should be used partially and that they can sometimes watch movies without music is 30% (n 24):

İ23: *"Soundtrack is necessary, but there are good movies without music, and I watch them"*

The Functions of Film Music

The contribution of music to the success of film

Soundtracks make an important contribution to the overall success of a movie. The fact that the movies, which are known as masterpieces, are remembered with their music in general, also demonstrates this contribution (Doğan, 2009: 11).

The interview group stated that the impact of music on the success of a movie was very high at 45% ratio (n 36):

İ21: *"I think the effect of the music on the success of a movie is immense."*

İ39: *"I think music and movies are inseparable. Music is very important in movies. It also supports success."*

41,3% (n 33) stated that it was high:

İ53: *"Soundtrack is an important factor in the success of movies. It supports at high levels."*

İ76: *"Music is necessary. If you ask as in terms of ratio, it is high."*

13,8% (n 11) stated that it is at normal ratio. None of the participants stated that music has very little or no effect on the success of a movie.

Emotional Transferring Function

Although there are several functions of music in movies, one of the most important is the function of providing / strengthening the transfer of emotions (See Doğan 2009: 123 et al.). So much so that music has the power to deepen the effect of a scene and to sharpen the focus of the story (Burt, 1994:). This powerful tool has a highlighting, accelerating or slowing, intensifying impact in affecting the subconscious of the audience (Irving, 1950: 35).

The interview group stated that the emotion transfer function of music in a movie is quite important at 87.5% ratio (n 70):

İ18: *"A lot of things are important but it is the music that gives the desired emotions."*

İ27: *"Soundtracks make the emotions in the scenes pass to the audience."*

İ58: *"Music, for example, makes an emotional scene be felt more clearly."*

İ80: *"I think that the music makes the emotion felt by the audience in the movies."*

8,8% (n 7) stated that it is normally important and 3,8% (n 3) stated that it is not important.

Promoting Effect

According to Konuralp (2004), soundtrack reminds the movie / film scenes whenever they are heard as a result of their integration with the films they are used in. While the soundtrack has the effect of listening after the movie, on the other hand, it enables the promotion of the film, it being recalled, and the transfer of these thoughts to other individuals / society (Doğan, 2009: 11).

In this framework, in the interview group, 78,8% (63) stated that they would find and listen to the soundtrack after watching a movie that they found impressive:

İ33: *"When I get out of the movie, if I love the movie, I get the music and listen."*

İ52: *"Yes, in general, especially if there is music that affects me, I often listen to it in that period."*

İ79: *"Good movies have good music. I buy the soundtrack."*

21,3% (n 17) stated that they would rarely find and listen to the music:

İ24: *"In general, I focus on the movie, and if the music interests me a lot, I download it."*

None of the participants answered that they would not find and listen to the music.

“Selvi Boylum Al Yazmalım” and “Çöpçüler Kralı”

Previously watched

In the interview group, 88,8% (n 71) stated that they saw both of the movies Selvi Boylum ve Al Yazmalım and Çöpçüler Kralı. 3,8% (n 3) stated that they only saw Selvi Boylum Al Yazmalım, 6,3% (n 5) stated that they only saw Çöpçüler Kralı, and 1,3% (n 1) stated that they did not see either of them.

In this framework, it can be seen that the majority of the interview group saw both movies.

Functions of Cinematic Music: Effects on Success of film; Emotion Transfer; Correct Emotion Transfer

Impact on the Success of the Movie

The interview group stated that music had an important effect on the success of both films with a rate of 87.6% (n 70):

I2: “The actors in the movies and the script is very successful. So is the music. Music has a significant impact on success.”

I14: “The music of both films is very impressive. It has a great influence on watching movies.”

I29: “Two movies and soundtracks that can be called cult. The effect of the music is immense.”

I44: “Memorable music. They have a lot of contribution to the success of the movies.”

11,3% (n 9) of the interview group stated that the music had a normal impact and 1,3 (n 1) stated that it had no impact at all.

Function of Creating Impact and Focusing

Konuralp (2004) states that one of the functions of music is to enable the audience to focus on the movie (Doğan, 2009: 124). The interview group stated that, thanks to the music, they were affected by one / more scenes where they would not normally be affected and that they focused on the film by the ratio of 80% (n 64):

I25: “The movies are nice, but while some scenes were not very impressive, the music made me feel impressed”

I37: “The music increased the emotional effect of the scenes and allowed me to focus more on the film.”

I43: “I was impressed by the effect of music from the scenes that I would not be impressed.”

On the other hand, the rate of those who stated that they were not affected by one / more scenes and focused on the film thanks to the music, which they would not normally be affected, is 20% (n16):

I40: “I did not focus on the movie due to music, or I was not impressed by a scene due to music which would not impress me normally.”

Transfer of Emotions Function

The interview group stated that there was a difference in terms of the emotional state created by the musical and non-musical versions of the two movies by 95% (n 76).

Within the percentage who stated that there was a difference, 92,1% (n 70) claimed that music ensured that the emotions that were aimed to convey through scenes were reinforced:

I1: “The biggest difference between musical and non-musical scenes is that emotions are felt more deeply in the movies I watch.”

I42: “In versions with music, feelings in the scenes are better conveyed.”

I69: “In movies without music, the feeling of the movie is not like the movies with music, it is weaker.”

I72: “The musical versions of the movies are more impressive such that they are more emotional, more funny.”

- 7,9% (n 6) stated that music led to the weakening of the emotions that are intended to convey through scenes.

On the other hand, the proportion of people who think that the musical and non-musical versions of the two movies are not different in terms of the emotional state they create is 5% (n 4).

Correct Transfer of Emotions Function⁴

⁴ In this section, participants were given options, but the right to create new options was also given.

In the movies, the audience does not focus directly on the meaning of music, but focuses on what the music makes them feel completely (Burt, 1994: 11). When the right pieces of music are used, music conveys to the audience where and what to feel (Doğan, 2009: 155). In this case, when the music is removed, the feeling desired to give can be reduced or completely lost. In fact, false impressions / false subconscious formation (Bayır, 2009: x) may be in question. Again, according to Konuralp (2004), one of the functions of a soundtrack is to provide expression without movement or dialogue. However, if the soundtrack cannot perform its role, it may create a false subconscious in the audience (Doğan, 2009: 124).

- In the movie *Selvi Boylum Al Yazmalım* which is an emotional/drama type of movie;
- The emotional/light comedy scene where Kadir İnanır follows Türkan Şoray with truck (Movie 1, Scene 1: F1S1) created the following impression in the interview group:
In musical version, 52,5% (n 42) felt emotional, 21,3% (n 17) felt comedy, 12,55 (n 10) felt dramatic, 8,8% (n 7) felt adventure, 3,8 (n 3) felt horror/thriller, 1,3% (n 1) felt other (sense of threat).
İ14: *"It was an emotional scene."*
İ19: *"It was emotional and influential."*
İ72: *"There were moments where I laughed."*
On the other hand, in non-musical version, 37,5% (n 30) felt horror/thriller, 18,8% (n 15) felt comedy, 16,3% (n 13) felt dramatic, 11,3% (n 9) felt adventure, 7,5% (n 6) felt emotional and 9,2% (n 7) felt other (no impression created).
İ32: *"It was as if he was driving the truck on her. Like he wanted to kill her. It was a thriller scene."*
İ74: *"It was perceived that he would forcibly follow her and hurt her. It was scary."*
- The emotional scene where Kadir İnanır was moving away with pickup truck and Türkan Şoray was chasing him created the following impression in the interview group (F1S2):
- In musical version, 62,5% (n 50) felt emotional, 16,3% (n 13) felt dramatic, 10% (n 8) felt comedy, 6,3% (n 5) felt horror/thriller, 5% (n 4) felt adventure.
İ7: *"Emotional. The person he loved was leaving him."*
İ68: *"The separation scene was emotional."*
İ78: *"It was an emotional scene."*
In non-musical version, 30% (n 24) felt dramatic, 26,3% (n 21) felt emotional, 17,5% (n 24) felt comedy, 16,3% (n 13) felt horror/thriller, 5% (n 4) felt other.
İ16: *"It was dramatic. It was a sad scene"*
İ20: *"It was an emotional scene"*
- The scene where Kadir İnanır and Türkan Şoray had a conversation and Türkan Şoray turned her back and walked away (F1S3) created the following impression in the interview group:
In the musical version, 71,3% (n 57) felt emotional, 25% (n 20) felt dramatic, 2,5% (n 2) felt comedy, 1,3% (n 1) felt adventure:
İ30: *"The newly sprouting love was emotional."*
İ41: *"An emotional scene."*
İ50: *"It was an emotional scene."*
İ59: *"Dramatic, walking away happily, albeit shy."*
In non-musical version, 41,3% (n 33) felt dramatic, 36,3% (n 29) felt emotional, 7,5% (n 6) felt comedy, 5% (n 4) felt horror/thriller, 3,8% (n 3) felt adventure, 6,5% (n 5) felt other (no impression or excitement created).
İ46: *"Dramatic. It seemed they could not come together. Because Kadir İnanır was not behaving with good intentions"*
İ57: *"Sad, although they love each other, they frightened and fled."*
İ64: *"It was emotional, as if it there was no trust"*
- In the movie *"Çöpçüler Kralı"* which is a romantic comedy type of movie, in the *emotional/comedy* scene (F2S1) where Kemal Sunal approaches from behind the wall when Ayşen Gruda is doing the laundry, the following emotions were created:
In musical version, 57,5% (n 46) felt comedy, 21,3% (n 17) felt emotional, 10% (n 8) felt adventure, 7,5% (n 6) felt horror/thriller, and 3,8% (n 3) felt dramatic.
İ15: *"It was a funny scene. I laughed at him peeking out from behind a wall. "*
İ61: *"He went to see the girl he loved, but it was funny."*
İ77: *"Comedy. It's a successful comedy movie. "*
In the non-musical version, 47,5% (n 38) felt horror/thriller, 23,7% (n 19) felt comedy, 18,8% (n 15) felt adventure, 3,8% (n 3) felt dramatic, and 3,8% (n 3) felt emotional.
İ45: *"It was as if he was going to harm the girl (Ayşen Gruda). Triller."*
İ62: *"Fear. It seems that he will do something by force. "*
İ67: *"So I laughed again but it was strange without music."*

