

# Turkish Online Journal of Educational Technology

*Volume 23, Issue 2*

*April 2024*

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**ISSN: 2146 - 7242**

**Indexed by**

Education Research Index  
ERIC  
EBSCO Online  
Cabell's Directories  
Index Copernicus Journal Master List

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Published in TURKEY

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## Digital Transformation and E-Government in Public Administration: TRNC E-Government Portal Analysis

**Sonuç Zorali**

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### ABSTRACT

In the current era, the E-Government phenomenon, which describes the state's provision of public services to its stakeholders through information and communication technologies, has a global character. This study aimed to examine the big data-based e-Government portal, which has many examples in the world and was created by utilizing digital technologies, on the example of the Turkish Republic of Northern Cyprus (TRNC), and whether the portal is user-oriented or not was examined by content analysis method in the context of big data features and citizen-oriented. The absence of any other study on the examination of the TRNC E-Government Portal, which was reorganized in 2021, gives the study a unique quality. At the end of the study, although progress was observed in the information and transaction stages of the TRNC E-Government Portal in the context of e-Government models, it has been determined that success has not yet been achieved in the interaction and integration stages, as well as in the context of citizen-oriented and big data features, it has been concluded that there is not enough level for a successful government portal.

**Keywords:** Innovation, Public Administration, Digital Transformation, E-Government

### INTRODUCTION

In the last quarter of the 20th century, thanks to the significant developments and innovations in the field of information and communication technologies, change and transformation have become dominant in all areas of human life. At the point of public and public service delivery, states have also had to experience this change and transformation to ensure their sustainability and the increasing and changing demands of citizens. With the developments in information and communication technologies, the bureaucratic and classical state understanding has been replaced by the e-Government understanding, which describes public services in the electronic environment shaped within the framework of new public administration and governance concepts. Unlike the classical state, the provision of public services in an electronic environment is the result of certain stages of development (Yürük & Öztaş, 2017, p. 2134). In this sense, it is important to examine e-Government portals that provide one-point access to public services in an electronic environment and aim to provide public services to citizens, businesses, and government institutions effectively and efficiently through information technologies. In particular, it is important to examine whether e-Government portals, which are shaped within the framework of the new public management approach, are user and citizen-oriented, whether they carry big data features, and how they fulfil the intended effective and efficient service delivery. At this point, the aim of the article is to analyse the big data-based e-Government portal implemented within the framework of digital transformation in TRNC. Although there are studies on the examination of the e-Government portal in the TRNC, the lack of a study examining the TRNC E-Government Portal, which was reorganised and implemented in July 2021, gives the study a unique feature. In light of this information, the goal was to obtain information about the current development level and content of the TRNC E-Government Portal by using the content analysis method within the framework of the mentioned problem and importance. For this purpose, whether the TRNC e-Government Portal is user-oriented or not was analysed in terms of its big data features and whether it is citizen-oriented or not.

### CONCEPTUAL BACKGROUND

#### Phenomenology of Innovation

In every period of its life, humanity has sought innovations that will carry it further and ensure the continuity of life, and these innovations have come to life with inventions, discoveries, and scientific research. The innovations that have emerged thanks to technological developments have become a concept of great importance in private/public organisations that want to have a competitive advantage.

In Turkish, words such as 'yenilik', 'yenilenme' and 'yenilikçilik' are used to describe the word 'innovation' (Elçi, 2007, p.2). There are various definitions of innovation in the literature. Schumpeter (1934) defined innovation as the creation of new combinations of existing resources, while the Australian National Audit Office (ANAO, 2009) defined innovation as the creation and implementation of good ideas; De Vires et al. (2014) defined innovation as the introduction of new elements into a service (new knowledge, new organisation, new management/skills), while

Evers et al. (2014) defined innovation as “innovations are significantly new and disruptive to established routines and structures”. Considering the characteristics of innovation, in order for an innovation to be accepted as an innovation, it must have expansionary (rapid diffusion) factors, trigger adaptation in its environment, ensure the combination of innovation characteristics and qualities, express a process and continuity, create change in the user of the innovation, increase the quality of life, provide economic and social benefits to all stakeholders, be a problem-solving process, mostly arise from empathy, kill a market and create a new market, be experiential and be the product of a cultural environment that feeds and triggers it (Şener, 2017). As stated by Güneş (2010), innovation affects individuals, the society consisting of individuals, the national economy and government policies, and the areas under this influence show us that innovation has three dimensions: social, economic, and political.

## **Digital Transformation and E-Government**

### ***Digital Transformation***

Digital transformation is one of the important concepts that explain the 21st century. Although a short definition of this concept can be made, digital transformation is not a concept that emerged suddenly. It is a process of change that develops through certain phases. This process (digital transformation), which progressed step by step, gained more momentum, especially with the Covid-19 pandemic that occurred all over the world in December 2019, and the idea of spreading digital transformation to every aspect of human life has turned into a must rather than a necessity. As digital transformation evolves with new technological developments emerging every day, the volume of data increases and thus the digitisation of this data is continuous. In other words, as Teichert (2019) states, digital transformation is not a static but a moving and continuous process. “Therefore, the main components of this transformation are human, process and technology adaptation. The fact that there are different components in this process requires a system approach to digital transformation and the inclusion of all layers of the transforming structure in this process.” (Bozkurt et al., 2021, p. 40). According to Siebel (2022), there are two waves of digital evolution, and these are "First Wave: Digitalisation" and "Second Wave: Internet". According to another source, in the emergence of digital transformation, technological developments, the globalisation of the Internet, the increasing demands of citizens (faster, transparent, easier, cheaper services), the reform efforts of the state in terms of administration, the prominence of information in the economy, and the desire of citizens to increase their trust in the state institution have been effective (Tosun, 2014, p. 50). Although the 4th Industrial Revolution (Industry 4.0) is the first thing that comes to mind when it comes to digital transformation, the technological developments that shaped the history of the world that led to today should not be ignored. With each important innovation and evolution in industry and technology, humanity has developed and entered the next revolution after finishing one revolution. These are the 1st Industrial Revolution (Industry 1.0), 2nd Industrial Revolution (Industry 2.0), 3rd Industrial Revolution (Industry 3.0) and the current 4th Industrial Revolution (Industry 4.0), respectively (Zhou et al., 2015; Banger, 2018; Kosif, 2019; Sert et al., 2019). Industry 4.0 components are listed as big data and analytics, cyber-physical systems and simulation, autonomous robots - smart machines, vertical-horizontal integration, cyber security, internet of things, additive manufacturing, augmented reality, and cloud computing - internet of services (Banger, 2018, p. 33). With the emergence of the 'new public administration (NPA)' concept in the 1970s (Karaçor & Oltulu, 2011, p. 404) and the concept of 'governance' after 1997 (Can, 2019, p. 19), reform efforts in state structuring have started to be implemented. In addition to all these developments, in the globalising world, the e-Government phenomenon, which describes the digital transformation in the political field, has emerged due to factors such as developments in information and communication technologies, the formation of a knowledge-based economy and the transformation of society into an information society. E-Government projects were first started to be used in the late 1990s (Chen & Gant, 2001, p. 343-344). When we look at the studies that contributed to the formation of the e-government understanding, studies such as the “1993 Gore Report, which sees the electronic state as an understanding of public administration that produces less costly and more effective public services, and the Green Book for the Electronic Delivery of Public Services published in the UK in 1996 [...]” (Güngör, 2007, p. 128-129 as cited by Can, 2019, p. 24-25) have a valuable place.

### ***E-Government***

The concept of electronic government, i.e., e-Government, is used to describe government services in the virtual (electronic) environment, i.e., public services carried out through information and communication technologies (especially the internet and the web) (Yıldız, 2011, p. 1). According to another definition, e-Government is "the uninterrupted and secure execution of the duties and services that the state is obliged to fulfil towards its citizens and the duties and services of citizens towards the state in electronic communication and transaction environments" (İlgaz, 2016, p. 5). In 1993, the basic components of the e-Government concept, which was used for the first time (Maraş, 2011, p. 122), are listed as communication device, communication channel and website, while the basic elements of e-Government are listed as citizens (e-citizens), companies (e-companies), institutions (e-institutions) and public officials (e-officials) (Acar, 2018, p. 23-24-25). Accordingly, e-Government interaction areas are stated as government to government/G2G, government to citizen/G2C, government to business/G2B and government to

employee/G2E) (Fang, 2002, p. 8-9). However, although these areas of interaction indicate the reality, they are not sufficient in the current era. The reason for this is that new communication channels (social media environments such as Facebook, Twitter, Instagram etc.) have been added to the old communication channels (e-mail and text messages) and stakeholders (non-governmental organisations, private sector, and citizens) who were passive recipients have now become content producers. "In the light of these discussions, the clusters of citizen-to-citizen (C2C) and civil society-to-citizen (NGO2C) can be added to the clusters of government-to-government, government-to-citizen and government-to-private sector, which are accepted as the main categories of the e-Government concept in the literature." (Yıldız, 2011, p. 7).

E-Government systems are projects that require significant financial resources (investment) in every country where they are implemented. Therefore, it is important to identify the problems that may prevent the success of these projects and to take the necessary measures. The Organisation for Economic Co-operation and Development (OECD) stated that several problems arise in the implementation of e-Government and classified these problems as internal and external e-Government barriers. Accordingly, the OECD identified external barriers that may hinder the adoption of e-Government as legal and regulatory barriers, financial (budget) barriers, technological barriers, and the digital divide, while internal barriers include lack of co-operation for seamless services, lack of plan and vision (2003). The elements required for a successful e-Government are given under the name of 'e-Government success factors'. Naralan has stated the factors that are sufficient for the countries that have achieved success in the e-Government system as management factor, institutional structure factor, technical infrastructure factor, human infrastructure factor, e-government portal factor and development factor (2010, p. 460).

### **E-Government Development Models**

Since e-Government refers to an active process, its development has been subjected to classifications in the form of stages or steps, and these have been named in different ways in the literature as 'e-Government development models', "evolution model' or 'maturity model' [...]" (Demir, 2018, p. 15). Acar summarized these different development models as the Layne and Lee Model (four stages: cataloguing, transformation, vertical integration and horizontal integration), the United Nations Model (five stages: emergence, development, interaction, transaction and integrated service), the Deloitte Model (six stages: information dissemination, two-way transaction, multi-purpose portals, portal customisation, combination of common services and full interaction), the Hiller and Belanger Model (five stages: simple information dissemination, two-way communication, service and monetary transaction, vertical and horizontal integration and political participation) and the Gartner Model (four stages: existence, transaction, interactive transaction and transformation) (2018, p. 30). However, when all these different e-Government development models are analysed, it is possible to make basically four classifications for the e-Government maturity model. According to this classification, e-Government development models can be listed as information, interaction, transaction, and integration (transformation) (Yürük & Öztaş, 2017; Karataş & Tarhan, 2021). The first stage, the 'information' stage, "covers the content that users have access to only by reading on websites, which is non-procedural, simple and mostly in the form of brochures and booklets and is intended to inform citizens" (Yürük & Öztaş, 2017, p. 2134). In the second stage, 'interaction', the state can communicate (interact) with its citizens (stakeholders) in various ways. In other words, citizens (stakeholders) can communicate with the authorities via e-mail and can access and download the documents and forms they want even outside working hours (7/24) (Karataş & Tarhan, 2021, p. 322). In the third stage, the 'transaction' stage, "many transactions (tax payments, visa passport procedures, etc.) can be done online without going to public organisations" (Yürük & Öztaş, 2017, p. 2134) and in the last stage, the 'integration (transformation)' stage, "state institutions are integrated among each other, and a main electronic state portal is created for the relevant stakeholders" (Karataş & Tarhan, 2021, p. 323).

### **E-Government Practices in the World**

The United Nations Department of Economic and Social Affairs (UN DESA) publishes the 'E-Government Development Index' (EGDI report), a report that assesses the e-Government development status of United Nations member states (193 countries) from 2001 to the present day (UN E-Government Knowledge Base). At the end of the evaluation, the top 14 countries with the highest EGDI values are Denmark, the Republic of Korea, Estonia, Finland, Australia, Sweden, the United Kingdom, New Zealand, the United States of America (USA), the Netherlands, Singapore, Iceland, Norway, and Japan (UN, 2020, p. 11-12). When examples from countries are examined, the prominent ones are as follows:

Denmark had the highest EGDI globally in 2018 and 2020 and is one of the seven countries in Northern Europe and one of the five countries in the European Union that are part of the highest rating class (VH) (UN, 2020, p. 12). The objectives that Denmark has set at the beginning of e-Government are that e-Government should play an active role in creating a network society, the public sector should work and communicate in a network environment, public services should be provided to citizens and institutions in a very comprehensive manner from

a single centre, and the tasks of the public sector should be performed in the best way wherever they are used (Kırçova, 2003, p. 152). While the Republic of Korea ranks 2nd after Denmark, it ranks 1st in the 'online service index (OSI)', one of the three dimensions of e-Government (UN, 2020, p. 12). The first step of the digitalisation of the government of the Republic of Korea started with the computerisation of the public administration in the 1960s and 1970s, the establishment of national information communication networks in the 1980s, the informatisation of the national administration in the 1990s, the creation of an integrated e-Government in the 2000s, the realisation of the integration of government services in the 2010s, and the sixth and final step is the stage of intelligent digital government (Republic of Korea E-Government Portal). The USA ranks 9th in the EGDI report. While the USA's development index was 0.8769 in 2018, the development index increased to 0.9297 in 2020 (UN, 2020, p. 11-12). The United States has based its e-Government strategy on the elements of user satisfaction, flexibility, and control (Yürük & Öztaş, 2017, p. 2137). The United Kingdom ranks 7th in the report. As stated in the report, while the development index in 2018 was 0.8999, the development index increased to 0.9358 in 2020 (UN, 2020, p. 11-12). In the United Kingdom, while e-Government studies started in the nineties, e-transformation studies gained further momentum with the addition of the Electronic Representation Department to the state structure, and it was ensured that the studies were carried out in a coordinated manner at local and national level (Yürük & Öztaş, 2017, p. 2139). Australia ranks 5th in the report. As stated in the report, while the development index in 2018 was 0.9053, the development index increased to 0.9432 in 2020 (UN, 2020, p. 11-12). The Australian government is a country that contributes to the growth and development of e-Government services and is an example for other countries. In 2001, the government set the goal of providing all government services online and created a comprehensive road map for this purpose. In 2002, the Ministry of Communications, Information Technology and the Arts launched the e-Government vision (Demirel, 2006, p. 108-109).

Although the process of transition to e-Government in Turkey started with the developments in the field of information and communication technologies (ICT) in the 1990s, the introduction of e-Government took place in the 2000s, i.e., within a period of 10 years (Ekinci, 2018, p. 336). According to Erdem, e-Government transition studies in Turkey are listed under five headings. These are E-Turkey Initiative (2001), E-Transformation Project (2003), Information Society Strategy (2006), Ninth Development Plan (2007-2013) and Tenth Development Plan (2014-2018) (2014: 738). The last important study on the transition to e-Government is the Eleventh Development Plan 2019-2023. This study was presented by the Republic of Turkey Ministry of Development in 2018 under the title of 'Development of e-Government services' and with this plan, it is aimed to contribute to the Eleventh Development Plan to be realised between 2019-2023 by evaluating the status of e-Government in Turkey and in the world and the developments that are thought to be possible in this field in the near future. In the said plan, the principles to be followed in the provision of e-Government services (Article 5) in the text of the 'Regulation on the procedures and principles regarding the execution of e-Government services' dated 2016 and numbered 29820, which constitutes the basis for Turkey e-Government project and studies, were emphasised (Republic of Turkey Ministry of Development, 2018, p. 21-22). In the '2020 UN E-Government Development Index (EGDI)' report, Turkey ranked 53rd with an EGDI value of 0.7112 in 2018 and 53rd again in 2020 with a value of 0.7718 (UN, 2020, p. 48).

### **GENERAL EVALUATION OF TRNC E-GOVERNMENT PORTAL**

When the literature on the examination of E-Government gateways is reviewed, it is seen that content analysis method is generally used among data collection methods in these studies. Content analysis is defined as "a systematic, repeatable technique in which some words of a text are summarised into smaller content categories by coding based on certain rules" (Büyükoztürk et al., 2020, p. 259). This article aims to provide information about the current level of development and content of the TRNC E-Government Portal. For this purpose, whether the TRNC e-Government Portal is user-oriented or not was analysed in the context of big data features and citizen orientation.

As stated in the informative publications of the TRNC E-Government Portal, e-Government portal is a website that provides access to all public services from a single point. The aim of the portal is to provide public services to citizens, businesses, and government organisations effectively and efficiently through information technologies. E-Government is the electronic delivery of services normally provided to citizens by the government. In this way, the government aims to provide its services to citizens in the easiest and most effective way, in a quality, fast, uninterrupted, and secure manner. With the e-Government approach, which has started to replace the bureaucratic and classical government understanding, it is aimed to provide easy access to every government institution and every individual to systems using information technologies and government institutions and organisations and the services provided by these institutions.

This study aims to obtain information about the current development level and content of the TRNC E-Government Portal by using the content analysis method. For this purpose, whether the TRNC e-Government Portal is user-oriented or not was analysed in the context of big data features and citizen orientation.

While it is sufficient to type in the address [www.edevlet.gov.ct.tr](http://www.edevlet.gov.ct.tr) and browse the page to access the contents offered for information purposes in the TRNC e-Government Portal, a password, e-signature, or mobile signature is required to access personal information or e-Services that require authentication. The user password required to utilize the services offered through the E-Government portal is obtained from the district governorships in each district in the TRNC. According to the information provided on the TRNC State Portal, the services offered to citizens through the e-Government portal are information services, e-Services, payment transactions, short cuts to institutions and organisations, information updates and announcements, and information messages from institutions to citizens.

When logging into the TRNC E-Government Portal, there is the TRNC official emblem (logo) at the top left of the main page. On the top right of the portal, there are five tabs in total: a tab with an English guide to provide information about the portal to foreign users, a tab with accessibility features (text-only view and more pronounced focus) to facilitate users with disabilities or physical limitations, a tab that allows users to customise their pages, a tab that allows users to search for the information or service they want (how can I help you?), and a login tab for users to access personal information or e-Services that require authentication.

When the main tabs of the portal are analysed, it is seen that there are five main tabs on the main page. These tabs are 'e-Services', 'institutions', 'municipalities', 'government transactions' and 'quick solution'. Figure 1 below shows the appearance of these five tabs.