- In the *comedy* scene where Ayşen Gruda's brothers were chasing Kemal Sunal (F2S2), the interview group experienced the following emotions:
In musical version, 68.8% (n 55) answered comedy, 17.5% (n 14) answered adventure, 6.3% (n 5) answered horror/thriller, 5% (n 4) answered dramatic, and 2.5% (n 2) answered emotional,
I34: "It was a funny scene."
I47: "Comedy, Kemal Sunal films always make you laugh a lot."
In non-musical version, 42.6% (n 34) answered horror/thriller, 27.5% (n 22) answered comedy, 23.8% (n 19) answered adventure, 5% (n 4) answered dramatic, 1.3% (n 1) answered emotional, and 1.3% (n 1) answered other: no excitement.
I36: "Thriller. He fled with fear. "
I48: "Scary, he tried to escape while the men chased."
I54: "It was not too funny without music, but it was still funny."
• The *slightly comedy with emotional weight* scene where Kemal Sunal and Ayşen Gruda are at the playground (F2S3) created the following emotions in the interview group:
In musical version, 45.1% (n 36) felt emotional, 37.5% (n 30) felt comedy, 12.5% (n 10) felt dramatic, and 5% (n 4) felt adventure.
I35: "It was an emotional scene."
I38: "It was the emergence of love. Emotional"
I65: "Like comedy, it made you laugh."
In non-musical version, 40% (n 32) answered comedy, 26.3% (n 21) answered emotional, 17.5% (n 14) answered dramatic, 12.5% (n 10) answered adventure, and 3.9% (n 3) answered other (no impression was created).
I26: "It was funny, their behaviors, their looks."
I63: "There was no comedy or emotional situation."
I66: "Maybe not very much, but it was an emotional scene."
Music not overshadowing the scenario / characters / acting
75% (n 60) of the interview group stated that film music did not overshadow the movie/scenes, scenario, characters and acting:
I28: "The music is successful, but it does not overshadow the script and the actors."
I44: "Screenplay, actors, especially music are very good. Balanced."
I70: "Good actors and a good movie. The music is good too, but it does not overshadow the others."
%25 (n 20), on the other hand, claimed that film music overshadowed the other elements:
I22: "Music is more dominant, it overshadows the movie."

In-depth Interview with Cahit Berkay in Semi-Structured Form

The analysis of the data obtained within the framework of a semi-structured in-depth interview with Cahit Berkay was carried out under the following themes, which were determined as a result of a detailed examination of the answers to the questions:⁵

The Reason of Cahit Berkay's Success in Film Music Sector and The Effects of Making Film Soundtracks to His Composer Identity

The main factor in making successful soundtracks

As an artist who composes film music, Cahit Berkay attributes his prominence in this field and making a difference to basically "doing his job with love". Stating that he already had a musician identity and a band and an orchestra, Berkay states that during the first periods he composed soundtracks, he was concerned about failure, but enjoyed it, so that it was possible for him to work in this field for long years, and, success came automatically.

"Like people who are successful in every profession, I did my job with love. Because I was already a musician, I was making music with my band and orchestra. Although I had no dream of making music in cinema, once I started this work, various offers started to come. While I was worried if I could do it, I realized it was actually a very fun job. This allowed me to love this job and continue it for years. I think this situation brought success automatically."

Berkay also emphasizes that success passes through understanding the expectations of the person (director) and the situation (scenario, film in general and scenes) very well. He states that this situation also has effects on his identity as a composer.

⁵ Written opinion form and questions were revised and finalized based on the opinions of two methodology experts, Asc. Prof. Dr. Ahmet Güneşli from Faculty of Education of Lefke European University, and Prof. Dr. Faruk Kalkan, Dean of the Faculty of Communication of Lefke European University.

The Effects of Making Film Musics to the Composer Identity

Cahit Berkay states that the main effect of making soundtrack on composer identity is that he can perceive the expectations and situation of the other party (directors) very well in terms of scenario, film in general and scenes. Thus, his aspect of working towards needs has improved:

“Normally, when composing, an idea, an emotion, an inspiration comes from within. You have to sit down and compose; but in the cinema, it is necessary to make whatever music is needed by the movie and the scene where the music will be made. Otherwise, it will be more harmful than contributing to the film to be shot. They even can say ‘what kind of work you are doing’ and they will get it back, they won’t let you do the music. That’s why if there is music in the cinema that you are asked, you have to discover it and make it. Cinema has such a feature, and it reveals the ability to produce work for expectations.”

The Process of Producing Soundtracks

Making compositions after receiving movie scripts

Cahit Berkay states that the songs he composed were not made the soundtrack of a movie afterwards; rather, his work was based on the offers and scripts that came with him:

“A song I composed didn’t later become the soundtrack for a movie. I always made my music on the scenes or movies that were already produced.”

Producing Film Tracks

Berkay lists the soundtrack preparation processes as follows:

- Obtaining and reading the script:
“When you get a job offer, they give you a script, you read the script. In fact, in the last period, we all sit together, a committee is formed, and desk work on cinema is carried out. But the point is, the person who will make the music needs to understand what to do. At this stage, reading the script takes the first place.”
- Perceiving the scenario read very well. In this context, seeing the film which was shot, montaged and completed:
“In the second stage, after reading the script and setting up that story in his head, he has to see the movie as shot and montaged, finished. Seeing is important from this point of view: no matter how strong your imagination is, after all you read the script like a book, and everyone creates a picture of their own. But there is a director, there are actors in that story, those actors have performances, and this performance is very important. It also affects the person who makes music, as well as whether it can affect the audience or not.”
- Understanding the expectations of the director very well:
“After the previous stages, you solve the movie in your head, sit with the director. The responsibility of the soundtrack often belongs to the person making the music, but you sit with the director and try to figure out what the director thinks, what he wants. Music is such a thing, such a concept, for example, give one movie to 10 musicians, and say “make music for this movie”, you will have 10 different soundtracks, none of them will be similar. But it is very important to perceive the expectations of the director in order to do this work correctly. Because it is the man who dreams and realizes that movie, and pours it into the silver screen. The director also has a musical expectation. It is necessary to understand and solve it.”
- Understanding the psychology and the rhythm of the movie and the scenes accurately:
“Once you have all these components in mind, then you begin to solve them. What is solving is that you begin to comprehend and compose the scenes. First you imagine the melody setup, and here you put the instruments and notes on the paper. You make small records, then you do the orchestration of that work, but the most important thing in this work is that the place of rhythm in life is very important. The rhythm in life; life that we live has a rhythm of its own. You have to catch that beat in the cinema. That rhythm depends on the director, how the director interprets that scene, that is, how he picks it. That tempo, which is definitely a tempo, is slow or fast, it speeds up or slows down in scenes, these are things that I always have to solve. You’ll get the rhythm. When you have already solved the rhythm, you have done a very important part of that scene and the whole movie. You’ll go a long way in making more successful music. So tempo is very important in this business, once you find the rhythm, you will find a dramatic fiction for a drama, and a fun rhythm for a comedy.”
- Taking into account the environmental social situations in the movie scenes and choosing the instruments accordingly:

“For example, in the 60s and 70s, there was no piano in the countryside, no trumpets, no western instruments. Rural areas make music with the unique instruments of that region. What are they, they are baglama, cura, shepherd’s pipe, whistle, darbuka, Turkish reed law, clarinet. There are revelry instruments, they are all solo instruments. But you when come to Istanbul, come to the big city, there are rich sections and ghettos in the city, too. In other words, there is the segment where the high society lives, and there is also the section where the poor and have-nots live. Mostly romantic films were made at that time, and the ones which caught the attention of the public most were the stories of Rich Girl Poor Boy or vice versa. Therefore, Cahit Berkay will sit and make music, and I come across a story scene in the ghetto. What am I doing there, I use the baglama, I use lute or qanun, I use

the instruments that exist in that environment. But let's take a movie in the Bosphorus, in a rich house, what are you doing there, you are using piano, you are using accordion, you are using saxophone."

Freedom vs. director intervention when composing soundtracks

Berkay states that while composing the soundtrack, some directors, with no intervention, show the approach of "you know this job, do as you wish":

"There are many names, but for example Atıf Yılmaz and Ömer Kavur. These two names would not interfere with me, they would say 'Cahit you know it, do this job as you know'. I would do it too. We did very successful works together, we made very good movies that left a mark in the box office."

Some other directors did not direct him but made their expectations known:

"For example, there are 17 Kemal Sunal movies, where I made one-on-one music with Kartal Tibet. Either he brought me a script or told me "Cahit I want these" and I did. In other words, he did not say, "You're going to make music like this," more like "just a little bit like that." For example, I made music for about 200 feature films. Over time, you understand the director, you learn what he could possibly ask for."

He states that some directors were with him all the time in the general process when the compositions are made:

"Some others sat with me from the beginning to the end; I mean, there are all kinds of directors."

Berkay states that the person to be held responsible for the qualification of the film as successful or unsuccessful is always the director and, in this context, while the soundtracks are composed, the directors have the right to intervene to a certain extent:

"When shooting a movie, all responsibility belongs to the director, nobody says "Cahit made bad music, and the movie went bankrupt". People say "the movie is bad", so the director has the right to intervene. The task of a musician is about loving, getting to know and gaining experience."

1.1.1. The impact of music on the success of the movie (box office success and emotional transfer success)

The impact of music on the box office success of a movie

Cahit Berkay expresses the idea that music may have an impact on the film's box office success. However, he claims that when a film is successful in terms of script, technical team and acting, good music will be positive at the box office. If music is made incompatible with the film by a musician who does not understand the film, a serious negative result will be created at the box office. On the other hand, he emphasizes that a movie which fails for all other elements can become successful by making good music to some extent, but that all elements should be considered together:

"Even if you make the most beautiful music in the world, a bad movie cannot achieve a great success at the box office. But if you make bad music on a very well-filmed movie, you screw up that movie, that movie can't do good business. Of course, in some cases, if you make very good music for a mediocre movie, you can lift the movie up a little bit, revive it a little bit, music has such an effect. Therefore, the task of music is this: music passes to the story, actors, and from there to the audience. Of course, this is a team work, involving the lightman, cameraman, soundman, director and many more. There is also music among these elements, and if all of these people do their job well, you will be successful if you do your job well, too. I'll explain it with a model like this. The good music is this: a dramatic scene, the audience watching the movie is sad, but they do not shed tears. But you make such a music there that you get a beat of the eyes, that is, you strengthen the effectiveness of that scene and its transfer to the audience. Likewise, in comedy movies, the scene makes the audience laugh, but you make such a music there that people will burst into laughter. The thriller scenes are exactly the same, if there is an excitement in the thriller, you put an exciting music there to double that thrilling sense. Music is already used in cinema in this sense, to make the scenes pass stronger to the audience. This is the description of this work as I understand it. And when it is done in this way, it definitely affects the box office success."

The impact of music on the transfer of emotions by music

Berkay states that soundtrack influences the emotion transfer of a movie very seriously. According to Berkay, this effect is so great that the proposal to make soundtrack mainly comes to the musician to support the transfer of emotions:

"So much, so impressive, that it has such a big effect that the musician already exists for it. That's why the musician is offered to make music for that movie. Music is such a thing that it significantly supports and strengthens the transfer of emotions in those scenes. This of course depends on the right person doing that job. The right music must be made so that the emotion in that scene is supported, and even conveyed correctly."

On the other hand, Berkay stated that there are directors who use the music very little and achieve success in the world cinema and emphasizes that some directors use unnecessary music and that this situation should be paid attention:

"For example, there are some movies with no music. The man establishes such a script that it does not need any music, this is of course a very ambitious job, but there are also successful films shot that way. They use very little

music in world cinema. But there are some directors, they love music and want music from almost the beginning to the end. But there are some directors who prefer to use music very little. In other words, "These scenes of the movie I shoot are strong, no music is needed," because the voice is used as a music in the cinema. Therefore, it is necessary to use it properly and appropriately. In addition to bad music, unnecessary use of music may be more damaging."

The Situations That Music Dominating Films

Berkay states that there are situations in which soundtracks are more prominent than movies. Especially, during the Yeşilçam period of Turkish Cinema, it is expected that music overshadowing the movie is expected, but that this structure has changed today. Berkay states that this situation may bring more harm than benefit to the movies. *"Yeşilçam period and the present period are very different. I made a quick introduction to this work without reading the school for this. One of the most important producers of that period, brother İrfan, the owner of Akin Film, İrfan Akin always said to me, "Cahit will make such a music that when people leave the movie, that is, they will come out whistling its music after the movie ends". In other words, very dramatic, striking and catchy music was desired. Later, I realized that this is not too right. From time to time, the music you make overshadows a scene. Then music crushes that scene, that is, it will damage it rather than benefiting it. People listen to music more than watching movies. That is, instead of watching with eyes and ears, people listen to the movies only with their ears, which is not a right thing to do. In the following years, I even said that "music should know its limits in cinema." What is it to know its limits, it will be in its place, it will be as much as the place reserved for it. Of course, you can not draw this place on paper with a pencil, it is up to the composer, it is about understanding and solving it."*

On the other hand, Berkay states that the success of music significantly supports both the box office and the film's success:

"On the other hand, there are many films associated with music both in world cinema and in Turkey. Whether it's musicals in the world cinema, or İbrahim Tatlıses, Müslüm Gürses, Orhan Gencebay films in Turkish cinema, these are films made only on a song. There are cinematic elements, dramatic scenes, but the audience wants to watch that singer there. They want to hear his voice and see him only as a painting that is shown in the cinema. Incredible box office records were broken by those films, and there is such a method in cinema. If we leave the singer movies aside, the effect of the music on the cinema films that also aim for artistic success affects both the box office and the quality of the film. As an example, when I was in my 10s, a movie called Avare came to Turkey and took the entire country by storm. There was a song in it, an Indian movie which corresponds to the 50s and 60s. In those times movies with Indian and Arabic tunes began to come to Turkey. In this period, music had created a strange doping effect in cinema."

Findings

In the study, data were obtained within the framework of structured in-depth interviews conducted with a sample of 80 people (interview group) after film demonstrations and semi-structured in-depth interviews with Cahit Berkay. The findings obtained from the evaluation of these data by content analysis are as follows:

The interview group watches movies frequently (every day, once) at 38.8% ratio (n 31), very frequently (every day, more than once) at 31.3% (n 25) ratio, and normally (4-5 times a week) at 28.7% (n 23) ratio. In this framework, the interview group consists of individuals who have an active movie watching habit.

As regards the elements that create an impact on cinema, the interview group mentioned the story/scenario at 83.3% ratio (n 67), acting/actors at 67.5% ratio (n 54), music at 62.5% ratio (n 50), and visual effects at 46.3% ratio (n 37). Particularly, the mentioning of music, which is higher than an indispensable element of our movies such as visual effects and very close to another important element such as acting / actors, emphasizes the importance of music in movies.

When the importance of music in cinema without presence of other elements is questioned, the interview group stated that using music in movies is absolutely necessary and that they did not prefer watching movies without music at 70% ratio (n 56), whereas 30% (n 24) stated that using music is partially necessary and that they could sometimes watch movies without music. This situation reinforces the importance of soundtracks.

As regards the function of soundtracks, the interview group stated that music had a very high impact on the success of movies at 45% ratio (n 36), and that the music had a high impact at 41.3% ratio (n 33). These proportions show that music has a very high/high impact on the success of movies.

- As regards obtaining the soundtrack after watching the movie, 78.8% (63) stated that they would definitely obtain it whereas 21.3% (n 17) stated that they would rarely find and listen to the soundtrack. This reveals that high percentage of the interview group acquired and listened to movie soundtracks after the movie, it also shows that music also contributed to the promotion of the movie.
- 80% (n 64) stated that, as a result of film music, they were affected by 1 or more scenes which they would not normally be affected. This situation reveals the function of the soundtrack to make an impact and to focus to a degree that will affect especially the 18-25 age group.

- It is stated by 87.5% of the participants (n 70) that the soundtrack of the movie / scenes is very important in the transfer of emotions. In this context, it is concluded that soundtrack is an important tool that transfers and / or supports the emotions that the film / scenes want to give.
- The argument that soundtrack not only conveys emotions but also conveys the right emotions is also found in the study on the interview group. Table 1 contains the emotions / types of emotions that 3 scenes each from 2 movies (6 in total) aim to create in the audience, and the emotions / types of emotions that occur in the audience in musical and non-musical versions:

Scene	The aimed emotion	Emotion in musical version (The two answers with highest frequency)	Emotion in non-musical version (The two answers with highest frequency)
F1S1	Emotional/Light comedy	%52,5 (n 42) emotional %21,3 (n 17) comedy	%37,5 (n 30) horror/thriller %18,8 (n 15) comedy
F1S2	Emotional	%62,5 (n 50) emotional %16,3 (n 13) dramatic	%30 (n 24) dramatic %26,3 (n 21) emotional
F1S3	Emotional	%71,3 (n 57) emotional %25 (n 20) dramatic	%41,3 (n 33) dramatic %36,3 (n 29) emotional
F2S1	Comedy/Light emotional	%57,5 (n 46) comedy %21,3 (n 17) emotional	%47,5 (n 38) horror/thriller %23,7 (n 19) komedi
F2S2	Comedy	%68,8 (n 55) comedy %17,5 (n 14) adventure	%42,6 (n 34) horror/thriller %27,5 (n 22) comedy
F2S3	Emotional/Light comedy	%45,1 (n 36) emotional %37,5 (n 30) comedy	%40 (n 32) comedy %26,3 (n 21) emotional

Table 1: Comparison of emotions emerged between musical and non-musical versions

It can be seen that the emotions that are desired to be created in the audience and given in the scenes can be quite different when there is no music. Even emotional or romantic scenes can create a horror / thriller effect. This reveals that music has the function of transferring the right emotions.

Finally, the idea that music does not overshadow the movie (screenplay, actors / acting, etc.) found a 75% (n 60) response in the interview group. It is important that such effective music does not overshadow the film and stand out more than the movie. This situation is also related to the fact that the relevant films, which can be accepted as a cult, are successful in terms of scenario, actors and acting. However, as Cahit Berkay emphasized, due to the fact that music overshadowing the film would damage it, such a situation is not preferred by the musicians and the works are carried out in that way. This reveals that Cahit Berkay has carried out the related works with a high level of care as stated.

Cahit Berkay emphasized that his main starting point is connected with “doing his job with love” by showing such care and composing very successful soundtracks. In the framework of emotional commitment to the profession as an important factor in this direction, Berkay's argument is found meaningful in terms of achieving success.

Cahit Berkay lists the stages for a successful soundtrack as follows: (i) obtaining and reading the script, (ii) perceiving the script very well and watching the full version of the film within this framework, (iii) understanding the director's expectations very well, (iv) understanding the moods and tempo of the movie / movie scenes correctly, and (v) choosing an instrument taking into account the environmental - social conditions of the scenes. The accuracy of these stages and the opinion that Berkay had an important influence on the success of the film also found a response within the framework of the approach of the interview group (86.3%, n 69); in that respect, the soundtracks composed by Berkay was found successful and contributing to the success of the movies.

Berkay's approach that music has an effect on the promotion of the film has also been found within the framework of the interview group's approach to obtaining the soundtrack after the film (78.8%, n 63).

Berkay's approach that film music has an important role in the transfer of emotions and that the choice of musicians is made within the framework of this matter also coincides with the opinion in the interview group that the function of music is quite high (87.5%, n 70).

Finally, with Berkay's approach that soundtrack has function of correct transfer of emotions, the results of the study applied to the interview group overlap (Table 1).

Conclusion and Recommendations

As a result of the study, it has been determined that the music used in movies has an important effect on conveying the emotions and the situation in the current scene to the audience correctly. In the non-musical versions of the movie sections watched in the part of the study using the measuring tools, the viewers had a contradiction about the real feeling desired to be conveyed. In contrast, it was observed that they perceived the true emotion that is desired to be conveyed in the musical versions. There is an even more extreme example of this situation: in some non-musical versions, comedy scenes were perceived as horror, emotional scenes as comedy. When the same

scenes are played with music, the feeling to be conveyed was formed correctly. This reveals the importance and functionality of the emotion transfer and correct emotion transfer functions of music in movies.

On the other hand, another important function of using music in movies is to enable viewers to be affected by the scenes that they would not normally be affected by, and to focus on the movie. It was determined that emotions were felt more enthusiastically and intensely when the visual and auditory integrity was achieved.

Another important aspect is that music plays an important role in the promotion of the movies.

As a result of the interviews conducted with the well-known musician and Turkish Cinema soundtrack composer Cahit Berkay, it was determined that composing successful music to the films depends on the elements of a detailed study, experience, dedication, and comprehending the emotion to be transferred. While it is important that music does not get overshadowed by the scene it is used, it is also very important that it does not overshadow the scene, which is a lesson to be learned in order to be a "good composer".

On the other hand, soundtracks also have a significant impact on the box office and overall success of movies; successful soundtracks play an important role in increasing the film's box office return and overall success.

In the light of the conclusions reached in the study, the following are recommended for musicians who will compose film music: (i) maintaining the balance between the scenes and music they compose, (ii) reflecting the harmonic and rhythmic structure of the compositions in the best way, and reflecting the emotion that is desired to be conveyed, (iii) following the developing technology and changing social conditions on a day-to-day basis, and not being outdated, and (iv) analyzing the direction of the film's concerns and composing their works in line with the light of the directors and screenwriters.