**Figure 1:** Main Tabs on the Home Page of the TRNC E-Government Portal

In the "e-Services" (e-Hizmetler) tab, the e-Services offered by official institutions are listed in alphabetical order of the names of the institutions; in the "institutions" (Kurumlar) tab, the list of all official institutions of the TRNC is given in alphabetical order; in the "municipalities" (Belediyeler) tab, the list of 28 municipalities in six districts is presented supported by a map; the next tab, 'government transactions' (Devlet İşlemleri), provides information on issues of interest to citizens about government transactions (education, general information, working in the TRNC, TRNC citizenship/passport, travelling, foreigners); and the last main tab, 'quick solution' (Hızlı Çözüm), provides information on communication methods that users can apply for the solution of problems (complaints, suggestions, questions and requests) related to the e-Government portal.

In the 'e-Services' main tab of the portal, the e-Services offered by public institutions are arranged in alphabetical order of the names of the institutions. Accordingly, the Deputy Prime Minister's Office, Ministry of Tourism, Culture, Youth and Environment has one service offered through the e-Government portal (electronic document management system document verification), Ministry of Public Works and Transport has one service offered through the e-Government portal (electronic document management system document verification), the Information and Communication Technologies Authority (ICTA) has one service (ICTA Academy Online Education Platform), the Ministry of Labour and Social Security has two services: an identity verification service (Social Insurance Department - insured login) and a service offered through the e-Government gateway (electronic document management system document verification), the Ministry of Economy and Energy has one service (electronic document management system document verification) available through the e-Government portal, the Customs and Duties Department has one service for identity verification (customs information system), Security Forces Command's ASAL and Mobilisation Branch Directorate has six services: booking/appointment, ASAL referral procedures (querying referral information), ASAL military service deferment procedures (querying

deferment information and military service status information) and mobilisation services (querying vehicle mobilisation information and querying personnel mobilisation exercise), the Ministry of Interior has one service (electronic document management system document verification) available through the e-Government gateway, the TRNC Prime Ministry has two services offered through the e-Government portal in total, one service (for electronic document management system document verification) and one service offered for identity verification (public administration system). The TRNC Courts have two services in total, namely the marriage information service and the service in the direction of identity verification (lawyer portal), the TRNC Central Bank has one service (daily exchange rates) available through the e-Government portal, the Ministry of Finance has one service (electronic document management system document verification) available through the e-Government portal, the Ministry of Education and Culture has a total of two services, one for identity verification (MoNE information system) and one through the e-Government gateway (electronic document management system document verification), the Lotteries Unit has one service (lottery enquiry) available through the e-Government portal, the Office of the Official Receiving and Recordship has five services in total, one service for identity verification (e-legal system) and four services (enquiry of new information of a commercial company, enquiry of the company one owns, enquiry of commercial company information and commercial company search) offered through the e-Government portal. The Ministry of Health has four services (analysis result, Covid-19 test result, vaccination information inquiry and electronic document management system document verification) available through the e-Government portal, the Ministry of Agriculture and Natural Resources has one service (electronic document management system document verification) available through the e-Government portal, the Trade Department has one service (importer and exporter certificate enquiry) available through the e-Government portal, the Traffic Office has one service (enquiry of vehicles registered in my name) available through the e-Government portal, and finally, the General Secretariat of the Supreme Electoral Council and the permanent voter registers offices have one service (voter register information) available through the e-Government portal. In addition to the e-Services provided under 'institutional services' on the page in question, access to 'municipal services', 'university services', 'company services', 'new services', 'frequently used' and 'access to other government portals' tabs are also provided. When these tabs were analysed, it was observed that the content of the 'university services', 'company services' and 'new services' tabs had not yet been created.

In the light of the above information, it would not be wrong to say that e-Services in organisations mostly consist of the Electronic Document Management System (EDMS), which enables the archiving of the input and output of all kinds of documents arising from the activities of the organisation. In addition, it was noted that some other e-Services other than EDMS were included in the 'most used services' tab and were few. To provide easy, fast, effective, and high-quality services to citizens, it is important to increase the e-Service capacity and to ensure that the services of all institutions are interconnected, in other words, to ensure integration in services. Integration of services also plays a major role in increasing the acceptance and use of e-Government, hence the portal. However, when the 'e-Services' tab is taken into consideration, although the variety of services under this tab is low, when the contents of the 'institutions' and 'municipalities' tabs are examined, it is seen that although both institutions and municipalities do not have services offered through the e-Government Gateway infrastructure, the contact information of these institutions and municipalities (institution name, web page, tel., e-mail, fax, address supported by a map, etc.) are presented in the lower steps of the main tab in the portal, enabling the user to easily access the desired institution or municipality and paving the way for them to utilize online transactions to existing (or future) e-Services. This is also important in terms of portal design (in terms of web design) as an infrastructure preparation to ensure that the increasing variety of services (increasing e-Services) can be easily delivered to the user in the future processes.

'When the main tab 'Institutions' is accessed, the list of the main legislative, executive and judicial institutions of the TRNC State is accessed, and when the names of the institutions are entered, the contact information of the institution (institution name, web page, tel., e-mail, fax and address supported with map) and the list of electronic services offered through the e-Government gateway and/or their own websites are accessed. The list in question is arranged in alphabetical order of the names of the institutions. When you click on any institution in the list, you can access the contact information of the relevant institution (institution name, web page, tel., e-mail, fax, and address) and a map showing its location. It has been observed that when clicking on some institutions, information such as 'there is no service offered through the e-Government Gateway infrastructure', 'services offered through the e-Government Gateway' or 'services offered through the website of the institution' is presented. The names of the institutions in the portal, whether they have services through the e-Government portal, and if so, what the service is are presented in Annex 1.

In addition, although some institutions do not have services offered through the e-Government portal infrastructure, it is seen that by accessing the services of these institutions through their own websites and



presenting their contact information (institution name, web number, tel., e-mail, fax, address supported by a map) on the portal, the user can easily access the desired institution and utilize their existing online transactions.

There are six districts and 28 municipalities affiliated to districts in the TRNC. When logging in to the 'municipalities' main tab of the portal, the list of municipalities under the district is accessed by selecting the districts with the phrase 'select the district from the map above or the selection box below to access the services offered by the municipalities in your district'. Clicking on any municipality provides access to the contact information of the relevant municipality (name of the institution, web page, telephone, e-mail, fax, and address supported with a map), and the list of electronic services offered through the e-Government gateway and/or their own websites. Annex 2 provides information on which municipalities are located under which districts, in the order in which they are presented in the portal, and the e-Services offered by the municipalities (through the e-Government portal and/or through their own websites). While municipalities have a single service (EDMS) offered through the e-Government gateway, they have services such as debt enquiry, payment transactions, e-municipality forms under the name of e-municipality services on their own websites.

When the 'government transactions' tab, which is another of the main tabs of the portal, was accessed, it was observed that some topics (education, general information, working in the TRNC, TRNC citizenship/passport, travelling and foreigners) were created on this page. While 'Higher Education Scholarship and Information System (YOBIS)' and 'university equivalence procedures' related to higher education were created under the heading of 'education', and information is provided about the subjects, it was observed that the following subject headings were opened under the heading of 'general information', but there was no information in the content: 'judicial matters', 'social insurance benefits received by employees', 'how can I lodge a complaint about environmental pollution?' 'stay in safety', 'TRNC international postcodes', 'housing unit', 'immigration issues', 'How do I import/export?', 'In which cases and how can I apply to the Ombudsman?', 'social insurances electronic premium payment', 'traffic issues', 'procedure followed regarding investors' and 'importation of pet animals accompanied by passengers from abroad to the Turkish Republic of Northern Cyprus'. It was observed that, under the heading of 'working in TRNC', the subject headings of 'HSO (occupational health and safety)', 'public vacancies', 'working life in the TRNC' and 'things to know about work permit procedures for foreigners' were created, however, information is provided only under the heading of 'public vacancies' (redirection to the website of the Public Service Commission), and there is no information on the content of other headings. It was determined that, under the heading of 'TRNC citizenship/passport', the heading of 'application for citizenship by marriage' was created and information is provided on this subject (Redirection to the website of the Directorate of Immigration Office), while under the heading of 'travel', subject heading of 'foreign travel transactions' was created and by giving information on the subject, directions were made to the websites of the relevant authorities. Under the last heading, 'foreigners', subject headings of 'what needs to be done to get a student permit', 'how to buy property in the TRNC as a foreigner' and 'visitor permit' were created and by providing information on the subject, directions were made to the websites of the relevant authorities. However, an important point to be noted here is that the phrase 'government operations', which includes the classification of some e-Services according to subjects, may not be clearly understood by the user (what its content is) and that tabs according to subjects should also be included on the main page of the portal in order for the user to access the desired service directly and easily. The fact that the services offered on the portal are located on the main page according to their subjects is considered important both in terms of increasing the speed of service and ensuring ease of use, and it is thought that the portal plays a major role in the acceptance and use of the portal and e-Government by the users.

The 'Quick solution' main tab provides information about the contact methods that users can apply for the solution of problems (complaints, suggestions, questions, and requests) related to the e-Government Gateway and is the tab where complaints, suggestions, questions, and requests are received for the solution of problems related to the e-Government Gateway. When logging in to this tab, 'contact and help centre' and 'quick solution centre' sub-tabs are encountered. 'Contact and help centre' tab includes 'general information', 'contact form' and 'social media' sub-headings. Under the heading 'general information', information about the problems encountered during the use of the e-Government Gateway and the authorities to seek written information and answers (117 call centre, e-mail, contact form) to resolve these problems are provided, under the heading 'contact form', complaints, suggestions, questions and requests regarding the problems encountered during the use of the e-Government Gateway can be submitted by filling out the form, and under the heading 'social media', information about the official social media accounts of the e-Government Gateway is provided. The 'quick solution centre' sub-tab contains the sub-headings 'I am having login problems' and 'I am having problems with my personal information'. Under the heading 'I am having login problems', there are ready-made questions and answers related to the problem experienced by the user or the information they want to access, while under the heading 'I am having problems with my personal information', there are ready-made questions and answers under the subheadings 'there is an error in my address information on the e-Government portal', 'I do not know how to update my personal information on the e-

Government portal' and 'there is an error in my identity information on the e-Government portal'. It is noteworthy that in the main tab where communication methods are specified, written text and information are used in all methods of communication with the e-Government official. When these communication methods were clicked on and examined, it was observed that 117 e-Government call centres and e-Government social media accounts (Twitter, YouTube, Instagram, Facebook) were not active and up to date, except for the 'quick solution centre' and 'write to us' tabs. The fact that the 'live support' service, which provides the user with a quick solution and the opportunity to submit any request, complaint, or suggestion instantly, is not provided and that social media accounts, which are seen as an up-to-date method that enables easy communication with e-Government officials, are not active and up to date, have been identified as a deficiency in terms of effective communication.

Apart from the main tabs of the portal, other tabs on the home page are 'most used services', 'news and announcements' and 'we are with you in social media too!' Accordingly, the 'most used services' are; 'Daily exchange rates' offered through the e-Government portal infrastructure in cooperation with the TRNC Central Bank, 'vehicle inquiry registered in my name' offered through the e-Government portal infrastructure in cooperation with the Traffic Department, 'test result' and 'vaccination information query' offered through the e-Government Gateway infrastructure in cooperation with the Ministry of Health, 'marriage information service' offered through the e-Government Gateway infrastructure in cooperation with the TRNC Courts, 'military service status query', 'postponement information query' and 'referral information query' offered through the e-Government Gateway infrastructure in cooperation with the Security Forces Command, 'voter registry information' offered through the e-Government portal infrastructure in cooperation with the General Secretariat of the Supreme Electoral Council and permanent voter registry offices. However, while analysing the portal, it was observed that some transactions could not be completed due to technical problems in the system. The fact that some services cannot be provided due to technical problems depending on the day shows us that necessary measures should be taken to minimise technical problems. It is important to identify the factors leading to this situation and to improve service quality.

Under the 'news and announcements' tab, which is another tab (heading) on the home page, it has been observed that information services are provided under the sub-headings of the following in line with their subjects: 'document verification', which allows the user to verify documents created in the electronic document management system; 'life in Cyprus', which allows you to follow the calendars of events such as festivities, festivals, concerts, exhibitions, theatres, etc. in the TRNC and access the web page for exploring the TRNC; 'newly added services', which allows you to access the list of the newest services added to the e-Government portal; and 'Atam', which allows you to visit the website of the Atatürk Research Centre. In the presentation of the announcements and news in this tab, it is considered important to include more up-to-date information as well as general information in terms of the activity and timeliness of the page.

In addition, towards the end of the home page, under the heading 'we are with you in social media too!...', it is stated that there are official social media accounts where users can be informed about the developments related to the e-Government Gateway and where users can report questions and errors, and that these social media accounts are Twitter, Facebook, YouTube and Instagram, as well as social media usage guide information. However, when logging into social media accounts, it is seen that these accounts are not yet fully up-to-date and active.

At the bottom of the main page, under the title 'e-Government Gateway', the following sub-headings are included and explained: 'home page' to return to the home page, 'English' to provide foreign language option, 'about us' to provide information about the e-Government Gateway, 'legal notice' to explain the legal notice and general conditions of the e-Government Gateway, and 'privacy and usage' tabs to explain the security of personal data, copyrights, limits of liability, e-mail and text message notifications; 'frequently used services', 'newly added services', 'municipal services' and 'all institutions' under the heading 'e-Services'; 'all institutions' and 'municipalities' under the heading 'public institutions'; 'general help', which provides information on how citizens can use the e-Government portal and what kind of services are offered, 'frequently asked questions', which answers questions about e-Government, 'our policies', which presents password and information security policies, 'for your security', which states the things to be considered for the security of password and personal information; 'contact us', which includes general information about communication, contact form, social media, login or personal information problems, and 'help for non-citizens', which includes an English guide to provide information about e-Government and e-Government gateway to foreign users; 'text-only view', 'more prominent focusing', 'keyboard shortcuts' in order to provide easy access to information and services on the e-Government Gateway (for people with disabilities or physical limitations) and 'site map' showing the main page listed collectively in order to provide easy access to the main categories and pages on the e-Government Gateway under the title of 'accessibility'. Finally, the communication channels that act as a bridge between the e-Government Gateway and the users, i.e., the methods by which users can contact the e-Government Gateway, are presented under the heading "Need help?"

You can contact us using the following methods. These communication methods are listed as 'quick solution centre', 'write to us', 'e-Government call centre', 'Twitter' and 'Facebook'. When these communication methods, which are also described under the other tabs of the home page, were clicked on, and examined, it was observed that the other tabs (117 e-Government call centre, Twitter, YouTube, Instagram, and Facebook) were not active and up to date, except for the 'quick solution centre' and 'write to us' tabs as mentioned before.

## CONCLUSION

As stated in the section on e-Government development models (evolution models, maturity models) in this study, although the items in these models are subjected to different rankings, the main classification that is basically accepted can be listed as information, interaction, transaction, and integration (transformation). When these e-Government development models are taken into consideration, it is observed that the TRNC E-Government Portal has made significant progress in the information (online presence of the portal, presentation of information, brochure-booklet format, most of the information presented is static and has little interaction with the user) and transaction (online forms and transactions, i.e. online tax payments, visa passport procedures, etc.) stages, while the interaction (interactive, two-way communication) and integration (linking all services, integration) stages have not yet been partially achieved.

Pippa Norris (2002) states that interactivity and informational transparency form the basis of the citizen orientation of state-owned Internet applications, while Wimmer ve Holler state that user-oriented and easy-to-use e-Government portal interfaces should have the following characteristics: learnability (easy to learn), efficiency (efficient to use and help can be obtained in reaching the desired service and information), memorability (memorable, easy to remember), errors (minimising the user's error rate), satisfaction (pleasant use of the interface to satisfy the user and fast, efficient access to the desired results), functionality (appropriate and intuitive visualisation of functionality and process flow, i.e. each service should be clearly designed so that the user can easily learn what it does and how it works) and reliability (the system should be predictable and the user should be able to trust the way the system works and its timelines) (2002, p 175-176). As stated in many sources, big data should have the following characteristics: diversity (Kaisler et al., 2003; Bayrakçı & Albayrak, 2019; Agocuk & Çiftçi, 2020), volume (Zadrozny & Kodali, 2013; Bayrakçı & Albayrak, 2019; Agocuk & Çiftçi, 2020), speed (Zikopoulos, 2012; Bayrakçı & Albayrak, 2019; Agocuk & Çiftçi, 2020), accuracy (Bayrakçı & Albayrak, 2019; Agocuk & Çiftçi, 2020), value (Bayrakçı & Albayrak, 2019; Agocuk & Çiftçi, 2020), comprehensiveness (Bayrakçı, 2015; Agocuk & Çiftçi, 2020), indexicality and resolution (Agocuk & Çiftçi, 2020), relationality (Agocuk & Çiftçi, 2020) and flexibility (Marz & Warren, 2012; Agocuk & Çiftçi, 2020). In the light of the above information, whether the TRNC e-Government Portal is user-oriented or not has been analysed in the context of big data features and citizen orientation. Accordingly, the TRNC E-Government Portal is considered to be as follows.

- Including the phrase gov.ct.tr indicating that the portal is an official web page of the state, which enables the portal to be characterised as reliable by the citizens, and the TRNC official emblem on the home page (accuracy + reliability);
- Ensuring secure login and logout by requiring a password, e-signature, or mobile signature in the log in of the portal (security + flexibility);
- Having an English language option for non-Turkish speakers living in TRNC, which is accepted as a common language in the world (flexibility + diversity + value + comprehensiveness + functionality);
- To eliminate the digital divide, which is one of the problems faced by e-Government, necessary arrangements having been made to facilitate the use of users with disabilities or physical limitations (flexibility + comprehensiveness + value + diversity + efficiency + functionality);
- Giving the update dates of the information related to the portal content (accuracy);
- The possibility to customise the page (diversity + value) is seen as a plus of the portal, but;
- Increasing the volume of e-Services in e-Government applications (flexibility + volume + diversity + comprehensiveness + relationality + satisfaction);
- e-Services categorised by subject (justice, environment, agriculture and animal husbandry, government and legislation, education, general information, security, business and career, personal information, health, social security and insurance, complaints and information, telecommunications, traffic and transport, taxes, fees, and penalties, etc.) are placed in the main tabs of the portal (speed + satisfaction + learnability + functionality);
- Transparently sharing with citizens, in textual and/or graphical form, data on E-Government gateway (number of registered users, number of services, mobile services, number of institutions providing services) and citizen applications (number of applications, the most common subject of applications, evaluation status of applications, etc.) (transparency);
- In addition to the complaints, suggestions, questions, and requests received regarding the use of the portal and the problems encountered, ensuring the receipt of complaints, suggestions, questions, and requests

regarding all other government transactions that cannot be reached or for which suggestions are desired (satisfaction + comprehensiveness + flexibility);

- In the e-Government system based on two-way (interactive, interactive) communication, realisation of 'live support' service representing instant service provision (interaction + diversity + volume + value + flexibility + comprehensiveness + efficiency + satisfaction + speed);
- Ensuring that the 'live support' service and all 'social media' accounts, which play an important role in ensuring the relationship, effective communication and participation of the user or citizen with the state, are up to date (value + comprehensiveness + flexibility + efficiency + productivity + satisfaction + speed);
- Diversification of the solution presentation (efficiency + satisfaction + diversity + volume + speed + comprehensiveness + flexibility) for possible problems ('I am having login problems' and 'I am having problems with my personal information') in the quick access tab of the portal;
- Enabling the citizen who makes any complaint, suggestion, question, and request to enquire about the status of the application and providing information on how many days the applications will be answered (comprehensiveness + flexibility);
- Providing more detailed information (hierarchical structure of the portal, mission, vision, etc.) in the 'about us' tab added to provide information about the E-Government portal (transparency + diversity + volume + comprehensiveness + relationality + flexibility);
- More up-to-date information in the news and announcements presented in the 'News and announcements' tab (diversity + volume + flexibility + relationality);
- Taking measures to minimise technical problems that reduce the quality-of-service delivery (satisfaction + error + efficiency);
- Adding a return button to each page for easier switching between tabs (satisfaction + functionality + speed);
- Enabling the use of existing e-services via smartphone (for easy access and instant information) (diversity + speed + value + comprehensiveness + flexibility + satisfaction).