For future scientific studies, it is recommended to examine the effects created by the soundtracks, especially within the framework of psychology, and to carry out studies focusing on Cahit Berkay, who comes to the fore with his identity as a musician and a soundtrack composer.

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THE EXPLANATION OF THE PSYCHO-SEMIOTIC LANGUAGE ABOUT THE ROLES OF THE ACTOR AND ACTRESSES CREATING GENDER PERCEPTION IN THE POSTERS DURING THE YEŞİLÇAM 1960'S PERIOD, SUCH AS EROL TAŞ, EKREM BORA, EDİZ HUN, TARIK AKAN, CÜNEYT ARKIN, SUZAN AVCI, FİLİZ AKIN, BELGİN DORUK, ETC...

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Abstract

The objective of this article is to investigate the roles of visual and linguistic reflection forms; in other words as a new concept: Psycho-Semiotic Language Usage in the 1960s at Yeşilçam of good family daughter, family woman and doomed backslider woman or vamp woman, also; good men as a family man, good family child, a doomed man, and bad man as a hoodlum, godfather in the Turkish Cinema in the creation of gender perception during the Yeşilçam Period.

It is a fact that the psycho-semiotic language use can be affected by society, consciously or not, as a measurable fact.

Keywords: Psycho-Semiotic, Language Usage,, Coquette, Gender Perception, Good Man, Bad Man, Family Man, Moustache, Villager, Townsman-woman, Cityman-Woman.

Introduction

“Stand out of my sunlight” Diogenes.

Magical cinema and territory of Turkey, where the Urartians, Hittites, Ionians, Lydians, Sumerians and many civilizations have stopped by... Many religious councils that made history are concentrated on this territory. Like the First Council of Nicaea. Many important focal points for religious tourism: The House of the Virgin Mary, philosophers born in Anatolia such as Diogenes, Herakleides, Alexsander, Thales, Anaximandros, Anaximenes, Heraclitos, Heraclides, Archaelaos, etc. Their stories, their stance in life, everything they brought to the age they live in... Moreover, they are so many in number...

These lands are really abundant in story, which is frequently mentioned in almost all articles written about cinema. Looking at the history of the magical cinema, it is perhaps the very beginning of the period when visuality became widespread because even the meaning of educating migrants by means of cinema was initially valid. Was human a visual entity in the first plan? When viewed as a pedagogue, in the magical atmosphere of cinema, could this atmosphere, which takes hold of the audience completely and gradually multiplies this effect by means of technology, have really created great effects on the audience while they are in the movie house?

Yes, it can create. Cinema can be powerful, transformative and changer like a weapon in societies where the education level is low or where it is not as high as desirable, that is, a world of questioning and critical thinking cannot be created. In other words, they can change the existing perspective, create a new one, and create a completely different perception with a new thought. This sometimes happens through changing an existing perception, sometimes with an individual who does not have sufficient knowledge about the subject and is incapable of thinking critically.

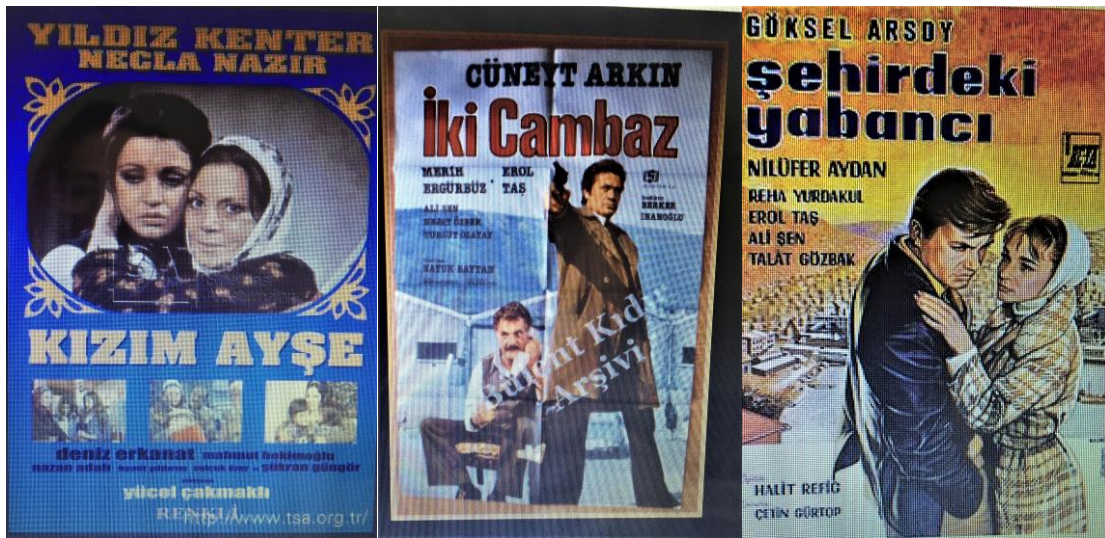
They do this through repetitions because picking examples from the advertising sector can always provide a clear understanding of the subject. Just as commercial films can hunt the target audience with effective words and use the cultural features existing in the society to move them in the direction they desire, move through cultural codes and provide this through repetitions, cinema can do the same and this effect can be reproduced by the technical features used: for example, the 25th frame effect which is about the human eye incapable of perceiving can be used to direct, lead and motivate the masses, and there is no legal regulation to prevent this as far as anyone knows. These kinds of references used to be called subconscious messages. At the beginning of 2000, the concept of the subconscious changed. The psychology discipline redefined this as subliminal. In other words, the area where the individual does not realize that they have done this because of former experiences. It would be better if the twenty-fifth square effect was introduced into this subliminal field under a different naming because it has nothing to do with innate gains.

Everyone would appreciate that the deep impact of a movie house is not the same as the television at home. The audience seems to have entered into a setup, so to say, prepared with equipment that can be guided by all of their perceptions, even the sixth sense and intuitive understanding. In this area where all genetic and cultural codes are analyzed today, it should be foreseen and understood that this transformative atmosphere can come into play even before entering the movie house. They will put into use anything that will increase the effect. It is not only the dim environments that prepare the audience for the movie house.

However, how can this happen? PsychoSemiotic Language Use, the Biggest Problem of the 21st Century, and poster samples from Yeşilçam of the 60s that can be an example of the use of this language

The readers of this article may think 21st century and 60s are quite far from each other. This new concept, even the theorem in some sense, belonging to the author of this article is tried to be explained in recent articles and is still being studied. It can also be explained as the use of a situation in human nature as a highly scientific, effective and striking way. The combination of what the public describes as 'make insinuation' with the advanced, scientific version of what the public calls 'peer bullying', and that is, equipping the target or target audience with Psycho-Semiotic Language Uses, and paralyzing the target by means of repetitions and atrophy them by changing the existing perception. distraction, leading to the desired direction, and deconstructing and reconstructing the existing direction.

In order to define Psycho-Semiotic Language Use, the concept of indicator must be defined first because Psycho-Semiotic Language Use is closely related to semiotic, semiology, semiotics and it needs to both use and develop its definitions. An indicator is defined as "all kinds of forms, objects, and phenomena that represent something other than itself and therefore can replace what it represents" (Rifat, 2009: 11). Psycho-Semiotic Language Use means that communication is designed to cause a reflection in the individual or target audience. This is not only limited to "all kinds of forms, objects, and phenomena" that are stated in the definition of the indicator, but also



1. <https://www.tsa.org.tr>

2. <https://tr.pinterest.com>

3. <https://tr.wikipedia.org/wiki/>

includes all kinds of sounds, smells, and senses that will cause a reflection in the target or the target audience.

Psycho-Semiotic Language Use and an Overview on the Posters of the Movies Made in Yeşilçam in the 60s

This overview is accomplished through grouping. Since the research is done through the posters, not only the visual definition of the Semiotic Language Use area is put into use. All languages, which can sometimes include the whole of Psycho-Semiotic Language Use, are also included in this use. All languages are indicators. Even in the urbanized actors -although their roots are coming from the countryside- such as Kartal Tibet, Ayhan Işık, Ahmet Mekin, a thin mustache, well-groomed hair, an honorable and virtuous posture, and a clean-shaven face are observed. Moreover, a Clark Gable ambiance can be perceived in Ayhan Işık. And in Erol Taş, who is demonstrated in movie posters such as Susuz Yaz, (<https://sinematikyesilcam.com/2017/06/koy-gercegi-basyapit-filmler>) with a stubbly beard, straggly and messy hair, thick mustache, messy clothes, folded sleeves are like



4. <https://tr.wikipedia.org/wiki>

5. <https://sinematikyesilcam.com>

6. <http://siyahbeyazturkfilmleri.blogspot.com>

indicators of the peasantry and the evil. Dry Summer is also an impressive title. It means a lot to the audience, particularly in dry regions. Heroic movies usually feature men with clean mustaches: like Kartal Tibet. Cüneyt Arkın is an exception. The fact that he is blond, and has blue eyes carry him beyond the general public perception. Although Turkish people may actually have a physical appearance according to the regions they settled in, the common perception or the created perception is based on dark hair and mustache. Perhaps cinema has brought novelty to the perception it had previously created. Action films came into fashion and Cüneyt Arkın, (Kaniye Kalesi, İki Cambaz, Devlerin Kavgası) a man about town, had to survive changing roles in the sector. No matter are Ediz Hun, İzzet Günay, Ekrem Bora, Murat Soydan, Cüneyt Arkın, Tanju Gürsu, and Göksel Arsoy, Önder Somer, good or bad actors, the audience can deduce that they are urbanized from their clean-shaven face without a mustache or beard, well-groomed appearance, smart dressing and suit despite being poor. Actresses like Filiz Akin, Ajda Pekkan, Esen Püsküllü, and Emel Sayın, no matter are they a coquette or not, represent the west and the city. Türkan Şoray, Belgin Doruk, Leyla Sayar, Selda Alkor, Muhterem Nur, Fatma Girik, Mine Mutlu, and Çolpan İlhan, no matter are they a coquette or not, may be more local, national and even a villager.

Indeed, the audience realizes some of these names the moment they see on the poster: The blind girl and her sad story, like of Muhterem Nur. Belgin Doruk: Little Lady and Her Adventures. Yıldız Kenter (Kızım Ayşe, Fatma Bacı), her hand on her head wearing a scarf and a mini-skirt at the same time, declares a village-city culture conflict, incompatibility and even a tragedy to the audience. All of these can play a role in creating a gender perception in society. The vast majority of the public hates Erol Taş, and it even made the papers that he got attacked (if this is not some kind of advertising). Whenever people saw Erol Taş on a poster they thought that he would do bad things and this may cause a negative perception about villager blowzy men wearing a beard and a

mustache. Lack of criticism and education, or lack of the necessary conditions, can sometimes mean "leaking watermelon juice in the devil's ear".