As a result, states that want to survive in the current era must incorporate the e-Government phenomenon, which shows that the state exists in the digital world. However, it is equally important not only to incorporate, but also to ensure the acceptance and use of the created system by its users. In this sense, the content of e-Government portals that provide access to public services from a single point in e-Government, whether they are user-friendly or not, whether they have big data features or not, and whether they are citizen-centred or not play a major role in their acceptance and use. Therefore, this study aims to obtain information about the current development level and content of the TRNC E-Government Portal. In this direction, whether the TRNC E-Government Portal is user-oriented or not was analysed in the context of big data features and citizen orientation.

At the end of the review, when the development models of e-Government are taken into consideration, it was found that although progress has been made in the information and transaction stages of the TRNC E-Government Portal, the necessary success has not been achieved in the interaction and integration stages, and success has not yet been achieved in the context of citizen orientation. In addition, only efficiency, functionality, and reliability in terms of user orientation and ease of use, and accuracy, diversity, comprehensiveness, flexibility, value (five out of nine features) in terms of big data features were partially improved, but it was concluded that they were not at a sufficient level for a successful Government portal.

However, it should be noted that there is a portal infrastructure that will enable the stages or features that have not yet been achieved to be easily realised. This shows us that the TRNC E-Government Portal design has a flexible structure and can turn into a successful e-Government portal if the deficiencies are completed in the future.

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**Annex 1.**

**Table 1:** Institutions and Services under the "All Institutions" tab in the TRNC E-Government Portal

<b>Institution Name</b>	<b>No Service via e-Government Gateway</b>	<b>Service via e-Government Gateway</b>	<b>Service</b>
EU Coordination Centre	✓		
Fuel Unit	✓		
Minimum Wage Determination Commission (Affiliated Institution)	✓		
Ataturk Teacher Academy	✓	✓	Services Provided through the Institution's Website (Decisions of the Council of Ministers)
General Secretariat of the Council of Ministers	✓		
Prime Ministry	✓		
Prime Ministry Auditing Board	✓	✓	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
Deputy Prime Minister, Ministry of Tourism, Culture, Youth and Environment		✓	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
Ministry of Public Works and Transport		✓	Services Provided through the Institution's Website (Bayrak Radio and Television Organisation)
Bayrak Radio and Television Corporation		✓	BTK Academy Online Training Platform and Services Provided through the Institution's Website (Information and Communication Technologies Authority Online Application System (Application Forms) and Information and Communication Technologies Authority Online Payment)
Information and Communication Technologies Authority (BTHK)		✓	Services Provided through the Institution's Website (TRNC Pharmacies on Duty, Laboratory Results, Outpatient Clinic List and Outpatient Clinic Appointment)
Budget Department	✓		
Cengiz Topel Hospital		✓	
Presidency	✓		
Presidential Symphony Orchestra	✓		
Republican Assembly		✓	Services Provided through the Institution's Website (Parliament TV Live Broadcast and Parliament TV Parliamentary Meetings)
Cyfruvex Ltd.	✓		
Department of Labour	✓		
Ministry of Labour and Social Security		✓	Identity Verification Services (Social Insurance Department - Insured Login), Services Provided through e-Government Gateway (Electronic Document

Environmental Protection Department	✓	Management System Document Verification) and Services Provided through the Institution's Website (TRNC Find a Job Portal)
EMU Foundation Board of Managers	✓	
State Printing House	✓	Services Provided through the Institution's Website (TRNC Official Gazette)
State Property and Materials Department	✓	
State Laboratory Department	✓	
State Planning Organisation	✓	
State Symphony Orchestra and Choir	✓	
State Production Farms Department	✓	
Ministry of Foreign Affairs	✓	
Foreign Affairs Department	✓	
Dr. Burhan Nalbantoğlu State Hospital	✓	
E-Government Executive Committee	✓	
Department of Education Shared Services	✓	
Ministry of Economy and Energy	✓	
Department of Information	✓	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
High Council of Antiquities and Monuments	✓	
Department of Antiquities and Museums	✓	
Famagusta State Hospital	✓	Services Provided through the Institution's Website (TRNC Pharmacies on Duty, Laboratory Results, Outpatient Clinic List, Outpatient Clinic Appointment)
Revenue and Taxation Office	✓	
Youth Welfare Office	✓	Services Provided through the Institution's Website - Vehicle Registration Fee Payments, Internet Tax Office (Fee Collection/Document Verification/Calculation)
Department of General Secondary Education	✓	
General Agricultural Insurance Fund	✓	
Customs and Duties Department	✓	Identity Verification Services (Customs Information System) and Services Provided through the Institution's Website (Customs and Duties Department Public Satisfaction Survey)
Security Forces Command	✓	
Map Department	✓	ASAL and Mobilisation Branch Directorate Reservation / Appointment, ASAL Dispatch Transactions (Dispatch Information Inquiry), ASAL Military Service Deferment Transactions (Postponement Information Inquiry, Military Status Information Enquiry), Mobilisation Services (Vehicle Mobilisation Information Enquiry, Personnel Mobilisation Exercise Enquiry)
Department of Animal Husbandry	✓	
Treasury and Accounting Department	✓	



Vocational School of Nursing	✓	
Civil Chamber (Attorney General's Office)	✓	
Ministry of Internal Affairs		Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
Provident Fund		Services Provided through the Institution's Website (Application for 2000TL Partial Payment from your Provident Fund Savings and Provident Fund Portal)
Department of Pharmaceuticals and Pharmacy	✓	
Department of Primary Education	✓	
Settlement Committee	✓	
Department of Settlement and Rehabilitation	✓	
Statistics Institute	✓	
Department of Geology and Mines	✓	
Development Bank	✓	
Presidency of the Public Service Commission	✓	
Department of Highways	✓	
Committee on Missing Persons	✓	
Kıbrıs Sigorta Şti. Ltd.	✓	
Kıbrıs Türk Denizcilik Ltd. Şti.	✓	Services Provided through the Institution's Website (Kıbrıs Türk Denizcilik Ltd. Buy Online Ticket)
Turkish Cypriot Electricity Authority (KIB-TEK)	✓	Services Provided through the Institution's Website (Kıb-Tek E-Payment)
Kıbrıs Türk Kıyı Emniyeti ve Gemi Kurtarma Ltd. Şti.	✓	
Kıbrıs Türk Petrolleri Ltd.	✓	
Cyprus Turkish Dairy Industry Organisation		Services Provided through the Institution's Website (E-SÜTEK Producer / Transporter / Manufacturer and E-SÜTEK Membership Application)
Kıbrıs Türk Tütün Endüstrisi Ltd.	✓	
Cyprus Turkish Investment and Development Agency (YAGA)	✓	Services Provided through the Institution's Website (Cyprus Turkish Investment Development Agency Application Form)
Kıbrıs Vakıflar Bankası Ltd.	✓	
Cyprus Foundations Administration	✓	
Cyprus Foundations Credit Company	✓	
TRNC Prime Ministry		Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Identity Verification Services (Public Administration System)
TRNC Presidency	✓	
TRNC Courts	✓	Marriage Information Service and Identity Verification Services (Lawyer Portal)

TRNC Central Bank	✓	Services Provided through e-Government Gateway (Daily Foreign Exchange Rates) and Services Provided through the Institution's Website (Cheque Prohibitions Enquiry)
Co-operative Companies Registry	✓	
Turkish Cypriot State Theatres	✓	
K.T. Kooperatif Merkez Bankası Ltd.	✓	
Department of Culture	✓	Services Provided through the Institution's Website (Department of Culture Events)
Nicosia District Governorate	✓	
Department of Ports	✓	
Ministry of Finance	✓	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
Finance, Inspection and Investigation Board	✓	
Central Prison	✓	
Central Tender Commission Presidency	✓	
Central Legislation Department	✓	
Vocational Technical Education Department	✓	
Department of Meteorology	✓	
National Archives and Research Department	✓	
National Education, Supervision, Evaluation and Steering Committee	✓	
Ministry of Education and Culture	✓	Identity Verification Services (MEB Information System) and Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
Immigration Department	✓	Services Provided through the Institution's Website (Residence Permits, Student Permits and Curfew Permits)
Civil Registry Office	✓	
Forestry Department	✓	
Department of Money, Foreign Exchange and Development Fund Affairs	✓	
Department of Personnel	✓	
Lotteries Unit	✓	Services Provided through e-Government Gateway (Lottery Enquiry) and Services Provided through the Institution's Website (State Lottery Enquiry)
Department of Planning and Construction	✓	
General Directorate of Police	✓	
Directorate of Police School	✓	
Postal Department	✓	Services Provided through the Institution's Website (TRNC Postal Department Mail Tracking Service)
Competition Board	✓	

Office of the Official Receiver and Registrar	✓	Identity Verification Services (E-Corporate System) and Services Provided through e-Government Gateway (Search for New Information of Commercial Company, Search for Company I Own, Search for Commercial Company Information and Search for Commercial Company)
Ministry of Health	✓	Services Provided through e-Government Gateway (Test Result, Covid-19 Test Result, Vaccination Information Inquiry and Electronic Document Management System Document Verification) and Services Provided through the Institution's Website (Tissue and Organ Transplantation / Stem Cell Donation / Organ Tissue Donation / Infectious Diseases Notification)
Department of Industry	✓	
Court of Accounts	✓	
Free Port and Zone Administration	✓	
Department of Civil Aviation	✓	Services Provided through the Institution's Website (TRNC Civil Aviation Live Flights)
Directorate of Civil Defence Organisation	✓	
Department of Social Services	✓	Services Provided through the Institution's Website (Social Services Polling)
Department of Social Insurance	✓	Services Provided through the Institution's Website (Social Insurance Department Institutional Login and Social Insurance Department Application Tracking)
Department of Sport	✓	
Water Affairs Institute	✓	
Department of Urban Planning	✓	
Şeker Sigorta Kibris Ltd.	✓	
Department of Education and Training	✓	
Department of Publicity	✓	
Department of Land Registry and Cadastre	✓	
Department of Agriculture	✓	
Agricultural Research Institute	✓	
Ministry of Agriculture and Natural Resources	✓	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
Department of Telecommunications	✓	
Department of Trade	✓	Services Provided through e-Government Gateway (Importer and Exporter Certificate Enquiry)
Department of Gender Equality	✓	
Soil Products Authority	✓	
Traffic Department	✓	Services Provided through e-Government Gateway (Vehicle Registered in My Name Enquiry)
Traffic and Transport Services Commission	✓	
Department of Tourism Planning	✓	

Department of Tourism, Promotion and Marketing	√	
Turkish Agency Cyprus (TAK)	√	
Türk Alkollü İçki ve Şarap Endüstrisi Ltd. (TAŞEL)	√	Services Provided through the Institution's Website (TAŞEL)
Anti-Drug Commission	√	
Foundations Organisation and Religious Affairs Department	√	Services Provided through the Institution's Website (Foundations Organisation and Religious Affairs Department E-Payment and Foundations Organisation and Religious Affairs Department Be a Goodness Volunteer)
Veterinary Department	√	
Department of Inpatient Treatment Institutions	√	
High Council of Publications	√	
Renewable Energy Resources Board	√	
General Secretariat of the Supreme Court	√	
Department of Higher Education and Foreign Relations	√	Services Provided through the Institution's Website (Diploma Status Enquiry and EBA Enquiry)
General Secretariat of the Supreme Electoral Council and Permanent Voter Registers Offices	√	Services Provided through e-Government Gateway (Voter Register Information)
Supreme Administrative Auditor (Ombudsman)	√	

**Annex 2.**
**Table 2: TRNC Districts, Municipalities Affiliated to Districts and E-Services Provided by Municipalities**

District	Municipality	No. Of e-Services	e-Services
Famagusta	Akdoğan Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
	Beyarmudu Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
	Famagusta Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (Debt Enquiry, City Map and City Guide)
	Geçitkale Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
	İnönü Municipality	-	—
	Paşaköy Municipality	-	—
	Serdarlı Municipality	-	—
	Tatlısu Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
	Vadili Municipality	-	—
	Yeniboğaziçi Municipality	-	Services Provided on the Website of the Institution (E-Municipality Services)
Kyrenia	Alsancak Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (E-Municipality Services)
	Çatalköy Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (Water Complaint Form)
	Dikmen Municipality	-	Services Provided on the Website of the Institution (Debt Enquiry)
	Esentepe Municipality	-	—
	Kyrenia Municipality	5	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification), Personalised Services (Debt Information Enquiry, Water Subscriber Enquiry, Declaration Information Enquiry and Water Bill Enquiry) and Services Provided on the Website of the Institution (Debt Enquiry, Bus Stops and Cashier Transactions)
Güzelyurt	Lapta Municipality	-	—
	Güzelyurt Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (E-Municipality Services, Property Tax Inquiry and Water Fee Inquiry)
	Büyükkonuk Municipality	-	—
İskele	Dipkarpaz Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)

	İskele Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (Debt Enquiry and Electronic Application Forms)
	Mehmetçik Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (E-Municipality Forms)
	Yenierenköy Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification)
Lefke	Lefke Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (E-Municipality Services)
	Akıncılar Municipality	-	—
Nicosia	Alayköy Municipality	-	Services Provided on the Website of the Institution (E-Municipality Services)
	Değirmenlik Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (E-Municipality Services)
	Gönyeli Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (Online Collection (e-Cashier))
	Nicosia Turkish Municipality	1	Services Provided through e-Government Gateway (Electronic Document Management System Document Verification) and Services Provided on the Website of the Institution (Electronic Debt Enquiry and Payment Transactions, Electronic Requests, Register / Donate / Buy Tickets, Nicosia Cemetery and Traffic Debt Enquiry)

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## Evaluation of Studies Based on the ICAP Framework in Learning Environments

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### ABSTRACT

ICAP is a framework that classifies learning processes based on students' explicit behaviors. The framework is developed for testing the hypothesis that interactive exercises are better than constructive exercises, and active exercises are better than the passive exercises for higher cognitive engagement and better learning outcomes. The ICAP Framework is intended to assist researchers, instruction designers and instructors in determining the activities appropriate for the aimed research and teaching. This study aims to evaluate articles based on or supported by the ICAP Framework from various aspects. In the study, employing the descriptive survey method, data collection was conducted through document analysis, while content analysis was utilized to analyze the data. The 71 articles reviewed within the study's scope were examined through the "data collection form" developed by the authors. In this context, the articles' general and methodological characteristics and themes and the findings related to ICAP contexts are presented. As a result of the research, no study regarding the ICAP Framework was conducted in Turkey. It was revealed that most of the studies, which have increased in number since 2017 in various countries, utilize the ICAP framework at the analytical level or create models-modules and develop tools-scales based on the ICAP Framework. Additionally, it was observed that mostly undergraduate and K12 students were studied in face-to-face education, with social sciences as the leading disciplinary field and teaching-learning approaches and design-development-evaluation as the most frequently studied topics, while in studies in which mixed and qualitative methods were the leading methods, exploratory and experimental approaches were more preferred. In line with these results, recommendations are presented to contribute to the field.

**Keywords:** ICAP Framework, ICAP Hypothesis, Cognitive Engagement, Active Learning, Explicit Behaviors

### INTRODUCTION

Interactive-Constructive-Active-Passive (ICAP) Theory; is a cognitive engagement theory developed to define cognitive engagement and active learning in a way that can encourage deeper learning. Before explaining the theory and the ICAP Framework developed based on it, it is essential to examine how cognitive engagement and active learning are defined in the literature.

Engagement, which refers to the student's level of commitment and involvement in school, has been examined primarily as a construct discussed in the K12 education literature (Fredricks, Blumenfeld, & Paris, 2004). Reschly and Christenson (2006) state that engagement, considered multidimensional in the literature, has three important dimensions: cognitive, emotional, and behavioral. While behavioral engagement means actively taking part in the in-class exercises and learning processes such as studying and doing homework; in cognitive engagement, subjects such as students' including the learning in their cognitive processes or having aims for learning, and the association of the new knowledge with the old knowledge are discussed. Emotional engagement stands for building positive relationships with teachers and peers, wanting to participate in the lesson, being curious and interested, feeling belongingness to school, etc. At this point, Chi, Adams, Bogusch, Bruchok, Kang, Lancaster, ... & Yaghmourian, (2018), emphasize the three elements related to engagement in K12 literature regardless of the dimension of it. These are the lack of systematic definitions and criteria for degrees of engagement, the lack of a clear definition of cognitive engagement from these three engagement perspectives, and its merging with related constructs such as motivation, self-regulation, metacognition, strategy use (Ravindran, Greene & DeBacker 2005; Greene, 2015; Sinatra, Heddy, & Lombardi., 2015, as cited in Chi et al., 2018), and the difficulty in measuring cognitive engagement with survey instruments.

One another concept that relates to the ICAP Framework is active learning. The recent efforts in structuring the learning environments to make learning more productive and efficient are shaped through the current term, active learning. Chi, (2009), Menekse, Stump, Krause, & Chi (2013) define active learning as the contemporary student-

centered teaching approaches that dynamically include students in the learning processes; and state that the main components of active learning are students' participation in the concrete learning experiences, building knowledge through meaningful learning techniques, and student interaction to a certain extent throughout the process.

Active learning at the university level is defined in two ways: from the perspectives of students and teachers. Passive learning is defined as the context in which students learn, usually only when the teachers are lecturing. At the same time, active learning is defined as anything else students can do when they are not being lectured to, usually collaborative/interactive exercises in small groups or pairs. (Chi et al., 2018) In professional development literature, active learning refers to the general thought that a professional development program should embed active learning strategies throughout the whole program. Such strategies include a variety of teacher activities such as requiring teachers to practice as learners under simulated conditions, review the works of students, observe expert teachers, or be observed by other teachers, followed by feedback and discussion (Van Driel, Meirink, Veen, & Zwart, 2012).

Chi et al. (2018) state that active learning is a popular construct aiming to demonstrate that active students learn more than passive students; however, emphasize that neither explicit parameters nor concrete operational definitions regarding what kind of exercises are active learning exercises and how to decide whether an active learning exercise is better than the other are present, and that the criteria cannot be met. Therefore, teachers and instructors face practical difficulties of not knowing how to design active learning exercises, other than avoiding lecturing. Freeman et al. (2014), state that active learning does not define in any way that can refer to any kind of learning strategy other than lecturing, and therefore, the educators are deprived of guidance in deciding what kind of exercises need to be included in the classroom. Therefore, the absence of a broad framework and classification related to the elements and characteristics of active learning makes it difficult to determine the value of active methods in different studies. Against these issues in the literature about engagement and active learning, ICAP, an evidence-based theory and learning science to help teachers design and practice active learning strategies, offers a heuristic method for improving learning to differentiate the types of active learning exercises from each other. (Chi & Whyllie, 2014)

#### **Interactive-Constructive-Active-Passive (ICAP) Framework**

ICAP Framework, initially put forward by Chi (2009), with its initial form DOLA (Differentiated Overt Learning Activities), classifies students' learning processes based on their explicit behavior. Within the DOLA, ICAP which presents three cognitive modes of cognitive engagement as interactive, constructive, and active; was improved in 2014 in a way that includes the passive mode. (Chi & Whyllie, 2014) Because many studies related to laboratory and classroom studies show that the passive mode is confused with one of the three modes. The term 'active' in active learning refers to the three modes (interactive, constructive, active) of cognitive engagement. 'Active' in the ICAP Framework, on the other hand, is a term referring to only one (active) engagement mode. (Menekse et al., 2013)

ICAP Framework provides a taxonomy of learning exercises based on explicit behaviors of students, categorized into one of the four modes (Chi & Whyllie, 2014): Interactive (I), Constructive (C), Active (A) and Passive (P). Explicit behaviors as indicators reflecting cognitive engagement can be observed, elicited, or directed by the instructor, evaluated in frequency of occurrence, coded, and analyzed as proof of the mediums in learning. This framework was developed to test the hypothesis that interactive exercises are more beneficial than constructive exercises, and active exercises are more beneficial than passive ones (I>C>A>P). Chi & Whyllie (2014) argue that drawing a line between these constructs is necessary for not only designing learning environments but also assessing which learning exercises are the most effective in mediating student learning.

The framework is different than the others in terms of emphasis and results. For instance, Cognitive Load Theory emphasizes the prescription of certain principles related to how learning materials need to be designed. (Pass, Renk & Sweller, 2004) SAMR Model provides learning designers with a framework to create the most appropriate learning experiences. (Conole & Brown, 2018). In the design of lesson plans and course work, typically used frameworks; for instance, Bloom's taxonomy, begins with classifying learning objectives and assessment elements from the teacher's point of view. (Krathwohl, 2002). ICAP, in contrast, designs lesson plans based on student's points of view and what they are supposed to do when interacting with teaching. The proposed framework focuses on understanding how different learning exercises contribute to or encourage learning. Each mode in the framework is operationally defined with heuristic methods consisting of two explicit indicators. These are the visible outcomes that students generate during the physical actions as they engage with learning. (Chi, 2009; Chi & Whyllie, 2014; Chi & Boucher, 2023).



Accordingly, passive engagement mode defines the state in which students are the recipients of information without engaging or interacting in their learning processes. For instance, if students listen to the lecture carefully or watch a video about the taught subject without note-taking, and are not interested in any other observable behavior; it is concluded that students are in passive mode. Therefore, two indicators of involvement in passive mode are paying attention, and producing observable outcomes. (Chi, 2009; Chi & Wylie, 2014; Chi & Boucher, 2023).

In active learning mode, students engage with materials in a more direct way, such as underlining or copy-pasting certain parts of a text and pausing and reversing video tapes. However, since active exercises do not include creating new knowledge through making conclusions or rebuilding prior knowledge, they only reflect superficial work (Chi, 2009; Chi & Wylie, 2014; Chi & Boucher, 2023; Gadgil, 2014).

In constructive learning mode, some additional outcomes students produce such as drawing mind maps, note-taking with their own words, asking questions building hypotheses, and casual connections, contain new ideas going beyond the given information about the content (Chi & Boucher, 2023). However, Chi (2009) points out that if a student asks a superficial question that is the word-for-word repetition of a text sentence, that is not constructive exercise, but an active exercise engaging with materials.

On the other hand, in interactive learning mode, which refers to a unique form of mutually co-productive collaboration, each partner should be constructively productive by not only going beyond the presented instructional information but also building onto the contributions of the other. Therefore, interactive exercises that provide students with the opportunities to create shared representations, lead to better learning outcomes than active and constructive exercises (Chi & Boucher, 2023).

The main hypothesis of ICAP theory has been supported by many laboratory and classroom studies, often comparing two conditions (Interactive>Constructive, Interactive>Active, Interactive>Passive, Constructive>Active) and mapping various circumstances into ICAP modes. (e.g., Freeman et al., 2014; Lin, Lee, Kalyuga, Wang, Guan., & Wu, 2017; Menekşe et al., 2013; Zhang & Linn, 2013; Legare & Lombrozo, 2014; Henderson, 2019; Leary, 2012; Chen, Wang, Kirschner, & Tsai, 2018). Despite the empirical support for the ICAP framework at various levels (K12, undergraduate, etc.) in the literature, especially in face-to-face learning, Thurn, Edelsbrunner, Berkowitz, Deiglmayr, & Schalk (2023) critically discuss two fundamental assumptions of the framework. Drawing on specific studies reported to strongly support the ICAP framework and current educational research questioning the validity of the framework the research highlights the importance of systematically monitoring and assessing students' implicit learning processes rather than explicit behaviors to achieve a particular learning goal.

When the relevant literature was analyzed, no study was found that evaluates the studies related to the ICAP Framework. In fact, analysis of conducted scientific studies in a field, may give some information of the depth of the subject, or reveal the general appearance of the analyzed field. (Turan, Karadağ, Bektaş, & Yalçın, 2014). This study is considered important in terms of demonstrating the general tendency in Turkey and the world regarding the ICAP framework and the studies carried out on the cognitive engagement of learners, revealing the deficient aspects, providing ideas on designing and implementing learning processes more effectively and productively; and thus, serving as a source to future studies. In line with this importance, the fundamental aim of the study is to evaluate articles based on or supported by the ICAP Framework. In accordance with this aim, answers to questions below were sought.

1. What are the general characteristics of studies related to the ICAP Framework?
2. What are the characteristics of the methodologies of studies related to the ICAP Framework?
3. What are the thematic characteristics of studies related to the ICAP Framework?
4. In which has ICAP been addressed in studies related to the ICAP Framework?

### Limitations

-This study, conducted by using the Anadolu University Library Search Engine and databases where full-access articles related to ICAP Framework have been published, is limited to;

-The articles published in Turkish and English languages,

-The keywords: "ICAP Taxonomy", "ICAP", "ICAP Theory", "Interactive Constructive Active Passive", "ICAP Framework", "ICAP Model", "ICAP HYPOTHESIS", "ICAP TAXONOMY", "ICAP FRAMING", "ICAP THEORY" used in the search of the Anadolu University Library Search Engine and databases between the dates: 01.12.2023- 31.01.2024.

## METHODOLOGY

### Research Model

The study is a descriptive study designed in the survey model. In the data collection, document analysis technique was utilized. Document analysis, covering the analysis of written materials containing information about the phenomenon or phenomena aimed to be studied; enables the analysis of documents produced within a certain period of time about a research problem, or documents produced by multiple sources and at different intervals on the relevant subject based on a wide period. (Yıldırım & Şimşek, 2006). Through document analysis, it is aimed to analyze the general tendencies of qualitative and quantitative research and to guide researchers in planning their own research (Selçuk, Palancı, Kandemir, & Dündar 2014). On the other hand, content analysis technique was adopted in the analysis of the data. The main aim of content analysis is to arrive at concepts or correlations that can explain the collected data (Yıldırım & Şimşek, 2016). Çepni (2014), states that the operation carried out in content analysis is to interpret similar data by gathering them together within the frame of certain themes and understandably arranging them. Through the content analysis used in the study, it is desired to provide broad, detailed, and reliable information to the field researchers.

### Data Collection and Analysis

In the first stage of the document analysis, national and international articles based on or supported by the ICAP Framework between 01.12.2023 and 31.01.2024 were accessed from the Anadolu University Library Search Engine and databases. As a result of the search 740 articles with keywords: “ICAP Çerçevesi”, “Aktif, Pasif, Yapıcı, Etkileşimli”, “ICAP Çerçevesi”, “ICAP Modeli”, “ICAP Hipotezi”, ICAP Taksonomisi”, “ICAP”, “ICAP Teori” and “Interactive Constructive Active Passive”, “ICAP Framework”, “ICAP Model”, “ICAP HYPOTHESIS”, “ICAP TAXONOMY” “ICAP FRAMING”, “ICAP THEORY”, in the keyword, title, abstract or in the text were found. No Turkish article related to the ICAP Framework was encountered among these articles. After the exclusion of duplicates, studies without full article access, book chapters, and irrelevant studies, 71 articles based on the ICAP Framework were included in the research. In this study, no date constraints were applied in order for the data to be broader and more detailed. To collect data from the included studies, the data collection form in Table 1 was used.

**Table 1:** Data Collection Form

M	Year	Country	Discipline Area	Instruction Mode	Study Group	Participant Level	Method	Data Collection Tools	Research Strategies	Research Themes	ICAP Context

Each addressed study is enrolled and analyzed according to the criteria in the data collection using a separate code name (M1, M2,... M71). The criteria addressed in the data collection form were determined to be related to the four research questions of the study:

**Criteria related to the first research question** are the year of publication, country, study group, participant education level, discipline area, and instruction mode.

**Criteria related to the second research question:** research method, research strategies, data collection methods

**Criteria related to the third research question:** research themes.

**Criteria related to the fourth research question:** ICAP Framework context.

The data obtained regarding the research themes were collected and evaluated in six (6) categories, and the data obtained regarding the ICAP context were collected and evaluated in four (4) categories. The data were represented with frequency and percentage values. Open coding was utilized in the content analysis process for the first and second research questions. In analyzing the data related to the third and fourth research questions, the two researchers separately conducted coding, and the consensus-disagreement formula (Miles & Huberman, 1994) was used to ensure reliability between coders.

To increase the validity and reliability of the research, both the literature and the opinions of academicians working in the field were used in determining the themes. In qualitative research, since the observations should be conducted by not only one, but more than one person to increase validity, and prevent the impact of the authors’ prejudices on the research; (Büyüköztürk, Çakman, Akgün, Karadeniz, & Demirel, 2018) the form, categories, and coding were examined by two experts in communication, distance education, and education technology. Findings obtained as a result of content analysis, are presented and discussed in the ‘findings’ section of the study.

### Ethical Dimension of the Study

Ethics committee approval was not required since the study used a literature review model, did not involve direct effects on humans or animals, and academic studies that were allowed open access by the authors were reviewed.

## FINDINGS

In this section of the study, in line with the sub-objectives of the research, findings on the general characteristics, methods, thematic characteristics, and ICAP context of the articles are presented.

### I-General Characteristics of the Studies

General characteristics of the reviewed studies are addressed in six sub-headings: year of publication, country, study group, participant level, discipline area, and instruction mode.

#### *Distribution of Articles by Year*

As presented in Table 2, as a result of the search in the databases, the publication year of the first article related to the subject is 2009. No article regarding the subject was found in the years 2010, 2011, 2012, and 2015. 34 of 71 articles were published in 2022 and 2023. In 2024, only one article was found, which is thought to be because the review of this year only covered the month of January.

**Table 2:** Distribution of Articles by Year

Year	Frequency	Percentage(%)
2009	1	1,40
2013	2	2,80
2014	1	1,40
2016	1	1,40
2017	7	9,85
2018	1	1,40
2019	8	11,25
2020	7	9,85
2021	8	11,25
2022	14	19,71
2023	20	28,16
2024	1	1,40
<b>Total</b>	<b>71</b>	<b>100.0</b>

#### *Distribution of Articles by Country*

When the distribution of articles by country is examined, it is seen that articles from 16 countries and 1 article with an unspecified country were published. The majority of the studies (n=31) carried out in the 16 countries were conducted in the USA. The second highest contribution came from Germany with a total of 9 articles (%12,60). China and Australia follow with 5 and 4 articles, respectively. The total number of publications from South Korea, Taiwan and Switzerland is 3.

**Table 3:** Distribution of Articles by Country

Countries	Number of Articles	Percentage (%)
USA	31	43,40
Germany	9	12,60
China	5	7,00
Australia	4	5,60
Taiwan	3	4,20
Switzerland	3	4,20
South Korea	3	4,20
Unspecified	2	2,80
Spain	2	2,80
Norway	1	1,40
Indonesia	1	1,40
Canada	1	1,40
Denmark	1	1,40
Israel	1	1,40
South Africa	1	1,40
The Netherlands	1	1,40

Serbia	1	1,40
Germany-Switzerland	1	1,40
<b>Total</b>	<b>71</b>	<b>100.0</b>

**Distribution of Articles by Study Group**

Distribution of articles by study group given in Table 4 concludes that students (n=46) have been studied more frequently than the other study groups. This is followed by Unspecified (n=7), Teachers (n=9), Other (5=), Students/Teachers (n=4).

**Table 4:** Distribution of Articles by Study Group

Study Groups	Frequency	Percentage (%)
Students	46	64,40
Teacher	9	12,60
Unspecified*	7	9,80
Other*	5	7,00
Students/Teachers	4	5,60
<b>Total</b>	<b>71</b>	<b>100.0</b>

\*Other (Curriculum, paid participants, mixed group, web-based digital educational resource editors)

\*Unspecified (Articles approaching education and teaching theoretically with general definitions)

**Distribution of Articles by Participant Level**

As seen in Table 5, it is seen that the target study groups of the articles are mostly undergraduate (n=39) study groups among the educational levels of the participants. This is followed by K12 (n=14), Graduate (n=2), Unspecified (n=9) and Other (n=3) study groups.

**Table 5:** Distribution of Articles by Participant Level

Participant Level	Frequency	Percentage (%)
Undergraduate	39	54,60
Undergraduate/Master’s	1	1,40
Graduate	2	2,80
Undergraduate/Graduate	1	1,40
K12	16	22,40
Other*	3	4,20
Unspecified	9	12,60
<b>Total</b>	<b>71</b>	<b>100.0</b>

\*Other (mixed-group, pregnant women, participants aged 18-65)

**Distribution of Articles by Discipline Area**

For the analysis of discipline areas in the articles, each subject area\* was identified and then grouped into four general areas: social sciences, medicine, science and engineering, and language education. It should be noted that some studies covered more than one subject area.

Table 6 shows that the vast majority (n=42) of the disciplinary area of the articles is Social Sciences. It is seen that Science and Engineering (n=18) was the next popular subject that adopted the ICAP Framework approach and was studied in the field of education. Studies in Medicine (n=9) and lastly Language (n=2) were also the subject of publications.

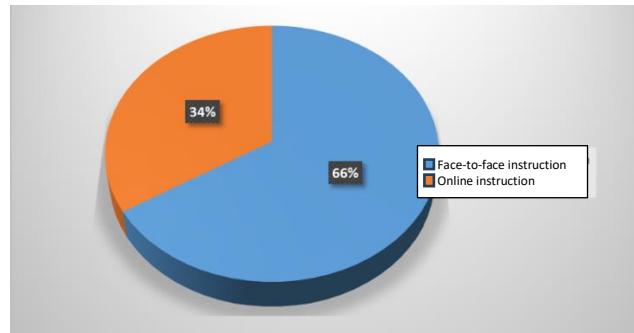
**Table 6:** Distribution of Articles by Discipline Area

Article Subject Area	Frequency	Percentage (%)
Social Sciences	42	58,80
Science and Engineering	18	25,20
Medicine	9	12,60
Language	2	2,80
<b>Total</b>	<b>71</b>	<b>100.0</b>

\*Disciplinary areas for each of the articles are given in Anex2.

**Distribution of Articles by Instruction Mode**

When analyzing the distribution of articles by instruction mode, two instruction modes were encountered: face-to-face and online. As can be seen in Figure 1, 66% (n=47) of the articles were related to face-to-face learning, in other words, traditional methods, while 34% (n=24) were focused on online learning.



**Figure 1:** Distribution of Articles by Instruction Mode

Table 7 presents the Disciplinary Areas and Instructional Mode Cross Table. Accordingly, the disciplinary field of the majority (n=23) of the articles using ICAP Framework-based, face-to-face teaching mode is social sciences. Science and Engineering (n=13) ranked second, Medicine (n=9) third and Language (n=2) last. The disciplinary field of the majority (n=19) of the articles using the online teaching mode is again social sciences. Of the articles in the online teaching mode, 4 were in the field of Science and Engineering (n=4) and 1 was in the field of Medicine (n=1). As a result of the review conducted within the scope of the research, no article in the field of language was found in the online teaching mode.

**Table 7:** Disciplinary Areas and Instructional Mode Cross Table

Number	1* Social Science	2* Medicine	3* Science and Engineering	4* Language
<b>Online Instruction (24)</b>	19	1	4	
<b>Face-to-face Instruction (47)</b>	23	9	13	2
<b>Total</b>	42	10	17	2

\*Research Subject Areas:(1) Social Sciences, (2)Medicine, (3)Science and Engineering, (4)Language

**II- Characteristics of the Methodology of Studies**

In this section of the study, findings related to the methodology, research strategies, and data collection methods of the studies are presented.

**Distribution of Articles by Methodology**

The framework used to classify research methods and inquiry research strategies was developed by Creswell (2009). Accordingly, there are three main research methods: qualitative, quantitative, and mixed. In this study, three research methods, qualitative, quantitative, and mixed were coded in the articles addressed in the research. When Table 8 is examined, it is seen that the most commonly used research method among the 71 articles is mixed method (n=30). This is followed by qualitative method (n=27) with 37,80%. The number of articles where quantitative methods are practices is 13. On the other hand, in 1 out of 71 articles, no research method is specified.