7. <http://siyahbeyazturkfilmleri.blogspot.com> 8. <https://www.otekisinema.com/>

9. <https://tr.wikipedia.org/wiki>

Conclusion

How will the movie house effect be achieved in an environment where Psycho-Semiotic Language Use, which is not limited to movie houses, establishes its digital hegemony with organizations such as Netflix?

One should have a look at the world before answering this question. In the history of the planet, on the road to the new world order, one should look at how last major events that seem ordinary or very benignant, that are political or do not appear to be political, but are articulated and will be the main trigger of other significant events: such as the Arab Spring.

One of the conclusions drawn in this article, which examines the posters of some movies made in the Yeşilçam period in the '60s in terms of Psycho-Semiotic Language Use: Even if Psycho-Semiotic Language is not used deliberately and reflects only the writer's own thinking world, it can be determined as a fact that it affects and influences the target audience, i.e. the spectators, can create a perception and this target or mass can now regard the incidents or phenomena through this perception. This state can also get strength through critical thinking, which is not that common in society. In societies where education and critical thinking are not widespread enough, it seems necessary to make a complete communication design in the field of cinema and to review the Psycho-Semiotic Language Use through multiple thoughts.

Some cultures and genetic codes may be accustomed and appropriate to Psycho-Semiotic Language Use. Even their transition to Public Relations may have been through these codes. This usage, which can be reduced as influencing people commercially and politically and leading them to the desired direction, can actually be quite complex and complicated. If the goal is crucial, it can even be even surrounded by an army of Psycho-Semiotic Language Use. It should be the academic field's task to awaken raise awareness about the term Psycho-Semiotic Language Use.

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<https://www.tsa.org.tr/tr/film/filmgoster/5277/kizim-ayse>
<https://www.otekisinema.com/cuneyt-arkin-tarihi-avanturler/> Kaniye Kalesi

TRAINING IN THE PROMOTION OF MENTAL HEALTH IN CHILDREN AND ADOLESCENTS: EVIDENCE OF VALIDITY

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Abstract

Effective school programs promoting mental health and emotional well-being in children and adolescents show that every opportunity should be seized to promote mental health among young people at schools.

To explore the evidence of validity for the "Priority training areas in the promotion of mental health and of the quality of life in children and adolescents" Scale is the aim of this study.

Methodological study with 136 participants (non probabilistic sample) that includes teachers (62.5%), nurses (32.4%) and police officers (5.1%), with a mean age of 48.3 years. Most of the participants were female (70.6%), hold a higher education degree (68.4%) and have been working for 24.3 years on average.

Factor extraction resulted in a bi-factorial model whose factors showed good internal consistency and a high stratified coefficient index. AVE values confirmed convergent validity only for Factor 1 - Violence in children and adolescents. Evidence shows that the length of a person's career influences training priorities; gender and occupational categories such as "security officers" are predictors for Factor 1- Violence in children and adolescents; the "nurse" professional category is predictive for Factor 2 - Behavioral disorders and mental health in children and adolescents; and that the "security officers" professional category " is the only global factor predictor.

The scale revealed good evidence of validity and the different professional categories are priority training predictors and should therefore be considered when one wishes to implement interventions aimed at promoting mental health and the quality of life for children and adolescents.

Keywords: mental health, health promotion, children, adolescents.

Introduction

There is an ever increasing volume of new research that identifies the harmful effects that adverse childhood/adolescence experiences, such as child abuse or exposure to domestic and school violence for instance, may have on mental health over the course of those people's lives. That finding requires all educational agents to be aware of problem situations so that they can act accordingly and in a timely manner, and thereby reduce the negative impact these problems may have on children and adolescents' health. The scientific literature shows that, generally speaking, most of the children and adolescents who were exposed to problematic situations suffer from low self-esteem and weak self-concept, which requires a concerted action by the different educational providers (parents, teachers, health professionals, police officers).^(1,2)

On the other hand, current evidence on the development of mental health intervention programs shows that several programs have already been developed and implemented in schools in order to promote mental health but also suggests that the effectiveness of said programs ,which is a key element to understand their reach, has not been appropriately assessed yet.

Some of those interventions seem to be quite successful. Most of them are universal, nonselective interventions, directed at all students and evidence shows that the role played by the teacher is crucial to their effectiveness. It seems that, somehow, the success of the interventions depends on the cooperation, training and involvement of the

schools and of the youngsters. This involvement can be facilitated with the use of digital interventions that are much more attractive to young people and have the potential to enable a universal and creative approach.⁽³⁾

The assessment of the effectiveness of school programs aimed at promoting mental health and emotional well-being stresses the promising results of said programs and shows that every possible opportunity should be seized to promote mental health among young people at school, provided that education agents possess the suitable skills to ensure that school itself will remain an environment where said interventions can keep on being implemented.⁽⁴⁾

A systematic review of the literature with meta-analysis conducted in 2017 was directed to: identify the effect of school programs on the prevention of depression and anxiety; assess the period of time needed to achieve treatment gains; establish the relative effect of these programs; ensure the development of the program, its attendance conditions, completion rates, and its cost-effectiveness. The findings show the benefits of continuously assessing and providing school-based prevention and stress that to improve the outcomes, one needs to identify at what age children should take part in those programs and consider the need for greater parent involvement.

The authors also found out that school-based prevention programs have little impact on depression and anxiety; significant prevention effects were detected at 6 and 12 months of follow-up; targeted prevention of depression was more effective than the universal approach; and school-based prevention programs have the potential to reduce the burden of mental health issues.⁽⁵⁾

The assessment of the effectiveness of school health and social services training in preventing suicide among adolescents showed the limitations of the process, despite the several programs which had already been implemented. Nevertheless, and although more thorough studies are required, the results suggest that every education, social and school health agent should be provided with a better and more effective training. This will undoubtedly improve their knowledge and skills and consequently increase the effectiveness of their interventions with the students and make them capable of changing their attitudes and behaviors.⁽⁶⁾

The implementation of interventions targeting multiple risk factors in young people with problematic behaviors, including sexual and substance abuse, was studied in order to describe the characteristics of the interventions and their effectiveness. Despite the limitations of the review conducted caused by the small number of selected studies, evidence suggests that interventions that have targeted multiple risk factors can improve the potential of the action. It also stresses the importance of determining the risks experienced by increasing the consistency of these actions, making them more complex, standardizing the assessment of their effectiveness and conducting economic analyses.⁽⁷⁾

Based on the assumption that the children between 5 and 12 years of age are those who will benefit most from mental health promotion programs and that school is the ideal place for this type of actions, we analyzed the implementation and evaluation of these programs in primary schools, and it was found that programs that focus on resilience and coping skills have a positive impact on the ability of students to manage stress-inducing events.⁽⁸⁾

A new review was conducted to address the role of teachers as health promoters. That review was useful to consider the effectiveness of the psychosocial interventions delivered by teachers on internalization and externalization levels. It became clear that interventions delivered in the classroom are globally effective and are more effective in the internalization dimension. The need for further studies and for the assessment of the actions carried out is once again highlighted.⁽⁹⁾

In summary, the studies conclude that intervention programs in schools show promising results, but also show that we still need to establish well-defined implementation criteria and to conduct a much better assessment of their effectiveness; success in promoting mental health in schools and the educators' skills are key aspects that will enable them to deliver a more effective intervention; the students' commitment is important and digital solutions can facilitate their involvement.

These conclusions stress the importance of developing training actions in schools focusing on the promotion of children and adolescents' mental health and of the consequent assessment of their effectiveness. This study was meant to shed some light on the aforementioned issues and was developed as part of the *MaiSaúde Mental* Project, conducted in Portugal and whose purpose was to promote mental health and the quality of life in children and adolescents.

Given the lack of measuring instruments dealing with this issue we decide to produce the "*Priority training areas in the promotion of mental health and of the quality of life in Children and Adolescents*" scale that would be used to assess said priority training areas. The scale was applied to a first sample in order to explore the evidence of validity. For this purpose, the following research questions were defined:

What kind of evidence of validity does the "*Priority training areas in the promotion of mental health and of the quality of life in Children and Adolescents*" scale present? Is the hypothetical trifactorial model confirmed by confirmatory factor analysis?

The Study

The methodological study obtained a favorable opinion (n°24/2017) from the Ethics Committee of the ESSV, which was followed by the authorization granted by the heads of the institutions involved who provided researchers with the lists of their staff. Subsequently, data was collected through personal contact with each of the education

agents. A non-probability convenience sampling was the technique of choice. The participants were selected from the professionals working in one of the municipalities located in central Portugal and that is part of the NUTs III Dão-Lafões. In this phase, a preliminary interview was carried out to inform the participants about the objectives of the study and about its scientific interest. They were also informed that their participation was voluntary and that they were free to leave at any time. They received and signed an Informed Consent containing detailed information about the study. The confidentiality of the data was ensured and maintained

Priority Training Areas in the Promotion of Mental Health and of the Quality of Life in Children and Adolescents Scale

The "*Priority training areas in the promotion of mental health and of the quality of life in Children and Adolescents*" scale is an original construct. Its conception was based on a review of the literature and on recommendations issued by several Portuguese scientific sources, like the country's Directorate General of Health (2017).

This is a Likert type scale with 15 questions where the possible answers range from 0 to 5 and where one (1) represents "*Not a priority at all*", two (2) "*Low priority*"; three (3) "*Priority*"; four (4) "*High priority*"; five (5) "*Extremely High priority*", and aims to assess the participants' perception of children and adolescents' mental health and quality of life. The items focus on 7 different areas and the statements address aspects such as behavioral disorders; mood swings; self-concept; sexuality; sleep; psychological disorders; violence. The sum of responses can range from 15 to 75 (minimum and maximum scores respectively). The higher the final score, the greater the importance attached by education agents to training.

We started the study of the scale's evidences of validity by testing its face validity and its content validity that correspond to two different phases of the process: the qualitative analysis and the quantitative analysis. This procedure was carried out by studying its psychometric properties using Cronbach's Alpha (α) to measure its internal consistency and construct validity was assessed using exploratory and confirmatory factor validity, convergent and discriminant validity to establish construct validity.