**Table 8:** Distribution of Articles by Methodology

Method	Frequency	Percentage (%)
Mixed	30	42,00
Qualitative	27	37,80
Quantitative	13	18,20
Unspecified	1	1,40
<b>Total</b>	<b>71</b>	<b>100.0</b>

**Distribution of Articles by Research Strategy**

As a result of the analysis of research strategies used in articles, exploratory case study (n=36) is determined to be the most adopted strategy among the 71 articles. The next research strategy was followed by all types of experimental studies, which were employed in a total of 24 articles. The number of articles using theoretical review was reported be n=8, and quasi-experimental and meta-analysis/comparative curriculum analysis/content analysis approaches as one publication each (n=1). The distribution of articles by research strategy is given in Table 9.

**Table 9:** Distribution of Articles by Research Strategy

Article Research Strategies	Frequency	Percentage (%)
Exploratory Case Study	36	50,40
Experimental	24	33,60
Theoretical Review	8	11,20
Meta-analysis/Comparative Curriculum Analysis/Content Analysis	1	1,40
Quasi-experimental	1	1,40
<b>Total</b>	<b>71</b>	<b>100.0</b>

**Distribution of Articles by Data Collection Method**

As a result of the analysis of data collection methods used in the articles, eight main data collection methods were tabulated. There is a clear indication that the researchers adopted more than one data collection method. As seen in Table 10, the researchers respectively used Documents (n=40), Tests (34), Questionnaires (n=32), Videos (n=27), Scales (n=16), Open-ended questions (n=8), Observations (n=7) and Interviews (n=2) as data collection methods.

**Table 10:** Distribution of Articles by Data Collection Method

Data Collection Methods	Frequency	Percentage (%)
Document	40	56,00
Test	34	47,60
Questionnaire	32	44,80
Video	27	37,80
Scale	16	22,40
Open-ended Question	8	11,20
Observation	7	9,80
Interview	2	2,80
<b>Total</b>	<b>166</b>	<b>100.0</b>

**III- Thematic Characteristics of Studies**

As stated in the methodology section, research themes extracted from 71 articles were classified in six main research theme. A brief explanation of each theme is presented as below:

**Theme 1:** Student Characteristics: Research focusing on student dialogues, student self-regulation, cognitive engagement, interaction, explicit behaviors, achievement, and use of technology.

**Theme 2:** Teacher Characteristics: Research focusing on teacher's professional development, training, technology acceptance, implementation skills, and henceforth approach.

**Theme 3:** Design – Development – Evaluation: Research regarding the design and development for lifelong learning, and online or face-to-face learning programs, technology integration, lesson material design, learning community design, web-based media design, and online tools and assessment system development.

**Theme 4:** Theory and Research: Research to explain, interrogate, and put ICAP Framework into practice.

**Theme 5:** Instruction and Communication Technologies: Research focusing on online video lectures, interactive engagement, computer-assisted instruction, web-based digital education, and interactive web and virtual environments.

**Theme 6:** Teaching and Learning Approaches: Research on active learning, collaborative learning, small group interaction, self-regulated learning, agent-based models, modes of cognitive engagement, peer learning, self-directed learning, instructional self-efficacy, video-based learning, flipped classroom, and reinforcement learning.

**Table 11:** Distribution of Articles by Research Theme

Research Themes	Frequency	Percentage (%)
Teaching and Learning Approaches	26	34,60
Design – Development - Evaluation	20	28,00
Student Characteristics	8	11,20
Instruction and Communication Technologies	8	11,20
Theory and Research	5	7,00
Teacher Characteristics	4	5,60
<b>Total</b>	<b>71</b>	<b>100.0</b>

As seen in Table 11, “Teaching and Learning Approaches” is the most commonly addressed theme among the research themes of articles. This theme is followed respectively by “Design – Development – Evaluation” (n=20), “Student Characteristics” (n=8), “Instruction and Communication Technologies” (n=8), “Theory and Research” (n=5), and “Teacher Characteristics” (n=5).

In Table 12, Research Themes and Instruction Modes Cross Table is given. Accordingly, in both face-to-face (n=19) and online learning (n=8), it is seen that studies addressing teaching and learning approaches are predominant. Studies on Design/development/evaluation ranked second in face-to-face (n=14) and online (n=5) learning.

**Table 12:** Research Themes and Instruction Mode Cross Table

Number	1*	2*	3*	4*	5*	6*
<b>Online Instruction (24)</b>	3	2	5	1	5	8
<b>Traditional – Face-to-face Instruction (45)</b>	4	2	14	2	3	19

\*(1) Student Characteristics, (2) Teacher Characteristics, (3) Design/Development/Evaluation, (4) Theory and Research, (5) Instruction and Communication Technologies, (6) Teaching and Learning Approaches

#### IV. ICAP Context of Studies

In this section of the study, the findings related to in which context the articles reviewed within the scope of the study address ICAP are given under the following four categories:

**Category 1; Use of ICAP Framework at theoretical level:** Articles defining cognitive engagement within the conceptual ICAP Framework, using ICAP Framework as a theoretical framework that enables the development of active learning experiences, addressing ICAP theory as an alternative way to fill in the research-practice gap in education, explaining learning-teaching approaches based on the ICAP Framework, and use the ICAP theoretical framework in the analysis of learning environments.

**Category 2; Use of ICAP Framework at analytical level:** Articles utilizing ICAP Framework in determining the level of effectiveness of active learning and cognitive engagement, and analyzing student interaction and teacher presence, interrogating learning materials based on ICAP Framework, determining the extent of engagement according to the use of technology within the scope of ICAP, categorize the relationship between metacognitive study strategies and exam performance in accordance with the ICAP Framework, and examine learning environments under the ICAP activity structure

**Category 3; Developing Models, modules, tools and scales based on the ICAP Framework:** Articles determine the level of cognitive engagement in learning-teaching environments, observing cognitive engagement, developing interactive design, developing models, modules, tools, scales and systems for evaluating educational environments.

**Category 4; Defining, Explaining and Questioning ICAP Framework at theoretical level:** Theoretical articles that define, explain and question the underlying assumptions of the ICAP Framework on the basis of students' explicit behaviors.

As seen in Table 13, majority of the articles (n=45) used the ICAP Framework at analytical level. The second largest number of articles (n=17) were articles that developed models, modules, tools and scales based on the ICAP Framework. On the other hand, while 6 articles use the ICAP Framework at theoretical level, the number of theoretical articles related to defining and explaining ICAP is 3.

**Table 13:** Distribution of Articles by ICAP Context

ICAP Context	Frequency
<b>K-1.</b> Articles using ICAP at theoretical level	6
<b>K-2.</b> Articles using ICAP at analytical level	45
<b>K-3.</b> Articles developing models, modules, tools and scales based on ICAP Framework	17
<b>K-4.</b> Theoretical articles defining, explaining, and questioning ICAP Framework	3

According to Distribution of Articles by ICAP Context and Year Cross Table, articles that utilized ICAP at an analytical level started to predominate from 2019 onwards, and this number increased especially in 2022 and 2023. Articles that developed models, modules, tools and scales based on the ICAP framework also increased in the same date range.

**Table 14:** Distribution of Articles by ICAP Context and Year Cross-Table

Year	K- 1	K-2	K-3	K-4
2009				1
2013	1	1		
2014				1
2016		1		
2017		5	2	
2018			1	
2019	2	6		
2020		5	2	
2021	1	5	2	
2022	1	11	2	
2023	1	10	8	1
2024		1		
<b>Total</b>	<b>6</b>	<b>45</b>	<b>17</b>	<b>3</b>

In Table 15, Research Themes and ICAP Context Cross-Table is given. Accordingly, in all of the articles focusing on student dialogues, student self-regulation, cognitive engagement, interaction, explicit behaviors, achievement, and use of technology (n=8), the ICAP Framework was utilized at analytical level. While three of the teacher characteristics themed articles (n=4) used the ICAP Framework at the analytical level; in one study, module development was carried out based on the ICAP framework. A vast majority (n=15) of the Design-Development-Evaluation themed studies (n=20) are articles on developing models, modules, tools and scales based on the ICAP framework. Under this theme, 4 studies utilized ICAP at the analytical level. Among the Theory and Research themed studies (n=5), the number of articles defining, explaining and questioning ICAP at the theoretical level is 3, while the number of articles making use of the ICAP at the theoretical level is 2. All the Instruction and Communication Technologies themed studies are articles using the ICAP at the analytical level. Under this theme, while 4 studies utilized the ICAP at the theoretical level, and one study was aimed at developing modules based on the ICAP Framework.

**Table 15:** Research Themes and ICAP Context Cross-Table

THEMES	ICAP CONTEXT CATEGORIES			
	K-1	K-2	K-3	K-4
1.Student Characteristics (8)		8		
2.Teacher Characteristics (4)		3	1	
3.Design-Development-Evaluation (20)		4	15	
4.Theory and Research (5)	2			3
5.Instruction and Communication Technologies (8)		8		



6. Teaching and Learning Approaches (26)	4	23	1	
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**RESULT AND DISCUSSION**

In this study, it is aimed to evaluate national and international scientific articles based on or supported by the ICAP Framework from various aspects. In line with these main and sub-objectives, articles were reviewed in four categories: general characteristics, methodological characteristics, research themes, and ICAP context.

***Findings on the General Characteristics of the Studies***

When the studies related to the ICAP Framework are evaluated in terms of general characteristics, it is seen that the studies were mostly carried out between 2019 and 2023 and gained intensity, especially between 2022 and 2023. One study in 2009 and one study in 2014 are the studies of researchers (Chi, 2009; Chi & Wylie, 2014) who put forward the ICAP theoretical framework. These studies are aimed at defining the framework at the theoretical level, explaining it by comparing it with existing learning theories, and how the framework can be used as a tool. After this process, which can be regarded as the starting point of the scientific effort, an increase in the number of articles using the ICAP Framework at the analytical level is observed. With the increase of experimental and exploratory articles, studies that question the ICAP Framework have been carried out. For instance, Thurn et al. (2023) For example, Thurn et al. (2023) questioned whether explicit behaviors in instructional activities, such as reading a text, taking notes, or discussing it, are reliable indicators of students' cognitive engagement.

When the distribution of articles by country is examined, it is observed that 16 of the 71 articles involved in the study were conducted in 16 different countries. This can be interpreted as the international acceptance of the ICAP framework, which presents cognitive engagement in education on the basis of explicit behaviors. Despite the existence of studies on active learning and cognitive engagement in the national literature, the fact that no study based on or supported by the ICAP Framework is found, can be considered as a deficiency in this field. From this perspective, it is not possible to analyze the addressing of the ICAP framework in Turkey. One of the important reasons why most of the studies were conducted in the USA can be attributed to the fact that the studies that put forward the ICAP Framework are of US origin.

The results of the research on the study groups and participant levels revealed that the most intensively studied groups in the articles were students and teachers, respectively. The participant levels are undergraduate and K12, in that order. The fact that students are the most common study group can be linked to students being at the center of education and training activities. That "undergraduate" and K12 are at the top of the participant levels may be because the pioneering studies on ICAP are primarily evaluated at these levels.

In addition, as Chi and colleagues (2018) also state, the fact that active learning is mainly discussed in the post-secondary literature and especially at the undergraduate level in the context of flipped classrooms, online learning, educational technology and machine learning may have been effective in the high number of studies at the undergraduate level. The fact that K12 ranked second may be attributed to the fact that engagement, which is associated with academic achievement, is a construct discussed primarily in the K-12 education literature.

The fact that teachers ranked second among the study groups may have been influenced by Chi and colleagues' (2018) proposal of a project to teach ICAP cognitive engagement theory to K12 teachers. This also provided guidance for further research.

The predominance of studies in the field of social sciences in both face-to-face and online teaching mode among disciplinary areas may be because this field covers many sub-disciplines and especially includes ICAP-related fields such as teacher education, learning-teaching psychology, learning-teaching strategy, educational technologies, and cognitive activation. On the other hand, the widespread use of online education as a teaching method, particularly in 2010 and onwards, has led the ICAP framework to be addressed in the field of science and engineering, especially at the empirical level. The fact that the least number of studies in online teaching mode is in the field of medicine (n=1) may be a result from the fact that this field is mostly applied in face-to-face instruction mode. As a matter of fact, the only study carried out in this field in the research findings (Lim, Ko, Park, & Ihm, 2022) is related to the applicability of online active learning to dentistry education.

***Findings on the Methodological Characteristics of Studies:***

When the methodological characteristics of the articles within the scope of the research were examined, it was determined that mixed, qualitative, and quantitative methods were used respectively. The predominant use of mixed methods in the articles is supportive of the idea that research should not be dominated by only one research method due to the evolving nature of instructional systems (Driscoll, 1995, as cited in İnci & Kandir, 2017).

Whereas exploratory case and experimental studies were more preferred, the fact that theoretical analysis was the least used research strategy indicates that researchers are more oriented towards empirical studies. The diversity of data collection tools in the articles included in the research enabled access to more comprehensive findings.

### ***Findings on Thematic Characteristics and ICAP Context of Studies***

Among the research themes, articles on teaching and learning approaches and design-development-evaluation in both online and face-to-face education are predominant. In addition, 5 of the 24 articles in the online education mode are themed on instructional and communication technologies. When considering how the articles address the ICAP Framework, it is noticeable that ICAP is mainly utilized at the analytical level, and models, modules, tools, and scales are developed based on the ICAP framework, and the majority of these have gained momentum since 2019. Majority of the studies that utilized ICAP at the analytical level are themed on Teaching and Learning Approaches. A significant portion of the studies that develop models, modules, tools and scales based on ICAP are themed as Design-Development-Evaluation. It can be said that the intensive use of technology, and especially web-based applications in learning-teaching processes is effective in this. In the articles reviewed in this study, issues related to collaborative learning, agent-based models, video-based learning, flipped classrooms, reinforcement learning, etc., which gained momentum in this process, and how technology can be used in instructional design in the best way, were addressed within the scope of the ICAP framework. For instance, in articles that made analytical use of ICAP with the theme of Teaching and Learning Approaches; video-recorded instructional and learning activities were analyzed using the ICAP framework to determine the importance of group size during the learning of collaborative skills (Noerholk, Morcke, Kulasegaram, Nørgaard, Harmsen, Andreasen, . . . & Tolsgaard, 2022); cognitive engagement in a reinforcement learning approach to adaptive remediation in online education was grounded on the ICAP framework (Spain, Rowe, Smith, Goldberg, Pokorny, Mott, & Lester, 2022).

In the Design-Development-Evaluation themed articles developing models, modules, tools and scales based on ICAP, for instance, an observation-based protocol (IONIC) that can be used in K-12 classrooms in different content and contexts was developed based on the ICAP theoretical framework (Chen & Terada, 2021); four chatbot interaction designs oriented towards active learning were developed based on the ICAP framework (Hobert, Følstad, & Law, 2023); the Real-Time Automated STEM Engagement Detection System (RASEDS), which identifies students' level of engagement and provides appropriate adaptive learning materials depending on the level of engagement, was developed using computer vision technology and the ICAP framework (Wu, Lee, Wang, Lin, & Huang 2023); The ICAP Technology Scale (ICAP-TS) to measure how teachers integrate technology into learning activities was developed based on the ICAP model (Antonietti, Schmitz, Consoli, Cattaneo, Gonon, & Petko 2023); the effects of four versions of a collaborative learning activity on learning were designed using ICAP and adapted PFL models (Lam & Muldner, 2017).

As a result, the process that was initiated with Chi's publication of a literature review on differentiated open learning activities in 2009, has now shifted towards the empirical studies on the applicability of ICAP as a theory of cognitive engagement to technology-supported learning activities. The key elements creating this shift are the introduction of research that explains the uses of the framework, the comparison of this theoretical framework with other frameworks, and the developments in information and communication technologies in instructional design.

### ***Implications for the Future***

- Most articles that utilized the ICAP framework as a guide for instructional design, for assessing student outcomes, and for determining the choice of control condition in research design were studies that empirically supported the validity of the framework. In contrast, few studies were found that questioned the validity of the ICAP hypothesis and hierarchy in formal and informal learning environments at different levels. This brings up the suggestion that future studies should be directed towards this inquiry.
- Instructional design in live lectures and instructional videos aimed to provide learner-teacher interaction in online learning can be evaluated in the context of ICAP.
- Such as the development of the student course cognitive engagement instrument (SCCEI) in engineering education (Barlow, Brown, Lutz, Pitterson, Hunsu, & Adesope, 2020); testing the ICAPD Framework for detecting student cognitive engagement in the classroom (Xu, Wei, Gao, Yao, & Liu 2023); Examination of active learning exercises of middle school students in virtual learning environments under the structure of active, constructive, and interactive activities (Hite, Jones, & Childers, 2024), studies that bring new perspectives to the ICAP framework can be carried out.
- The dimensions of using ICAP as a framework model for designing informal learning experiences in museums, exhibition halls, science centers, etc. can be analyzed in more depth.

- The correlations between the use of technology in ICAP learning activities and teachers' digital competencies, beliefs, and attitudes toward technology can be further studied to identify the most important predictors of high-quality technology integration.
- Research-based on different disadvantaged groups in terms of educational inclusiveness can focus on categorizing their forms of cognitive engagement using the ICAP Framework and designing learning activities.
- The implication of the research that is seen as the most important for the future is the necessity of conducting studies aiming to evaluate the articles, theses, etc. related to the ICAP Framework and hypothesis. Thus, researchers who will conduct studies on the ICAP framework, especially in Turkey, will be able to see the gap in the literature and plan their studies accordingly.

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## Examination of the Reasons for Participation and Satisfaction Levels of Trainees at Public Education Centers: A Case Study on Hozat Public Education Center

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### ABSTRACT

The aim of this article is to examine the reasons for participation in courses that are offered by public education centers within the scope of lifelong learning, and the level of satisfaction of trainees, focusing on Hozat Public Education Center. Since the study aims at determining the reasons why trainees take part in the courses as well as their levels of satisfaction objectively, it was designed on the basis of relational survey model which is a quantitative research model. The population of the research consists of 767 trainees that participated in the courses between the educational term of 2021-2022 (those courses were offered between 01.01.2022-30.06.2022), and the sample consists of 352 trainees some of whom were reachable, and the others that could be selected by simple random sampling method. The data was collected through “Trainee Satisfaction Questionnaire” and “Questionnaire on Reasons for Course Participation” that the Ministry of National Education offers to the trainees in public education centers. As the measurement scores demonstrated normal distributions, parametric tests were used to analyze data. Pearson’s correlation coefficient was used to determine the relationship between scores from the surveys on the reasons for participation in courses and satisfaction levels of trainees. Analysis showed that there was a low level of positive correlation between the scores of surveys on participation reasons and satisfaction levels of the trainees (Crobach’s Alpha=0.29). There was not a meaningful correlation between the scores of the trainees’ satisfaction with the courses and the reasons for attending the courses and trainees’ sex, educational levels, professions, or occupations. According to the findings, men and women participate in courses that the Public Education Center offers at a similar rate. However, the satisfaction levels of men and women with the courses, and their thoughts on participation reasons are slightly below average. This finding clearly indicates that public education centers should be enhanced and supported in line with their aims. **Keywords:** Education, adult education, lifelong learning, public education, Hozat.

### Introduction

Although its origin is controversial, it is safe to say that public education is a type of education as old as human history. First humans who reflected what they learned by doing, living, and making observations in their natural environment on their lives, could establish a new type of learning based on regularized environments by their successors over time. As a matter of fact, it became possible to provide formal and informal education in organized environments, under the supervision and control of governments only with the Industrial Revolution, which occurred in the 1760s. Public education, which was perceived as a religion-based educational process in the West until the 1700s, has evolved into a regular and organized vocational education process for adults and out-of-school people in later periods. Public education, the main purpose of which is to contribute to the social and cultural development as well as enhancing individuals’ skills and prompting them to acquire professions, also carries out its tasks more efficiently and effectively in accordance with up-to-date conditions. (Celep, 2003; Tezcan, 2012). In the case of Turkish educational history, it is evident that informal education has always been important and continued without interruption until today. Public education has served many similar and different purposes throughout the years, and it gained a new objective after the establishment of the Republic. In other words, with the establishment of the Republic, the demands of the new political system increased the significance of public education. (Yıldız, A., Uysal, M. 2013). It is evident that informal education was carried out with the help of institutional entities ranging from Village Chambers, Nation’s schools, Evening Art Schools to Community Centers, courses for teachers in villages, as well as courses for illiterate soldiers (Ali Schools) and Apprenticeship Education Centers. (Geray, 2002; Celep, C. 2003; MEB, 2006). Today, public education is conducted by the

<sup>1</sup> This article was produced from the master thesis titled “Examination of the Reasons for Participation and Satisfaction Levels of Trainees at Public Education Centers: A Case Study on Hozat Public Education Center”

General Directorate of Apprenticeship and Informal Education, and it was included into the scope of General Directorate of Lifelong Learning by the decree law on the Organization and Duties of the Ministry of National Education dated 25/8/2011 and numbered 652 (MEB HBÖGM, 2022).

A total of 6 million 317 thousand 933 trainees participated in the courses that have quite comprehensive and numerous institutional entities in almost all cities and are offered by 998 public education centers as well as 27 Turkish Traditional Arts Institutes. (MEB, 2022). The main inquiry about the courses that public education centers offer is not the number of participants, but rather the extent to which public education centers fulfill the trainees' expectations from the courses. Therefore, the competence level of public education centers, which undertake the mission of public education under the General Directorate of Lifelong Learning, is critical for research studies focusing on the extent to which expectation levels of trainees are met by these courses.

Despite the fact that there are few studies on the subject, it is also possible to find many prominent studies. One such example is the study conducted on the public education center located in Erzin district of Hatay by Peker et al. (2011). The population of this study includes 450 trainees that registered to the courses offered by Erzin Public Education Center during the 2020-2021 academic year, and the sample consists of 372 from these trainees. According to the findings of the research that was designed on the basis of a quantitative research model, it was shown that trainees' reasons for participation affected their level of satisfaction with the courses. Additionally, the research study made it evident that the major reason for the trainees to attend these courses was to receive the required documents for job applications. Another study was conducted by Taşkın et al. (2022) on Bandırma Public Education Center. The sample of this study, which was designed on the basis of quantitative methods, was 10 trainees that attended the courses in the 2022-2023 academic year by person. According to the findings of the study, trainees were content with the courses in the public education center. Coşkun (2012) examined the expectation and satisfaction levels of the attendees in the case of courses offered by Tuzla Public Education Center in the 2011-2012 academic year. The population of this research consisted of 950 trainees, and the sample consisted of 537 trainees that continued the courses. The data of this research study, which employed the quantitative research approach, was collected with two questionnaires to determine expectations and satisfaction levels of the attendees. According to the findings, the majority of the attendees had the following demographic characteristics: women, aged 36 or above, married with children, primary school graduates, members of middle income group. Trainees stated that they attended the courses mostly "to make changes in their daily lives" and "to improve their individual traits", and least because of "the desire to be more appreciated within their social environment". With respect to the satisfaction levels, the highest ranked questionnaire statement was "Do you think you would consider recommending the courses to your relatives and others?", while the lowest ranked one was the statement "Did you have a hard time understanding the concepts that were explained to you during the courses?". In his doctoral dissertation, Tezcan (2012) aimed to determine the motivational orientations of the trainees that attended the courses offered by the public education center in the 2010-2011 academic year in center of Muğla, based on the Cyril O. Houle's classification of adult learners. As a result of the analysis of 562 questionnaires received from the questionnaires applied to 989 trainees registered in the course, goal-oriented adult learners attended the courses to obtain certificates and for professional concerns, activity-oriented adult learners attended to meet new people and escape from their routines, learning-oriented adult learners attended only to learn. Özengi (2017) aimed to assess the effects of the courses offered by Amasra Public Education Center on the trainees in terms of physical condition, educational setting, and lifelong learning. The population of the study, which was conducted in the 2015-2016 academic year, consisted of 2022 trainees and the sample consisted of 150 out of 2022. The study detected a significant difference on the factors such as physical condition, education process, and lifelong learning. The study also found that sex variable is only an important factor in terms of physical condition. The study did not detect any evidence for differences in terms of physical condition of the public education center, education process, lifelong learning dimensions caused by age or marital status. Acun's study (2015) examines the case of Kastamonu city. The study addresses the expectations and satisfaction levels of the trainees that attended vocational and technical courses offered by the Kastamonu Public Education Center in the 2013-2014 academic year. The sample of the study consists of the 402 trainees from all 8206 trainees that attended 390 courses offered by the Public Education Center. The analysis of the data collected through surveys on "Reasons for Participation" and "Satisfaction Levels" showed that the least influential factor in participation was "Decreasing domestic spendings by meeting some needs at home". The most influential factor was "the desire to be more useful at work and for the social circle." The trainees stated that they were satisfied with the outcome of courses, while the results of surveys indicated that trainees were least satisfied with the insufficient number of cultural and social activities included in courses offered by the public education center.

### **Research ethics committee approval**

Ethical approval for this research study was granted by the Non-Interventional Research Ethics Committee of Munzur University Rectorate by the Decision made in the Session Date 28.04.2022, Date and Number 10.05.2022-51987.

### **The objective and Importance of Research**

Self-development, active citizenship and employability are all fundamental parts of a whole. In this context, the link between education and work life can be quite meaningful. The need for a desired number of competent labor forces able to address expectations of the market made it imperative for the business world and educational institutions to collaborate. Europe seems to have achieved this, although partially. In this regard, Turkey has taken important steps, and has employed certain educational institutions and conferred some responsibilities on these institutions. Public education centers are one of the most prominent of these institutions (HBÖGM, 2018). As a consequence, the quality of services public education centers provide gain importance. Despite various methods and tests available to assess the quality of education public education centers provide, the most valid one is to refer to opinions of individuals/trainees who receive services from public education centers. In this context, within the scope of researcher’s opportunities, the aim of the research was to examine the reasons for participation in and their satisfaction levels with courses offered by Hozat Public Education Center. The research aims to answer questions below:

1. What is the participation rate in courses offered by the public education center?
2. What is the satisfaction level of trainees with the courses opened by the public education center?
3. Is there any meaningful correlation between the reasons for participation and satisfaction levels of the trainees?
4. Does the satisfaction level of a trainee differ due to factors such as sex, age, marital status, educational status, profession and participation in previous courses opened by the public education center?

### **Methodology**

#### **The model of the Research**

The research utilizes the correlational survey design from qualitative research approaches. The correlational survey model is a survey model that aims to investigate relationships between two or more variables. The correlational survey model is used to determine whether variables change together, and if they do, the model can be used to observe the nature and direction of the change (Karasar, 2015). In other words, the model makes it possible to detect change between two or more variables requiring the correlational survey. The fact that numerically measurable data requires statistical analysis comprises the quantitative aspect of the research. (Karasar, 2015; Büyüköztürk, Ş. ve Ark. 2011; Ekiz, 2020).

#### **The Universe and Sample**

The universe of the research consisted of trainees that attended courses offered by the Public Education Center in Hozat district of Tunceli between 01.01.2022 and 20.08.2022. The sample of the study consisted of the trainees that could be reached among these trainees. Between the dates 01.01.2022 and 30.06.2022, the number of trainees that attended the courses offered by Hozat Public Education Center was 767 (Table 1). Although the number of individuals comprising the sample was estimated to be at least 246 based on calculations on the number of trainees in the universe, 352 trainees, whose survey results were valid, were included in the sample. (Sekeran, 2003; Bartlett, Kortlik ve Higgins, 2001; Yazıcıoğlu ve Erdoğan, 2004; Hum ve Leow, 1996; Bal ve Gundry,1999).

**Table 1:** Number of Courses and Trainees at Hozat Public Education Center (01.01.2022-30.06.2022)

Years (Course Period)	Number of Courses	Number of Trainees	Female Trainees	Male Trainees
01.01.2022-30.06.2022	38	767	316	451

If the number of individuals is given, the calculation of the sample with 95% reliability ( $\alpha=0.05$  the level of significance) is as follows:

$$n = Nt^2 pq / d^2(N-1) + t^2pq = 15.555/633$$

$$n = 246$$

In this formula:

- N: Number of individuals in the universe (767)
- n: Number of individuals to be included in the sample (?)
- p: Frequency of the examined event (probability) (0.20)
- q: Frequency (probability) of non-occurrence of the examined event (0.80)



t: The theoretical value obtained from the table t at the certain degrees of freedom and specified error margin (1.96)

d: The desired  $\pm$  deviation according to the frequency of the event (Sekeran, 2003; Bartlett, Kortlik, & Higgins, 2001; Yazıcıoğlu & Erdoğan, 2004; Hum & Leow, 1996; Bal & Gundry, 1999).  $767/352= 45\%$  values.

Accordingly, although the sample number was calculated as 246, 352 of 550 surveys that were responded were found to be suitable for analysis. Table 2 illustrates the descriptive statistics.

**Table 2:** Frequency and Percentage Distribution of Personal Data of the Sample Group : (N=352)

Ranking No	Variables	Features	N	%
	Sex	Female	220	62,5
		Male	132	37,5
	Marital Status	Married	180	51,1
		Single	159	45,2
		Other	13	3,7
	Age	18-22	56	15,9
		23-27	92	26,1
		28-33	73	20,7
		34-39	61	17,3
		40-45	43	12,2
		46-50	17	4,8
		51+ above	10	2,8
	Profession or Job	Public employee	80	22,7
		Retired	150	42,6
		Self-employed	70	19,9
		Housewife	18	5,1
		Unemployed	30	8,5
		Private sector employee	4	1,1
	Income	1000 TL and below	51	14,5
		Between 1001 – 3000 TL	76	21,6
		Between 3001 TL -5000 TL	120	34,1
		Between 5001-7000 TL	47	13,4
		Between 7001-9000 TL	28	8,0
		9001-above	25	7,1
	Education	Primary school	5	1,4
		Middle school	65	18,5
		Highschool	128	36,4
		Associate's degree	81	23,0
		Bachelor's degree	51	14,5
		Postgraduate degree	1	,3
	Indicate the type of course you are currently enrolled in	Vocational or Technical	245	69,6
		General (social / cultural)	107	30,4
	Have you taken any other courses offered by the Public Education Center?	Yes	241	68,5
		No	111	31,5
	Number of children	1	145	41,2
		2	195	55,4
		3	8	2,3
		4	3	,9
		5	1	,3

As Table 2 illustrates, 62.5% of the trainees participating in the study were female and 37.5% were male. In terms of their marital status, 51.1% are married, 45.2% are single and 3.7% have other marital status (divorced or widowed). Regarding the age variable; 15.9% of the trainees were between the ages of 18-22,

26.1% between the ages of 23-27, 20.7% between the ages of 28-33, 17.3% between the ages of 34-39, 4.8% between the ages of 46-50 and 2.8% between the ages of 51 and above. In terms of their professions, 22.7% of the respondents were public sector employees, 42.6% were retired, 19.9% were self-employed, 5.1% were housewives, 8.5% were unemployed and 1.1% were employed in the private sector. With regard to their income level, 14.5% of the participants had a monthly income of 1000 TL or less, 21.6% had an income of 1001-3000 TL, 34.5% had an income of 3001-5000 TL, 13.4% had an income of 5001-7000 TL, 8.0% had an income of 7001-9000 TL and 7.5% had an income of 9001 TL or above. Concerning their educational levels, 1.4% had primary school education, 18.5% had secondary school education, 36.4% had high school education, 23.0% had associate's degree, 14.5% had bachelor's degree and 0.3% had postgraduate degree. According to the type of course; 69.62% attended Vocational and Technical courses and 30.4% attended General (Social-Cultural) courses. When asked whether they enrolled in any other course offered by the Public Education Center, 68.5% of those surveyed stated that they did, while 31.5% indicated that they had not participated before. 41.2% of the participants have 1 child, 55.4% have 2 children, 2.3% have 3 children, 0.9% have 4 children and 0.3% have 1 child.

**Data Collection Tools**

The data for the research was collected from the questionnaire consisting of the three parts, (1) “Personal Information Form”, (2) “Reasons for Participation in the Courses”, (3) “Satisfaction Levels of the Trainee Survey”.

**Questionnaire on the Reasons for Participation in the Courses**

The questionnaire “Reasons for Participation in the Courses” is prepared and implied by the Ministry of National Education to detect the reasons why the trainees attend courses offered by Public Education Centers. The questionnaire has been used in similar research studies in various years. For instance, Selçuk (2021) used the questionnaire that was published in the Ministry of National Education Communique Journal, Issue: 2645. Likewise, Coşkun (2012) also utilized the questionnaire in the thesis “Evaluation of Expectations and Satisfaction Levels of Trainees Attending the Courses Opened by Public Education Centers (Case of Tuzla)”. The questionnaire consists of 16 items. The questionnaire comprises Likert Scale questions, answers to which are organized as “yes” (3), “partially” (2), “no” (1), based on a triple Likert scale.

The Cronbach Alpha value was found to be 0.737 after the reliability analysis Selçuk conducted for the “Reasons for Participation in the Courses Questionnaire”, while Peker et al. (2021) calculated it as 0.879. The Cronbach’s Alpha value for this research was calculated as .892 after the reliability analysis, and experts’ views for the construct validity were deemed sufficient.

**Questionnaire on the Satisfaction Levels of the Trainees**

“The Questionnaire on Satisfaction Levels of the Trainees” is a likert scale survey that is applied to the trainees that attended courses at Public Education Centers, consisting of 18 items. Two of the questions are negative, while the rest are affirmative. An answer scale consisting of answers “yes” (3), “partially” (2), and “no” (3) was organized. The Cronbach Alpha value of the questionnaires was calculated as 0.742 by Coşkun (2020), and as 0.888 by Peker et al. (2021). For this research, Cronbach’s Alpha value was calculated as .846. Therefore, experts’ views were deemed sufficient for the questionnaire’s content validity.

**Data Analysis**

Before deciding which statistical methods to utilize in the data analysis, Skewness and Kurtosis values were checked to detect whether scores received from the questionnaires were normally distributed. This value was calculated as Skewness=.619-.130; Kurtosis =.676-.259 for the “Reasons for Participation in the Courses”, and as Skewness=.695-.130; Kurtosis =.456-.259 for the “Satisfaction Levels of the Trainees”. The analysis has shown that both questionnaire scores were distributed normally (Büyüköztürk, 2002:40). Therefore, parametric tests were used together with descriptive statistics to analyze data. Additionally, the below interval was taken into consideration during the evaluation of the scores obtained from the questionnaire (Tablo: 3). Accordingly, if the mean of the responses to a question is close to 3, it is interpreted as a high level of agreement. If the mean of the responses is close to 1, it is interpreted as a low level of agreement with the questionnaire items (Özdamar, 2004).

Table 3: Reference Interval Values When Evaluating Scale Scores

Options	Scores	Score Interval	Evaluation
Unimportant/No	1	1.00-1.66	Lower
Important/Yes	2	2.34-3.00	Medium
Partially/Partially	3	1.67-2.33	Low

### Findings

In this section of the research study, findings related to the sub-problems are presented. Accordingly:

#### *Findings related to the first sub-problem*

The first sub-problem of the study was described as “What is the agreement level of the trainees with the reasons for participation in the courses opened by the Public Education Center?”. The descriptive statistics of the opinions on the reasons for the participation of the trainees in the courses opened by the Public Education Center are presented in Table 4.

**Table 4.:** Descriptive statistics of the reasons for the participation of trainees in the courses opened by the Public Education Center (N=352).

Item No	Questionnaire Items	N	X	SS
kk14	Desire to be more appreciated in my environment	352	<b>1,75</b>	,800
kk16	Need to decrease domestic spendings by meeting some of my needs or my family’s needs	352	<b>1,65</b>	,792
kk13	Merely out of curiosity	352	<b>1,75</b>	,762
kk10	The fact that the course I am attending is appreciated in my environment	352	1,56	,737
kk3	To get rid of the stress and depressive feelings	352	1,53	,716
kk12	Desire to prepare for a new job	352	1,49	,708
kk8	Desire to acquire needed skills and knowledge to be able to find a second job for extra income along with my current job	352	<b>1,57</b>	,701
kk15	The fact that I need the document I will obtain when the course ends	352	1,48	,687
kk1	Desire to meet new people and make new friends	352	1,43	,672
kk11	To acquire a profession or improve my current profession	352	1,44	,664
kk4	To catch up with the fast change in the community	352	1,47	,631
kk9	Desire to be more beneficial for my family, environment and the institution I am working for	352	1,38	,625
kk2	To become more healthy physically and mentally	352	1,35	,600
kk6	Desire to make changes in the daily life	352	1,38	,596
kk5	Desire to make use of my spare time (Hobby)	352	1,39	,584
kk7	To improve my personal characteristics	352	1,31	,536
For all reasons		352	1,4950	,41986

As illustrated in the Table 4, the trainees agreed most with the reasons for the participation in the courses opened by the Public Education Center “Desire to be more appreciated in my environment” and “Merely out of curiosity” with a mean of 1.75. They agreed with the statement “The need to decrease domestic spendings by meeting some of my needs or my family’s needs” at the second highest level with a mean of 1.65. The third highest level of agreement was “The desire to acquire needed skills and knowledge to be able to find a second job for extra income along with my current job” with a mean of 1.57.