- ***Procedure for the scale's construction***

The construction of the "*Priority Training Areas in the Promotion of Mental Health and of the Quality of Life in Children and Adolescents*" scale was based on a qualitative approach whose aim was to find theoretical constructs that would support the scale and on the experience of researchers in the field of scale construction and on their knowledge of the subject field concerned. Once the scale constructs were defined, we had to outline a set of items that would enable us to measure the construct. Then, content validity was tested using three distinct procedures: validity of race, expert judges' analysis and response process validity.

The items of the scale were then subjected to an expert analysis in order to assess their relevance with regard to aspects that were important to ensure the psychometric quality of the scale. Four expert judges from the mental health field were selected and asked to assess the items of the construct regarding their relevance and their relationship with the dimension to which they belonged. They were also asked to give suggestions that would be used to improve the items or the overall construct.

The following step consisted of a descriptive analysis of the opinions issued by the judges. The frequencies, the percentage of agreement with the construct and the relevance of the items to the dimension that is being assessed were checked. According to the inclusion criterion defined, only items with an expert judges' 75% agreement rate would be incorporate in the final scale. Any item with a lower agreement rate was removed or had to be modified upon suggestion of the judges.

This procedure led to the modification of two items and to the removal of three other because they did not obtain inter-rater agreement.

A semantic analysis of the remaining items was carried out in order to analyze the understanding of the items and a pretest was conducted using a sample of 20 education agents. Some adjustments were made to the original wording to clarify the meaning of the statements. All the modifications and suggestions presented were incorporated in the final version of the fifteen item scale.

- ***Procedure for statistical analysis / data processing***

Statistical procedures, namely exploratory factor analysis, are often used to assess and refine assessment tools. The assessment of the psychometric properties of the scale includes convergent validity, internal consistency, factorial structure, and scale reproducibility. These elements are fundamental to measure the informative quality of the data conveyed by a given construct. ⁽ⁱ⁾ This set of techniques aims to find an underlying structure in a matrix and determine the number and nature of latent variables (factors) that can best represent a set of observed variables. ⁽ⁱⁱ⁾ According to Marôco (2014), ⁽¹¹⁾ factor analysis is based on an assumption that empirical variables (indicators) can be explained by a smaller number of hypothetical variables, commonly referred to as factors.

The metric properties of the scale were assessed using validity and reliability studies. The reliability studies enabled (i) the determination of the sensitivity of the items through skewness (SK) and kurtosis (K). $SK \leq 3$ and $K \leq 7$ (in absolute values) were considered as reference values; (ii) the determination of the internal consistency or homogeneity of the items by means of the Pearson correlation coefficient of the various items. Reference values must have correlations coefficients above 0.20; (iii) the determination of Cronbach's Alpha. This coefficient can

assume any value between 0 and 1, however Marôco (2014) suggests the following scores: > 0.9 very good; 0.8 - 0.9 good; 0.7 - 0.8 acceptable; 0.6 - 0.7 reasonable; 0.5 - 0.6 bad; < 0.5 unacceptable.

The validity studies included exploratory and confirmatory factor analysis. Exploratory factor analysis was based on the principal component analysis and factor analysis with Varimax orthogonal rotation. To validate the factors, eigenvalues over than 1 and the results display in the scree plot were considered.

A confirmatory factor analysis (CFA) was performed using AMOS 25 (Analysis of Moment Structures). CFA is a confirmatory method that is usually used to confirm whether certain latent factors are responsible for the behavior of specific manifest variables according to a theory, a pattern pre-established in another study (Marôco, 2014).

In CFA, the procedures recommended by Marôco (2014) were followed: (i) sensitivity of the items was evaluated by the coefficient of skewness (Sk) and the coefficient of kurtosis (Kw) (previously mentioned) and by the mardia's coefficient. ≤ 5 is the reference value for the latter; (ii) global adjustment quality indicators considering the ratio between chi-square and degrees of freedom (χ^2/df). Values below 5.0 are considered adequate (CFI – Comparative Fit Index and GFI – Goodness of Fit Index with adequate reference values above 0.90; RMSEA – Root Mean Square Error of Approximation; RMR – Residual Root mean square; SRMR – residual standardized root mean square). All these indicators are considered adequate when values are below 0.080 (iii) local adjustment quality was assessed using composite reliability (λ) (saturation above 0.50 have a good reliability), individual reliability of indicators (δ) (0.25 is considered to be an adequate value), composite reliability (CR) and convergent validity (AVE) (0.70 and 0.50 respectively are the values considered adequate), and discriminant validity which is assessed by comparing the AVE values for each factor with the square of Pearson's correlation coefficient between the factors. The existence of discriminant validity was adopted when the AVE of each factor is greater than the square of the correlation between factors. In factor analysis we considered the covariance matrix and the Maximum Likelihood Estimation (MLE) algorithm was adopted to achieve parameter estimation.^(10,12)

Since it was the first time that the questionnaire was applied, the reliability was assessed with the internal consistency or homogeneity of the items, whose coefficient includes the average correlation between all the items and the number of items.

The statistical analysis was performed using the SPSS (Statistical Package for the Social Sciences, Version 24) program and the adjustment of the model was performed, as already mentioned, based on the modification indices suggested by AMOS, Version 25.

• **Ethical and legal procedures**

The research protocol was previously submitted to the Ethics Committee (favorable opinion n°. 24/2017) of the education institution that was promoting the study and scrupulous compliance with the general principles of research ethics were guaranteed. The participants were provided with the necessary information and asked to sign the informed consent form. Their anonymity and data confidentiality were ensured and their autonomy was fully respected. They were also informed that their participation was completely free and that they could leave the study at any time and that they wouldn't be paid or would not have to pay anything to take part in the study. They were also informed that no harm would come from said participation.

The study was authorized by the heads of the institutions/organizations where they were employed.

Findings

The sample involved 136 participants (62.5% of them were teachers, 32.4% nurses and 5.1% police officers from the *Escola Segura* team) with a mean age of 48.34. Most participants were female (70.6%) and at the time were living in urban areas (72.8%). 68.4% of them hold a higher education degree and have been working on average for 24.33 years.

• **Exploratory Factor Analysis**

Exploratory factor analysis was performed in order to analyze the evidence of validity, that is, to assess whether or not the variables that constitute the factors are fit enough to measure the same concepts.⁽¹²⁾

We started the study of the "Priority training areas in the promotion of mental health and of the quality of life in Children and Adolescents" scale establishing the sensitivity of the items using skewness and kurtosis indexes. This procedure revealed that the results were within the reference parameters with absolute values of skewness ranging from 0.011 to 0.295, absolute values of kurtosis ranging from 0.162 to 0.855 and with a 3.872 mardia's multivariate coefficient. The results of the statistics presented in Table 1 show the means and standard deviations and the correlations obtained between each item and the overall scale. We can observe that the mean indexes are well centered, since they are all above the mean which means that on average the education agents understand that the training areas studied are essential.

Once we applied the Kaiser-Meyer-Olkin (KMO) test, the scale presented a KMO value=0.885, and Bartlett's test of sphericity presents high statistical significance ($p=0.000$). Those values are high enough to allow us to proceed with the process of scale validation. Once the initial communality is determined, after factor extraction, the values are between 0.426 in item 7 "*Sleeping problems*" and 0.771 in item 14 "*Abuse/neglect/maltreatment*".

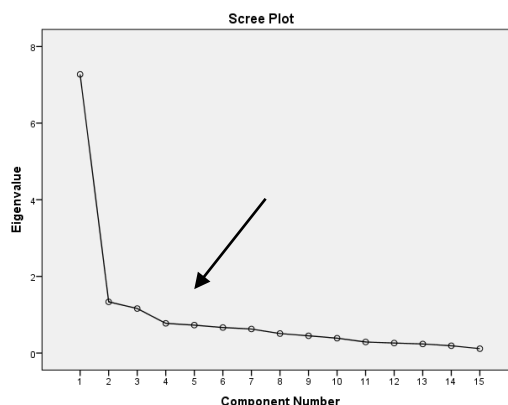
After the factors were extracted using principal components analysis with a Varimax orthogonal rotation and eigenvalues greater than 1, two (2) factors were obtained, which explain, on the whole, 57.385 % of the total variance.

Factor 1, dubbed "*Violence in children and adolescents*" includes items 14, 13, 10, 15, 11, 12, 9, and 8 and explains 31.62% of the total variance. Factor 2, named "*Mental health and behavioral disorders in children and adolescents*," explains 25.76% of the total variance, and comprises items 3, 4, 2, 1, 6, 5, and 7. (Table 1).

Table 1 - Internal Consistency and Factorial Loads with Varimax Orthogonal Rotation of the "Priority Training Areas in the Promotion of Mental Health and of the Quality of Life in Children and Adolescents" Scale

Number of Item		Items	Internal consistency					Fators		h ²
			Mean	SD	r item/total	r ²	α without item	1	2	
1		Harmful habits and addictions in Children and Adolescents	3,28	1,108	,483	,387	,923		0,690	0,488
2		Eating disorders (anorexia and bulimia...)	3,34	1,033	,580	,588	,919		0,707	0,548
3		Mood swings	3,00	,973	,585	,555	,919		0,784	0,642
4		Changes in Body Image	2,99	,926	,703	,626	,916		0,717	0,653
5		Affective disorders: low self-esteem, weak self-concept, insecurity	3,48	1,060	,664	,654	,917		0,561	0,532
6		Living a healthy and responsible sexuality	3,25	1,045	,647	,641	,917		0,570	0,514
7		Sleeping problems	3,26	1,025	,565	,476	,920		0,551	0,426
8		Stress, anxiety and depression	3,49	1,017	,659	,542	,917	0,546		0,509
9		Suicidal behaviors	3,41	1,105	,695	,578	,916	0,592		0,555
10		Bullying and Cyberbullying	3,54	1,009	,664	,589	,917	0,772		0,641
11		School violence	3,57	,976	,666	,601	,917	0,655		0,551
12		Domestic violence	3,56	1,015	,635	,492	,918	0,643		0,513
13		Sexual assault	3,60	1,070	,671	,776	,916	0,827		0,711
14		Abuse/neglect/maltreatment	3,68	1,030	,728	,811	,915	0,853		0,771
15		Dating Violence	3,46	1,038	,639	,508	,917	0,698		0,552
Overall Cronbach's alpha coefficient			0,923							
							Factors			%
								Eigenvalue	% Variance	Cumulative Variance
								Factor 1	4,743	31,620
							Factor 2	3,865	25,765	57,385

The graph of variances referred to as *scree plot* indicates that two components are to be retained, so a new factor analysis was performed focusing on two factors.