The lowest level agreement with a reason for participation in the course was “To improve my personal characteristics” with a mean of 1.31, the second lowest level of agreement was with “The desire to make changes in my daily life” with a mean of 1.38, and the third lowest one was “To make use of my spare time (hobby)” with a mean of 1.39. However, when evaluated as a whole, it is shown that the trainees agree with the reasons for attending the course at a low or lower level ( $\bar{X}=1.50$ ).

#### *Findings related to the second sub-problem*

The second sub-problem of the study was described as “What are the levels of satisfaction with the courses opened by the Public Education Center?”.

The descriptive statistics of the satisfaction levels of the trainees with the courses opened by the Public Education Center are set out in the Table 5 (N=352).

**Table 5:** Descriptive statistics of trainees' satisfaction level with the courses offered by the Public Education Center (N=352).

Item No	Questionnaire Items	N	Mean	Std. Deviation
km9	Were there any situations that made you uncomfortable in our center?	352	2,41	,805
km8	Did you find it difficult to understand what was taught in the course?	352	2,38	,786
km19	Do you find the equipment needed for the course sufficient?	352	1,60	,744
km10	Do you think that the courses offered by the Public Education Center meet the expectations of the public?	352	1,53	,715
km20	Do you think the education you are receiving will address your needs?	352	1,53	,704
km7	Does public education support cultural and social needs of the society?	352	1,51	,667
km14	Are there sufficient social and cultural activities at the Public Education Center?	352	1,46	,657
km1	Did the education you received at the Public Education Center released your goal?	352	1,45	,648
km5	Apart from the center's administrators and trainers, did other staff help you to facilitate your work?	352	1,45	,648
km11	Will the education that you received at the Public Education Center contribute to your work life?	352	1,42	,644
km13	Do you think that the evaluation of the exams at the Public Education Center is fair?	352	1,38	,637
km12	Are announcements about issues of interest to trainees made in a timely manner at the Public Education Center?	352	1,37	,618
km16	Do the administrators of the Public Education Center visit the classrooms and do they work to overcome any shortcomings and problems?	352	1,34	,601
km18	Do you think the Public Education Center offers the education in line with your expectations?	352	1,35	,594
km6	Did you observe that the administrators and the trainers work hard enough to make the center function better?	352	1,39	,570
km17	Would you like to attend any other courses or activities offered by the Public Education Center?	352	1,31	,564
km4	At the end of this training, do you think that the trainers working in the Public Education Center are sufficient?	352	1,29	,552
km15	Do principal and deputy principal pay attention to problems arising from the courses or the trainees?	352	1,30	,551
km3	Do you think Public Education Centers follow the changes and developments in education and training?	352	1,36	,532
km2	Would you recommend Public Education Centers to your relatives and other people?	352	1,23	,466
For all		352	1,5041	,32347

When the satisfaction level descriptive statistics are examined in Table 5, the trainees agreed with the statement "Were there any situations that made you uncomfortable in our center?" with a mean of 2.41 at the highest level. Another way of interpreting this is that the trainees did not encounter any situation that disturbed them in the Public Education Center during the course and this situation was satisfactory. The second highest level of satisfaction was with the statement "Did you find it difficult to understand what was taught in the course?" with a mean of 2.38. This finding also suggests that the trainees were satisfied that the learning materials offered during the course were presented in a way that they understood. The third highest level of satisfaction was with the statement "Do you find the equipment needed for the course sufficient?" with a mean of 1.60. In other words, the trainees were satisfied with the adequacy and features of the tools and equipment provided in the courses they took.

Among the statements of satisfaction with the course, the lowest level with a mean of 1.23 was the statement "Do you think that Public Education Centers follow the changes and developments in education and training?", the second lowest level with a mean of 1.36 was the statement "Do you think that Public Education Centers follow the

changes and developments related to education and training?" and the third lowest level with a mean of 1.30 was the statement "Do principal and deputy principal pay attention to problems arising from the courses or the trainees?". In other words, they expressed their dissatisfaction with the fact that the management was not responsive enough to the problems faced by the trainees at the Public Education Center and keeping up with the changes and development.

**Findings related to the third sub-problem**

The third sub-problem is described as "Is there a significant relationship between the reasons for participating in the courses opened by the Public Education Center and the level of satisfaction with the courses?" and the findings are compared in Table 6.

**Table 6:** The Pearson Product-Moment Correlation Analysis Results of the scale scores of the questionnaires “The Reasons for Participation in the Courses” and “The Satisfaction Levels of the Trainees”

Variables		REASONS FOR PARTICIPATION	FOR SATISFACTION
REASONS FOR PARTICIPATION	Pearson Correlation	1	,289**
	Sig. (2-tailed)		,000
	N	352	352
	Pearson Correlation	,289**	1
	Sig. (2-tailed)	,000	
	N	352	352

\*\* . Correlation is significant at the 0.01 level (2-tailed).

According to the categorization of Cohen, the analysis indicates "0,10-0,29=low, 0,30-0,49=moderate and 0,50-1,0=high" correlation, while according to Büyüköztürk’s categorization the results are classified as "0,0-0,29=low, 0,30-0,69=moderate, 70-1,00=high" correlation. These two different views on the correlation levels were included in the evaluation. Table 6 presents the correlation coefficient as 0.289 for the given data. Since the significance rate is less than 0.05 (Sig. 2-tailed), the relationship between the satisfaction level and the reasons for participation is significant (p<.05). The coefficient of determination was calculated by squaring the correlation coefficient (R2) as R2=0.08. According to this finding, it was shown that approximately 0.08 (% 08) of the satisfaction level variable could be explained with the participation in the courses variable. This rate is quite low in terms of the correlation between the two variables. In other words, the scores between the reasons for participation in the courses and satisfaction levels with the course variables have a very low correlation (r=0.229). This finding can be interpreted to indicate that there is not an observable relationship between the average scores of the reasons for participation in the courses and satisfaction levels with the courses (Büyüköztürk, 2002).

**Discussion, Conclusion and Recommendations**

**Discussion**

Although its origin is controversial, adult education in Turkish Educational History dates back to the Seljuk and Ottoman Empire periods. In the Seljuk and Ottoman Empire period, Madrasas and Enderun Schools, shopkeeper organizations, guilds, armed forces and some voluntary organizations provided training for adults (Kurt, 2000). After the establishment of the republic, necessary education for adults was provided with the help of Public Branches, Public Schools, People’s Houses, Village Institutes, Public Training Centers and Evening Courses starting first with the Nation Schools in 1928 (Geray, 2002; Okçabol, 1994) in the process of building the new social structure, especially with literacy rates (Gülbitti, 2020). Currently, in the light of the social conditions transformed by the developing and changing technology as well as taking the EU acquis into consideration, adult education is provided by the institutional bodies named as life-long learning, continuing education, continuing learning, etc.

Public Education Centers are the prominent adult education institutions. In almost every period of the history of the Republic, Public Education Centers have maintained their importance as institutional structures for adults, and as a matter of fact, while the Ministry of National Education has brought all institutions and organizations providing education services for adults together under the roof of the General Directorate of Lifelong Learning, public education centers have managed to maintain their place.

The founding principles of Public Education Centers first appeared in 1951, and in 1952 public education centers were known by the name Public Education Bureaus within the body of the Ministry of Education, later in 1953 they continued to operate as Public Education Rooms in villages and small towns (Kurt, 2000; Kılıç, 1981). In 1960, these bodies evolved into Public Education Centers under the General Directorate of Public Education, a body of the Ministry of Education at that time. (Lokmanoglu et al., 1999). As of 2011, the General Directorate of

Lifelong Learning continues its activities through the sub-bodies such as Maturation Institutes, Open Plan Schools and Public Education Centers (Kaya, 2015; Yıldız, 2012).

At the current stage, the continuing aspect of education impelled countries to take measures. Thus, while Europe has realized continuous learning, which is conceptualized as lifelong learning, at a rate of 12.5, while this rate is 2.9 in Turkey (Kaya, 2015).

A key point to be highlighted here within the scope of this research is that the services provided by Public Education Centers target adults. As a matter of fact, the target group of Hozat Public Education Center in this sense is adult education. While all segments of society are the target audience of lifelong learning, adult education refers to education that targets only one audience within the scope of lifelong learning. Thus, considering adult education as the basis of the educational services of the Public Education Center is also taken as the limitation of the research.

It can be said that adult education, which was mentioned as a very important issue after the establishment of the Republic, is still continuing to be addressed by establishing institutions such as "public schools", "public training centers", "people's houses" and "nation schools". For several reasons, in addition to acquiring a job and profession, literacy, knowledge and skills needed in some areas, it is seen that adults are in need of attending the courses opened by Public Education Centers in their residences.

The satisfaction of the trainees with the courses opened by the Public Education Centers is as crucial as the reasons for the participation of the trainees in the courses opened by the Public Education Centers. Examining the findings related to the sub-problems of the research conducted in this context, it is possible to see the fact that the level of the trainees' agreement with the reasons for attending the courses and their satisfaction with the courses are not at the expected level. This finding could be viewed as a significant assessment that calls for the enhancement of Public Education Centers to become more efficient institutions in the direction of their aims.

As a matter of fact, the reasons for participating in the courses opened by the Public Education Center, the trainees agreed with the statements "To be appreciated more in my environment" and "Just out of curiosity" at the highest level with a mean of 1.75, while at the lowest level they agreed with the statement "To improve my personal characteristics" with a mean of 1.31. Nevertheless, based on an overall evaluation, it was observed that the trainees agreed with the reasons for attending the course at a low or lower level ( $\bar{X}=1.50$ ). In Akkiraz's (1987) study, finding a job and making use of spare time were found to be the reasons for trainees to attend courses at the highest level, while in Sağlam and Korkmaz's (2019) study, reasons for developing professional knowledge and skills, income, finding a job, social relations, personal relaxation and satisfaction were detected as the reasons agreed at the highest level.

The trainees agreed with the statements, questioning their satisfaction levels with the courses opened by the Public Education Center, "Were there any situations that made you uncomfortable in our center?" and "Did you find it difficult to understand what was taught in the course?" with a mean of 2.41 at the highest level. When similar research findings are examined, it is seen that the level of satisfaction with the courses is quite low in Peker et al. (2021). Particularly, the physical features of the classrooms, the length of the course durations, poor maintenance of machinery, tools and equipment, etc. were seen to lead to disappointment in the trainees.

When the findings of trainees' reasons for the participation and satisfaction levels according to sex are compared with similar research findings, it is seen that male trainees participating in the courses opened by the Hozat Public Education Center agreed with the survey items at a higher level with an average of ( $\bar{X}=1.65$ ) than female trainees ( $\bar{X}=1.40$ ). In Aktaş and Yolcu's (2020) study, when female participants ( $\bar{X}=2.43$ ) were compared to male participants ( $\bar{X}=2.08$ ), the reasons for participating in training activities in HEMs were higher on the basis of economic reasons. In Çoşkun's (2020) study, female and male trainees agreed with the reasons for attending courses at approximately the same level.

### **Conclusion**

Adult education is as old as the history of humanity. The fact that adult education is still of key importance is a done of its significance. This is due to the individual's ability to adapt to new social conditions created by advances and changes in science, technic, and technology. Public or adult education, which used to be offered to certain age groups for certain periods, became a more integrated and efficient type of education, before as a part of informal education and today as a part of continuing or lifelong learning. The importance of public education has become recognized in Turkey as a type of education for all segments of society. The concept of lifelong learning has been institutionalized as the General Directorate of Lifelong Learning under the Ministry of Education and this institution offers education for all segments of society with different institutional bodies. Public education

centers are one of the prominent examples of these institutions. Their main purpose is to contribute to the continuous development of all segments of society without exceptions, by providing all kinds of training they need, especially vocational training. Public education centers, where certificate programs for new jobs and professions are especially eminent, exist on an organizational level in all provinces and districts of Turkey. However, the problem arises in the trainees' reasons for the participation in the courses and satisfaction levels, not in their organization. Our public education centers lack enough opportunities and facilities that enable them to fulfill their functions, therefore it becomes difficult and often impossible for them to fulfill the functions they undertake. In this sense, when the findings of the research conducted to determine the reasons for the participation of the trainees in the courses opened by the Hozat Public Education Center and the level of satisfaction with these courses are evaluated as a whole: The trainees' levels of agreement with the reasons for attending the courses and their satisfaction with the courses were found to be below average, that is, low. The results of the test conducted to detect the significance of the gap between the reasons for attending the courses and satisfaction levels according to some demographic characteristics (gender, education level, marital status), set out that the gap was not significant.

The most important reason for the trainees to participate in the course was "To be appreciated more in my environment" and "Merely out of curiosity" at the highest level with a mean of 1.75, and "To improve my personal characteristics" at the lowest level with a mean of 1.31. The trainees stated their satisfaction with the item "Were there any situations that made you uncomfortable in our center?" at the highest level with a mean of 2.41 and they responded to the item "Do you think that Public Education Centers follow the changes and developments related to education and training?" at the lowest level of satisfaction with a mean of 1.23

### **Recommendations**

Within the scope of lifelong learning, Public Education Centers are non-formal education institutions that have an important place in the education needed by all segments of society regardless of age, gender, job and profession, etc. Their ability to fulfill their functions depends to a great extent on the facilities and opportunities provided to them. In this sense, Public Education Centers need to be supported in every aspect (physical, instructor, equipment, financial, etc.). In particular, master trainers who undertake courses should be equipped to fulfill their responsibilities and their personal rights should be organized according to the conditions of the day.

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## Exploring the Motivations Behind the Surge in Kindergarten Male Teachers in China

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### ABSTRACT

In the global context, male participation in early childhood education is notably low, with only 3% of the workforce in mainland China comprising male professionals. This study delves into the intrinsic motivation of male kindergarten teachers, employing the framework of self-determination theory. Qualitative research, comprising face-to-face interviews with seven Chinese kindergarten teachers, aims to uncover the factors influencing their intrinsic motivation at work. By understanding their perspectives on intrinsic motivation, this research offers valuable insights to professionals in the field of early childhood education.

**Keywords:** Chinese, Male, Motivation, Self-determination, Kindergarten teachers

### INTRODUCTION

In China, kindergarten male teachers (KMT) are also referred to as 'Xiong mao Gege' (Panda Brother), as male early childhood professionals constitute only 3% of this industry (Deng et al., 2023). However, various countries are making efforts to attract men to work in Early Childhood Education (ECE), challenging stereotypical views of male gender roles (Harris & Barnes, 2009; Yang & McNair, 2017; Zhang & Wang, 2018). KMT are seen as male role models for young children, especially boys, providing gender-diverse experiences in their early lives, which are believed to have a positive impact on children's gender formation and personality development (Chen & Rao, 2010; Davison & Nelson, 2011). Men working in the ECE field may encounter various challenges, including parental suspicions and accusations of child abuse (Børve, 2016; Christensen & Darling, 2019), low social status, being stereotyped as disciplinarians, potentially undertaking tasks involving physical labor or technical issues, and feeling discomfort in interactions with female colleagues (Yang & McNair, 2017). In China's ECE industry, with its relatively low entry barriers, it is perceived as having 'low social status,' 'low prestige,' 'low income,' and being a 'female job' (Liu et al., 2022; Zhang et al., 2022). This is attributed to professions like education, involving significant care and nurturing, considered atypical for males, as it traditionally falls under the social and cultural responsibilities of females. In this context, understanding why male teachers are motivated to become KMT and their commitment to this profession becomes crucial. Despite extensive research on teacher motivation in recent years, the motivation of KMT has received relatively little attention.

"Motivation" refers to the internal and external forces that propel, guide, and maintain an individual's behavior during a specific activity (Michaelson, 2005). It encompasses the process of pursuing goals, fulfilling desires, and meeting needs, serving as the driving force behind individuals' choices, efforts, and perseverance (Acquah et al., 2021). In the field of education, teacher motivation is essential for achieving professional goals, particularly amidst conflicts and challenges (Bruinsma & Jansen, 2010).

Grounded in self-determination theory, this study explores kindergarten male teachers' (KMTs) perceptions of their roles in early childhood education (ECE) and their beliefs regarding career development. Prompted by the surge of KMTs post-pandemic and increased parental attention, the study focuses on seven KMTs in Changzhou, China, born in the 1990s. Examining their teaching motivation, the study uncovers the crucial role of the "actual self" in sustaining their motivation. Specifically, findings indicate that factors such as social media presence and high salaries stimulate the "actual self" of male teachers, influencing their decision to enter and remain in the profession.

Insights from this study offer valuable information for KMTs and communities interested in fostering greater male participation in the field. Several factors influence kindergarten male teachers' career choice, reflecting a complex interplay of personal, societal, and professional considerations, including interest in early childhood education, perceived need for male teachers, personal values and beliefs, community and family support, role models and influences, job satisfaction and fulfillment, diversity and inclusion initiatives, and financial considerations. This study contributes significantly by shedding light on the motivations of kindergarten male teachers (KMT), thereby

fostering a more supportive work environment and offering development opportunities to enhance job satisfaction and a sense of accomplishment. Moreover, attracting and retaining male educators in educational institutions promotes diversity, creativity, and inclusivity within teams, contributing to gender equality and challenging societal stereotypes. This increased male involvement not only enriches the educational experience but also enhances overall educational quality, meeting diverse needs and fostering a comprehensive learning environment.

Additionally, understanding these motivations aids in devising effective recruitment strategies and offering attractive benefits, leading to higher participation and retention rates among male educators. By providing additional training and career advancement opportunities, institutions can elevate professionalism and offer better development prospects. Cultivating a supportive work environment further enhances employee satisfaction and boosts the reputation and attractiveness of educational institutions, ultimately promoting a more equitable and inclusive educational environment. This study's findings highlight positive impacts across multiple domains, including individuals, society, and educational institutions. Specifically, it contributes to fostering a more equal, diverse, and supportive early childhood education (ECE) environment.

### **THEROETICAL FRAMEWORK**

Self-determination theory, a cornerstone in psychology, explains the motivation driving behavior by positing that individuals experience heightened self-determination when their basic psychological needs—autonomy, competence, and relatedness—are met. Intrinsic motivation, stemming from internal enjoyment and satisfaction from activities, is closely tied to autonomy and is categorized alongside extrinsic and amotivation. Notably, research indicates that teachers exhibit higher levels of intrinsic motivation than extrinsic motivation (Yıldız & Kılıç, 2021). By satisfying autonomy, competence, and relatedness needs, self-determination theory suggests that intrinsic motivation can be nurtured, providing a theoretical framework that guides practices in education and beyond.