Graph 1 – Scree Plot

• Confirmatory Factor Analysis

The hypothesized solution factor was tested using confirmatory factor analysis with a Bootstrap simulation for 10 thousand samples. The critical ratios of the trajectories between the different items and the factors to which they correspond are, as observed, all greater than 1.96 and highly significant (Table 2).

Table 2 - Estimates and critical ratios of the items and their factors

Trajectories and critical ratios			Estimates	S.E.	C.R.	P	λ
APF10	<---	Fb1	0,841	0,088	9,582	***	0,738
APF15	<---	Fb1	0,824	0,087	9,450	***	0,708
APF11	<---	Fb1	0,736	0,091	8,068	***	0,667
APF12	<---	Fb1	0,746	0,095	7,863	***	0,645
APF4	<---	Fb2	1,102	0,133	8,258	***	0,793
APF2	<---	Fb2	0,983	0,145	6,764	***	0,628
APF1	<---	Fb2	0,864	0,156	5,520	***	0,519
APF6	<---	Fb2	1,147	0,161	7,116	***	0,730
APF5	<---	Fb2	1,160	0,164	7,070	***	0,723
APF14	<---	Fb1	1,000				0,866
APF13	<---	Fb1	0,987	0,078	12,621	***	0,823
APF8	<---	Fb1	0,735	0,093	7,905	***	0,640
APF9	<---	Fb1	0,863	0,099	8,708	***	0,697
APF3	<---	Fb2	1,000				0,685
APF7	<---	Fb2	0,967	0,151	6,406	***	0,621

Figure 1 reproduces the tested bi-factor model. The circles represent the two factors also referred to as latent variables, the rectangles show the items that represent the manifestation of each factor (also called manifest variables) and the smaller circles represent the errors associated to each item.

The direction of the unidirectional arrows indicates that each factor reproduces the response given to each item. The factors are implicit in the responses given to the items, but part of this manifestation is not due to the factor itself, but to unknown causes. Those are the errors that represent the part of the variance that cannot be explained by the factor. The bidirectional arrow between factors expresses the correlation they establish among themselves.

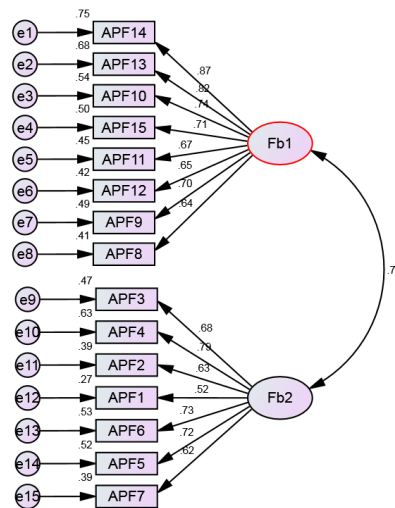


Figure 1: Initial Factorial Model

The model was refined with the modification indexes proposed by AMOS and item APF2 was rejected. It exhibited some collinearity problems because of its association with APF1 and APF3. Adjustment indices improved the quality of the last model, after item APF2 had been removed, and show good level of adjustment for the $\chi^2/df=1.769$, CFI = 0.945, RMR = 0.057 and SRMR = 0.055 values and acceptable level of adjustment for RMSEA=0.075 and GFI= 0.886 values.

With the exception of APF1, which has a coefficient of 0.50, there is evidence of the prevalence of high factor loadings with significant indexes and coefficients greater than 0.67 between the factors (constructs) and their observable manifestations. Each indicator also shows adequate individual reliability. As for the correlation between the two factors, evidence shows the existence of a very significant relationship between both ($p = 0.81$).

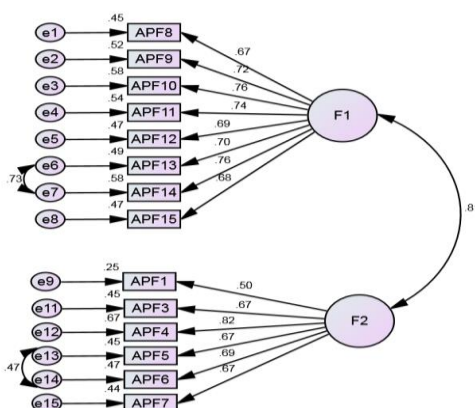


Figure 2: Final model refined with modification indexes

Global goodness of fit indexes show that after the refinement of the model all values became adequate. The only exception was the GFI value which showed a slight improvement but remained barely tolerable (see Table 3).

Table 3 – Global goodness of fit indexes

Model	χ^2/df	GFI	CFI	RMSEA	RMR	SRMR
Initial Model (figure 1)	3,346	0,766	0,815	0,132	0,081	0,076
Model with modification indexes	1,769	0,886	0,945	0,075	0,057	0,055

• Convergent validity and composite reliability

Convergent validity was assessed using the value of the Average Variance Extracted (AVE) as described below. Factor 1 shows an Average Variance Extracted (AVE) value = 0.512, thus above minimum threshold (0.5), which shows the existence of convergent validity. However, the value of the same indicator for Factor 2 is AVE = 0.456, which is lower than the cut-off score and therefore shows the existence of divergent validity. The same happens with the value for the overall scale (AVE = 0.488). Composite reliability is in both factors greater than the threshold (0.70) which suggests good internal consistency. Furthermore, the stratified coefficient is high (composite reliability, CR = 0.929). Discriminant Validity was found between factors since the squared correlational value is lower than AVE (DV - F1-F2 = 0.260).

We also studied the convergent/discriminating validity of the items, establishing a correlation between all the items and the underlying factors and the overall value of the scale. Results show that most of the items are significant, ensuring higher correlational values in the subscale to which they belong (indices in bold). (Table 4)

Table 4 – Convergent Validity of the scale items

Number of Item	Items	Factor 1	Factor 2	Overall AVE
1	Harmful habits and addictions in children and adolescents	0,405***	0,631***	0,539***
3	Mood swings	0,471***	0,714***	0,618***
4	Changes in body image	0,600***	0,806***	0,740***
5	Affective disorders: low self-esteem, weak self-concept, insecurity	0,601***	0,766***	0,724***
6	Living a healthy and responsible sexuality	0,555***	0,797***	0,708***
7	Sleeping problems	0,507***	0,723***	0,645***
8	Stress, anxiety and depression	0,700***	0,595***	0,708***
9	Suicidal behaviors	0,764***	0,569***	0,737***
10	Bullying and Cyberbullying	0,794***	0,491***	0,721***
11	School violence	0,735***	0,602***	0,734***
12	Domestic Violence	0,719***	0,544***	0,698***
13	Sexual assault	0,804***	0,489***	0,726***
14	Abuse/neglect/maltreatment	0,846***	0,537***	0,774***
15	Dating violence	0,746***	0,494***	0,692***

n.r. not relevant * $p < 0.05$ ** $p < 0.001$ *** $p < 0.001$

Finally, Pearson's correlation matrix reveals positive values with a very good consistency ($r=0.948^{**}$) in the relationship between Factor 1 - "Violence in children and adolescents" and the overall scale; good consistency ($r=0.895^{**}$) between Factor 2 - "Mental health and behavioral disorders in children and adolescents" and the overall scale and average consistency between both factors ($r=0.707^{**}$).

• *Training priorities for Education Agents*

The establishment of the training priorities was based on the overall score of the scale and on the percentiles from 25 to 75%. 3 groups were consequently obtained: a percentile ≤ 25 represents a low training priority (25.0%), percentiles between 26 and 74 represent a moderate priority (47.1%), and a percentile ≥ 75 represent a high training priority (27.9%).

After cross-checking the variables, it became evident that participants who were working for less than 20 years are those who feel a greater need for training. This means that training priority decreases as one's period of employment increases ($\chi^2=10.946$; $p=0.027$).

Multiple linear regression using input method was carried out and revealed that gender ($p=0.031$) and the "security officers" professional category were predictors for Factor 1 - "*Violence in children and adolescents*". In Factor 2 - "*Mental health and behavioral disorders in children and adolescents*" the "nurses" professional category is predictive ($p=0.043$). The category "security officers" is the only predictor of the overall factor ($p=0.026$).

Discussion

This study has limitations in terms of psychometry, mainly due to the type of sample chosen: it is a convenient sampling that involved a small amount of participants ($n=136$) and focused solely on a specific group (education agents). It would therefore be interesting to replicate the study of the psychometric validity of the scale using a larger number of participants in order to assess whether the results obtained in this study remain unchanged.

On the other hand, social desirability was not a controlled variable and this may have influenced the responses obtained, since the instrument includes self-response. The study in mental health training also poses difficulties at the methodological level. It is hard to obtain answers that are not influenced by social desirability. This happens because this is an issue still surrounded by stigma, myths and taboos that are not always easily overcome.

When time came to discuss the results, the following aspects stood out. In the current context of mental health nursing, further research is necessary if we really want to understand the perceptions and attitudes of education agents towards the children and adolescents' mental health and the way it relates to their quality of life. This kind of awareness will allow us to achieve real health and education gains and improve epidemiological indicators, a health area that has proved to be quite sensitive. Therefore, the validation of data collection assessment/measurement tools can be an important contribution to this objective.

This stage of the study is crucial to the process of assessing the quality of a measurement instrument. It will assess whether or not the psychometric properties of an instrument are reliable and provide the researcher with the right requirements to measure what he wants to measure.

The study of the psychometric properties of the *Priority Training Areas in the promotion of mental health and of the quality of life in Children and Adolescents* scale, with a sample where 70.6% of the participants were female and where participants were 48.3 years on average, revealed the reliability of the construct based on its consistency represented by values between $r=0.483$, -a value deemed acceptable- and $r=0.728$, on Cronbach's alpha coefficients ranging between $\alpha=0.923$ and $\alpha=0.915$, and on a $\alpha=0.923$ overall value that reflects a very good internal consistency.

After extraction, 2 factors were obtained that explain, on the whole, 57.385 % of the total variance. The confirmatory factor analysis suggests good overall fit indices and the composite reliability indexes show good internal consistency. However the AVE values obtained in Factor 2 – *Behavioral and mental health disorders in children and adolescents* (AVE=0.456) and in the Overall Factor (AVE = 0.488) failed to achieve convergent validity.

Internal reliability, assessed using internal consistency, and bipartition coefficient showed adequate scale values. Internal consistency measured by Cronbach's alpha for the 14 items of the scale was 0.923, a value that shows good reliability for most authors.

However, it is essential to evaluate inter-item and item-total correlations simultaneously, since the larger these correlations are, the greater the homogeneity of the items and the consistency with which the same dimension or theoretical construct is measured. Item 2 was removed because of the very low score obtained. Internal consistency was then reassessed and the score rose to 0.72, a value deemed quite acceptable since it lies between 0.70 and 0.80. Even though this Cronbach's alpha value is within those found in other studies, it should be remembered that alpha values should be interpreted in light of the characteristics of the measurement itself, the number of items included in the scale and the population in which this measurement was conducted. The values that tend to be lower can then be understood because mental health is a construct surrounded by prejudice in all cultures, and also because this scale has a low number of items and has been applied to different education agents whose attitudes and beliefs towards the subject are evident.⁽¹³⁾

After we used Spearman-Brown prediction formula, the values of the split-half reliability coefficient reached 0.838. Those values are lower than the alpha values but they still suggest the existence of high internal fidelity. However said values have to be analyzed with caution since the conditions of the division between the items may be different and may also be influenced by the size of the sample and by the non-probabilistic sampling method used. In situations where the sample is larger and more diversified the values may be quite different.⁽¹²⁾

The participants' professional category can also influence the outcome, since the scores obtained by the police officers that were part of the Escola Segura team were lower than those obtained by nurses and teachers. Participants who have worked for less than 20 years seem to need more training than those who have a longer career. This means that the longer people work, the less they seem to need training. These findings need to be explored, as they can show the profile of the agent who develops the educational intervention and the kind of influence he may have.

The psychometric results indicate that the scale can be used as a research tool to evaluate priority training areas in the promotion of mental health and of the quality of life in children and adolescents in samples whose characteristics are similar to those of the sample used in this study.

In summary, the factorial study of the scale should be replicated in larger and more balanced samples in terms of professional category and in which the social desirability variable is controlled. It is also suggested that studies should be developed to improve the assessment of the validity and fidelity of the *Priority Training Areas in the promotion of mental health and of the quality of life in Children and Adolescents* scale, and that those studies should include education agents from different cultures and professional contexts.

In the future, we will try to test this scale by comparing it with other scales, in order to complement the information obtained and identify additional sensitive areas that may require training. The results will have implications for the pedagogical and clinical practice. They highlight the importance of identifying the predictors of the education agents' training priorities, because the knowledge of this specificity will be important to improve the children and adolescents' qualification. This may represent an important contribution that will help the academic community carry out further research studies focusing on the uniqueness and individual nature of mental health and of the quality of life of children and adolescents.

Conclusions

Our intention in this study was, using a bibliographic review and following the opinion of external mental health expert judges, to build a set of statements that would help identify the priority training areas in the promotion of mental health and of the quality of life in children and adolescents, since those are aspects that are always present and influence the performance of education agents.

The validation methodology made it possible to select fourteen (14) questions, assuming a minimum score of 14 and maximum score of 75. According to the results obtained, it seems that the questions fulfill the general objective we had initially devised and the different validity tests performed show that they meet all the reliability requirements. The results show that the "Priority training areas in the promotion of mental health and of the quality of life in Children and Adolescents" scale revealed, in its first application with 136 education agents, very good evidences of validity (Cronbach's alpha between 0.923 and 0.915). Results also show that the factorial structure has satisfactory validity and reliability indexes and represent adequately the construct. It can therefore be deduced that this scale can be used as a data collection tool to assess the perceptions of educational agents about their training priorities.

It was also established that the participants' gender, the number of years they have already worked (less than 20 years) and their professional category (being a police officer) are predictors of training priorities, which is why training programs should focus on these groups' needs.

This study should be replicated in future research in order to build robust recommendations that will include practical guidelines to help promote children and adolescents' mental health. The implementation of this research represents a contribution to research in education and nursing sciences and will benefit scientific skills and creative critical thinking, some of the most solid foundations upon which education agents should base the analysis of the problems related to the mental health of children and adolescents. Additionally, personal experiences and backgrounds and people's real life context must always be taken into account.

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VOCATIONAL SCHOOL STUDENTS' BELIEFS IN SCIENTISTS

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Abstract

In this study we analyzed vocational school science students' belief in scientists. For this purpose, 204 students from the same school, randomly selected from 1845 member of the group are included to the study. The data used for this study coming from different science departments as constructing, chemistry, computer, electric and machine at a vocational school in Turkey. Data collected with a special data collecting tool that the Draw a Scientist Test abbreviated as DAST. The findings can be abstracted as that the typical characters of a scientist are male, very clever, working hard and creating new information on his special study area. There were some differences of students' image according to their academic achievements. To get more realistic images on scientists, a scientific culture lecture, as history of science or scientist, could be added in the school curricula of schools.

Key words: science, scientist, student's idea, vocational school

Introduction

The studies conducted in students' beliefs give a perspective that students' beliefs could affect their learning styles, their understanding of scientific concepts and their beliefs for science and scientists (Ayoubi et al. 2017; MacCorquodale, 1984; Uhomiohi and Ross, 2018; Wells, 2015). According to these authors, no meaning relation was determined between teacher's academic perspective and their students' beliefs for science and scientists. In this context, another study group stressed the effect of social environment and students' enrolling to scientific materials on scientists' life context (Abu Karsh, 2018). A few papers conducted in some different countries resulted with same findings on believing of candidates for science and scientist (Ayoubi, 2017; Bovina and Dragul' Skaia; 2008; Ross, 1993; Sjoberg and Schreiner, 2006; Song and Kim, 1999).

In a study focused scientists' images were analyzed science teachers' beliefs conducted on their teaching experiences (Ünver, 2010; Finson and Biaver, 1995). The author expressed that pre-service science teachers had different beliefs of scientist than the other teachers. These teachers classified scientist with deep window glasses and disconnectedly living style. Also, McDuffie (2001) stayed that scientist are clever, wearing coats and middle-aged persons according to pre-service science teachers. All these studies showed that scientist did not give different images to the participants.

Scientists are usually introduced in the Turkish textbooks as white persons, males, working and living alone man and spend his much time in his laboratory. There is not literature on vocational schoolteachers' and their students' perceptions of scientists. So, this study conducted on the vocational school students' perceptions of scientists.

Method

A sample of 204 vocational school students from chemistry, computer, electric and machine departments participated in this study. These students were randomly selected from the sample of 1845 at the same vocational school in Turkey. In this sample, 54 students (26%) were students in chemistry, 53 students (26%) were in computer, 49 students (24%) were in electric and 48 students (24%) were in machine. The students' responses to the open-ended questions were analyzed based on guidelines of Sioberg and Schreiner (2006). Classifications of typical images of scientist such as their study area, gender, dressing style were analyzed to present their characters not only students' images but also their responses to the open-ended questions.

In order to analyze the quantitative data, descriptive statistics (frequency and percentage) was used in this study. The data were classified and derived from the students' answer the questions. To more realistic reliability of the study, the participants were wanted to give their answers in two short sentences.

Findings

The vocational school students' images for scientists were presented in Table 1. To symbolize their beliefs, it was used eight character for scientist.

Table 1. Students' mental drawings for scientists as typical indicators (Total N=204).
Frequency Percentage

Male gender only	125	60.4%
Scientist working indoors (lab)	136	66.6%
Scientist's facial expression	83	40.6%
Symbols of knowledge	41	20.1%
Technology represented	35	17.1%
Model of research presented	48	23.5%
Extraordinary personalities	17	8.3%
Representation of danger or fear	11	5.3%
Similar models	18	8.8%

The main perspective of students for scientists that they are the persons working indoors especially in their special laboratory (66.6%). Also, most of them (66.6%) believe that scientists' gender is male. 40.6% students think that scientists have their special facial vision. A few students imagine scientists as a reason of danger or fear.

Student answers for the question "what the scientists are doing" are classified in Table 2.

Table 2. Student answers to what the scientists are doing (Total N=204).

Student Answers	Frequency	Percentage
Doing an experimental study	61	29.9%
Doing a chemistry or physics experiment	59	28.9%
inventing technology such as computer or machine	42	20.5%
Inventing nuclear models	31	15.1%
Inventing medical materials for people	16	7.8%
Focusing on nature and life	13	6.3%
Reading/writing a book or a scientific material	22	10.7%
Poet, astronaut, doctor	17	3%
Others: teaching, learning, doing scientific trips, meeting, drawing, etc	14	6.8%

According to vocational school students, scientists' classical manner is doing experimental study in lab or in their special study area (29.9%). Students believe that scientists work on chemistry or physics (28.9%) when they are inventing any something. Little students believe that scientists are inventing medical materials for people (7.8%),

focusing on nature and life for research (6.3%) and reading/writing a book or a scientific material as an academic study (10.7%).

The participating students have responded the questions about the scientists' character types as presented in Table 3.

Table 3. Scientist's character types according to students (Total N=204).

Character types	Frequency	Percentage
Inventor	172	84.3%
Explorer	183	89.7%
Thinker	123	60.2%
Creative	132	84.3%
Hard worker	196	96.0%
Generous	82	40.1%
Imagination	57	27.9%
Organized	61	29.9%
Manager	38	18.6%
Serious	67	32.8%
Helpful	32	15.6%
Sociable	42	20.5%
Alone	23	11.2%
Athletic	9	4.4%

As presented in Table 3, Most of students believe that scientists are inventor, explorer, hard worker, thinker, creative persons. About half of them think that scientists are serious, organized, imagination, sociable and helpful characters. Little students agree that they are alone and athletic.

Finally, we classified students' ideas about the most famous scientists from all over the world (Table 4).

Table 4. Students' favorite scientists according (Total N=204).

Favorite scientists	Frequency	Percentage
Einstein	198	97.0%
Newton	173	88.8%
Pasteur	201	98.5%
Edison	196	96.1%
Armstrong	128	62.7%
Mendel	103	50.5%
Galilee	89	43.6%
Pythagoras	81	39.7%
Da Vinci	70	34.3%
Plato	67	32.8%
El Harezmi	32	15.6%
İbni Sina	42	20.5%
Cahit Arf	123	60.2%
Oktay Sinanoğlu	73	35.6%

According to vocational school students, Pasteur, Einstein, Edison and Newton are the most famous scientist. About half students think that Amstrong, Cahit ARF, Mendel and Galile are same level popularity. El Harezmi and İbni Sina have lower level popularity than the others in the list. It can be said that vocational school students have little information about the Islamic scientific world.

Conclusions

Vocational School students have positive attitudes about scientists. The stereotypical vision of scientists as male gender, working in a laboratory and a researcher are prevalent for vocational school students. These results are similar to much research conducted in this subject (Barman, 1999; Fralick at al., 2009; McDuffie; 2001). The students believe that scientist image did not have mythical types such as dangerous, alone person and unhappy character. We can say that the society of the vocational school could have an essential role on the findings.

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