Intrinsic motivation, the driving force behind spontaneous exploration and curiosity, plays a pivotal role in cognitive development, stemming from the inherent enjoyment of an activity (Oudeyer et al., 2016). Unlike external stimuli, intrinsic motivation propels individuals to action solely for the inherent enjoyment or challenge of the activity itself (Katz & Shahar, 2015). Fulfilling basic psychological needs influences intrinsic motivation and vocational self-efficacy, crucial for fostering innovative behavior (Klaeijssen et al., 2017).

Teachers' intrinsic motivation reflects their developmental level, influenced by existing values, instructional practices, and interactions (Liu et al., 2018). Positive emotions evoked during teaching, coupled with progress and success in instructional practices, contribute to intrinsic motivation (Han & Yin, 2016). Understanding kindergarten male teachers' (KMTs) cognitions regarding their current status, idealized state, and societal expectations reveals profound motivations behind their career choices and dedication, shedding light on their aspirations and the societal expectations they navigate.

### **METHODOLOGY**

The study employs a qualitative case study approach, aiming to delve into phenomena within a real-life setting. Qualitative research seeks to explore phenomena using textual narratives and visual representations (Creswell, 2012). The selection of the research site is deliberate and aligned with the study's objectives. Focused on seven kindergarten male teachers (KMTs) from a pilot public kindergarten in Changzhou, the study investigates their motivations for teaching. The participants, with teaching experience ranging from 1 to 5 years, were engaged through in-depth semi-structured interviews and thematic analysis.

Semi-structured interviews, documenting teachers' perceptions of their actual, ideal, and ought selves (Zhang & Wang, 2018), primarily explored their beliefs, cognitions, and motivations for pursuing kindergarten teaching. Furthermore, the study examines participants' decision-making processes regarding a career in education. Verbatim transcripts of interviews underwent thematic analysis, involving familiarization with data, code generation, theme identification, and refinement. Initial analysis provided an overview of the teaching motivations of the seven KMTs, followed by a detailed examination of their representations of self-concepts.

Participant recruitment involved a combination of standard and convenience sampling techniques, facilitated by the snowball method. Inclusion criteria mandated active teaching in public kindergartens and identification as male. Selection from public kindergartens ensured homogeneity in roles and salaries, supplemented by recommendations from participants through snowball sampling.

Guided by self-determination theory and prior research, the study posed three primary questions during interviews

to probe motivations, perceptions of ideal teaching, and traits of competent kindergarten male teachers (KMTs). Interviews, conducted face-to-face and lasting 30-60 minutes each, were audio-recorded and transcribed. Thematic analysis facilitated the identification of common themes and motivational drivers, with participant feedback sought to validate interpretations.

Mandarin interviews were translated into English and cross-checked by a native speaker to ensure accuracy while preserving participant confidentiality throughout the process. The demographics of the teachers are in Table 1.

## FINDINGS

**Table 1:** Summary of Teacher Demographics

Teachers' Nicknames	Marital Status	Birth Decade	Teaching Experience	Spouse' Occupation	Major
Lajiao	Married	1990s	4 years	Kindergarten teacher	Bachelor's degree in preschool education
Xigua	Married	1990s	5 years	Kindergarten teacher	Bachelor's degree in education management
HouGe	Married	1990s	4 years	Kindergarten teacher	Bachelor's degree in Education policy
Yumi	Married	1990s	3 years	Housewife	Bachelor's degree in Music
Daxiang	Single	1990s	1 years	Businesswoman	Bachelor's degree in Physical Education
Xiongmao	Single	1990s	3 years	Policewoman	Bachelor's degree in preschool education
QiuQiu	Single	1990s	2 years	Housewife	Master's degree in Subject Teaching

The data analysis reveals that the "actual self" plays a crucial role in driving the teaching motivation of seven male kindergarten teachers. It suggests that the "actual self" of kindergarten male teachers indicates their emphasis on individuality and authenticity, characteristics often prioritized by individuals born in the 1990s who tend to pursue a genuine self rather than a superficial facade. This emphasis may manifest in various aspects of their lives, including lifestyle choices, social media presentations, and career decisions. When there are minimal disparities between the actual self and the ought self, alignment ensures the coherence of their teaching motivation. This contrasts with prior research (Zhang & Wang, 2018), which posited that the "ideal self" leads to inconsistent motivation.

### Changing Social Perceptions and Gender Roles

Data analysis indicates that initially, individuals choosing to become KMT received recognition and understanding from their families, friends, as well as parents of the children. Previous studies suggested that KMT faced challenges in gaining acceptance or understanding from friends, colleagues, or parents of the children, and they were often labeled as "male babysitters," "male aunts," or even "clowns," leading to marginalization in the workplace (Zhang & Wang, 2018). However, this situation seems to have changed; one respondent provided a different perspective:

*"No one gave me uncomfortable nicknames, and at that time, my family strongly supported my choice to work in ECE. My family believes that being a male kindergarten teacher is a promising career for the future."* (Xigua Gege)

Societal perceptions of gender roles and expectations are undergoing transformation. People are gradually accepting that men can succeed in traditionally considered female-dominated fields, including ECE. This shift helps break gender stereotypes, enabling more men to feel free to choose a career in ECE. Concurrently, changes in family values are observed. With the evolution of family values, an increasing number of parents recognize that men can play a crucial role in child education. This may lead to more support and encouragement for men to choose ECE as a profession.

### Diversity in the Education Sector

The field of education is becoming increasingly diverse, encouraging individuals from different backgrounds and genders to participate. Schools and kindergartens are also recognizing that male teachers can offer children unique educational experiences and perspectives. Zhang and Wang (2018) mention that kindergarten male teachers were once forced into uncomfortable and unwilling roles, undertaking a significant amount of "female work," although not substantially internalizing these roles into their future selves. In practice, they were perceived as similar to female teachers. One respondent highlighted in the study may offer a different viewpoint:

*"The biggest difference between male and female teachers lies in physical strength, but this doesn't mean that men cannot excel in traditionally considered female tasks. I am the homeroom teacher, and TA is a girl, but I can still braid beautiful braids for my girls."* (Hou Ge)

Researchers observe that the disparities between the 'actual' and 'should' self-representations influence their career choices and serve as a driving force for motivation and pride in their profession.

### Career Development Opportunities

The Chinese government has provided more career development opportunities and support, encouraging men to enter the field of ECE. This includes scholarships, training programs, and opportunities for professional advancement. The increased demand for male teachers is evident, and some schools may face challenges in recruiting a sufficient number of male teachers. Therefore, proactive recruitment strategies may be implemented to attract more male teachers. All participants acknowledge their professional competence and qualities as kindergarten teachers (ideal self). Among the seven male teachers interviewed, six mentioned scholarships and training programs, with the only graduate participant expressing:

*"When I first became a kindergarten teacher, it was because my undergraduate major was in early childhood education. During my tenure, the school provided tuition subsidies and training time, allowing me to continue my education."* (Qiuqiu)

The remaining participants established their self-concept as physical education teachers in kindergarten and gained a sense of achievement and job satisfaction. All six undergraduate teachers underwent training while on the job or pursued graduate education. They mentioned that male teachers can enjoy more rewards and advantages compared to female kindergarten teachers. Additionally, men may find it easier to obtain opportunities for career advancement over their female counterparts (Yang & McNair, 2020; Zhang et al., 2022). These measures gradually challenge public perceptions of lower educational qualifications for early childhood teachers (Lan et al., 2021). Importantly, all participants expressed their commitment to continue working in the field of ECE in the future, as they are dedicated to being kindergarten teachers. Therefore, their firm self-concept and motivation are less susceptible to conflicts between ideal, actual, and should self, aligning with previous research findings (Zhang et al., 2022).

### Social Recognition and Rewards through social media

All seven participants noted the significant impact of social media in garnering social recognition. They highlighted China's increasing internationalization and the growing emphasis on ECE, making the industry more appealing and promising. Additionally, they acknowledged the advantages of male kindergarten teachers' roles and expressed their dedication to honing their uniqueness. The participant with the longest tenure shared his experience as follows: *"At first, I thought Tik Tok was just for fun....through sharing, I discovered my strengths, as pointed out by my fans. They helped me accept different challenges and find my uniqueness in the ECE environment, also earn some extra income from TikTok."* (Xigua Gege)

The response from Daxiang Gege, who has been working for only a year, surprised the researchers:

*"Do you know how I ended up on this path? It's quite unbelievable and somewhat funny. Watching TikTok sparked my desire to become a kindergarten teacher.... Being a kindergarten teacher has enriched my life, and on weekends, some institutions invite me to participate in activities where I can also earn some rewards."* (Daxiang Gege)

Self-media platforms like TikTok provide male teachers with opportunities to showcase their teaching skills and interact with students, creating rich rewards and social recognition. Successful content on these platforms can bring widespread social approval and attention, as well as various rewards, including fan support, advertising collaborations, and invitations from educational institutions. This exposure may enhance the status of kindergarten male teachers in society.

### Personal Interests and Sense of Mission

Some men may have a strong interest in interacting with and educating young children, viewing it as a meaningful career and hoping to make a positive contribution to the growth and development of children. This generation often emphasizes the pursuit of personality and interests. We found that men born in the 1990s are passionate about early childhood education and demonstrate excellent teaching abilities. They are more willing to accept and respect such career choices such as:

*"I find early childhood education to be an extremely interesting profession. I can interact with carefree children, and when they call me 'brother,' it brings me immense satisfaction. Although the work is tough, I find joy in it." (Yumi Gege)*

A KMT mentioned their reflection after dealing with a child injury issue, stating:

*"We demonstrate a stronger ability to handle emergencies. It feels like having a sense of mission, similar to firefighters saving lives." (Daxiang Gege)*

The data showed that men in their 90s who work in early childhood education aspire to pursue personal dreams and goals. They prioritize achieving self-worth through their work and lifestyle. They may pay more attention to the meaning of their work and personal sense of accomplishment. Additionally, they might emphasize the balance between work and life, striving to integrate personal interests and career, aiming for more comprehensive self-development.

### Discussions

This study delves into the motivations behind the significant rise in male early childhood educators, a trend influenced by multiple factors. Firstly, shifting social perceptions and gender roles play a crucial role (Xu, 2019). Over recent years, increased societal recognition of men in early childhood education has highlighted their importance in this field, potentially inspiring more men to pursue careers in this domain (Zhang & Yu, 2016).

The evolving attitudes toward gender equality serve as a driving force behind the surge in male early childhood educators. As societal norms regarding gender roles evolve, more men are encouraged to challenge traditional stereotypes and opt for professions traditionally dominated by women (Yang & McNair, 2020), such as early childhood education, marking a notable departure from previous studies (Zhang & Wang, 2018; Zhang et al., 2022).

The contemporary openness and progressiveness in China have fostered greater acceptance of diverse ideas and cultures among the younger generation, born in the 1990s, who grew up in an environment emphasizing gender equality and inclusivity. Thus, they may view men engaging in early childhood education, traditionally seen as a female-dominated field, with a more egalitarian and inclusive perspective.

The influence of social media emerges as a significant factor driving this trend. Positive portrayals and endorsements of male early childhood educators on social media platforms can sway individuals' career choices, making them more inclined to enter this profession. The post-90s generation, having grown up with the rise of social media, places a strong emphasis on presenting authentic selves on these platforms while being influenced by external evaluations. Actively engaging with social media allows them to express support for males in early childhood education and serves as a vital source of information and perspectives. Through self-media platforms, male educators can showcase their professional skills, innovative teaching methods, and positive interactions with students (Szeto et al., 2015), thus reshaping societal perceptions of male educators in early childhood education and establishing a more professional image for them. However, potential drawbacks, such as an excessive focus on appearance and entertainment, warrant consideration, along with the need to maintain personal privacy and adhere to professional ethical standards when sharing teaching processes and student interactions on self-media platforms.

Additionally, researchers observed that male early childhood educators born in the 1990s prioritize achieving a work-life balance and integrating personal interests with their careers to achieve comprehensive self-development. This generation generally values pursuing personal interests and realizing self-worth (Yang, 2020), making it easier for them to understand and support a career choice that aligns with their passions. Finally, economic rewards and career advancement opportunities are crucial considerations (Lan et al., 2021).

Increased visibility on social media platforms and participation in social activities can enhance the social status and salary levels of male early childhood educators, serving as economic incentives. Additionally, some men may perceive greater career development prospects in early childhood education, including opportunities for

promotions to managerial positions or achieving higher social status in the sector. These motivations are likely intertwined, with individuals making decisions based on a combination of factors. It is important to note that this study was conducted in economically developed regions of China, and perceptions of the actual self may vary based on location and individual circumstances, particularly in less developed areas.

### Conclusion

Kindergarten male teachers born in the 1990s prioritize achieving work-life balance and integrating personal interests with their careers for comprehensive self-development. Attention to economic rewards and career advancement opportunities is crucial, with social media platforms potentially enhancing visibility and elevating social status and salary levels.

Educational institutions should bolster the professional awareness of male educators, providing training and guiding them to recognize their capabilities. Encouraging participation in social media can showcase skills. Implementing incentive policies to raise social status and salaries can enhance attractiveness to the profession, alongside offering career development opportunities for professional growth.

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## Factors Affecting the Acceptance and Adoption of Tiktok Platform through the Lens of Diffusion of Innovation Theory

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### Abstract

This study aimed to discover the factors affecting the acceptance and adoption of Tiktok platform among Palestinians through the Lens of Diffusion of Innovation Theory. The study sought to research how Tiktok app has diffused among the Palestinian users, and discover the characteristics of Tiktok platform that affect its adoption among them, in addition to discover the benefits that Palestinian users are gaining from Tiktok adoption. The study also sought to identify the reasons that derive Palestinian users to prefer Tiktok to other platforms.

This study used the qualitative methodology and utilized semi – structured interviews to accomplish the goals of the research and answer its questions. These interviews were based on a pre-established set of questions that were asked to all respondents. Semi- structured interviews were chosen because they flexible and give the opportunity to ask follow-up questions to delve more deeply into topics addressed.

Ten interviews done with diverse Palestinian Tiktok users to discover the characteristics and determinants that motivate them to use and adopt Tiktok and reveal the reasons that may derive users to prefer other platforms to use.

After interviews analyzing, the study revealed that users got to know the Tiktok platform in various ways, including YouTube ads, and the recommendation of close friends and relatives to use the platform. The majority of interviewees cleared that the most important characteristic that encouraged them to adopt and use the application is its ease of use, as well as the fact that it is free application supports the Arabic language and doesn't need a prior experience to use. According to the results, the interviewees believe that there are many advantages to utilize and implement the application, such as passing the time by watching quick videos with a variety of subjects.

**Keywords:** Diffusion, Tiktok, Palestine.

### Introduction

The world is living now through the information era. The continuing rising of cloud computing and digital devices has primarily changed the way people interact with each other and the internet (Vogel, 2023).

The world today is in a progressively hyper-interconnected world, a comprehensive society for communicative interaction and exchange which stimulates profound cultural change and realignment, a world for the most part defined by globalization and the emerging of new technologies. Essentially, the evolving global media landscape is framing the socialization procedure, values, and beliefs of youth, and influencing their decisions in areas such as educational preference, employment and entertainment (Salman, 2009; Mustaffa, 2011).

One important element of today world is social media that have a vital place in our daily lives, especially with the great development of smartphones and the permanent availability of the Internet (Steven, et al., 2021). These platforms have become a well-known path for individuals to communicate with others, socialize and build relationships with friends, colleagues, family and strangers, and explore, share and consume information (Khalifa, 2020).

Some reports that are interested in studying the use of social media sites in the Middle East and Africa have concluded that consumption of social media use and exposure have increased since the outbreak of coronavirus pandemic (Radcliffe, 2021). In addition to several reports emphasize that social media has become more popular among young Arabs than traditional media (Akerman, 2019) and that Social media has increased significantly as a source of news among Arab youth over the last five years (Radcliffe, 2020).



According to 2023 Global overview report, Tiktok, the popular short-video platform now ranks sixth at a worldwide level, with a 23 hours monthly average of using worldwide. In the Middle East, The United Arab Emirates is the country with the highest Tiktok reach, with more than 100% of the population aged 18 and over utilizing the popular social video. This was followed by Saudi Arabia, at over 100% (Kemp, 2023).

Tiktok is a social software for creative short video. Since 2017, the short video platform has a huge number of users, and its influence has gradually expanded, From April to July 2017, user installations increased by more than 17 million, which on the other hand reflects the rapid development of short video platforms (Wang & Wang, 2019).

Following the rapid spread of the Tiktok platform around the world, this study came through the theory of the diffusion of innovations to determine how users in Palestine first learned about Tiktok, also to identify the factors that contribute to the acceptance and adoption of this platform in Palestine, and to learn about the characteristics of this platform that encourage users to use it and identify weaknesses that reduce the likelihood of adopting this platform in Palestine.

### **Diffusion of innovation aspects**

Diffusion refers to the process by which innovations are communicated through certain channels over time among members of a social system (Rice & Katz, 1985). After the quick growth of radio in the late 1920s and early 1930s, interest in the principles of diffusion in communication peaked historically (Katz, 1957).

Innovation is a term used to describe anything novel and previously unheard of. It involves uncertainty for the individual and may involve risk in its acceptance. The speed of its diffusion increases with perceived adoption risk (Rogers, 1983). The most crucial component when discussing the idea of diffusion is time. The concept of time in communication pertaining to diffusion is different from the concept of time in communication studies looking to assess the effects of mass communication campaigns; studies on the diffusion of a particular innovation typically highlight the need for a lengthy period of time (Nemutanzhela & Iyamu, 2015).

From a sociological standpoint, the concept of "Diffusion" is expressed in communication research and is frequently referred to by several expressions, such as "Acceptance," which refers to "the time of acceptance" in order to identify which individuals have and have not accepted an innovation or what proportion of the population members in various communities have accepted (Katz & Hamilton, 1963).

Although the first use of an innovation does not always imply continued use, communication researchers have attempted to distinguish between two other concepts related to the diffusion, namely the concepts of "trial" and "adoption" (Ryan & Gross, 1943). Communication studies typically link the timing of the "first use" of innovation with the concept of acceptance. Time is a crucial element in the diffusion process because it allows for the identification of early adopter characteristics, the construction of the flow direction of influence, and the establishment of a foundation for the charting of diffusion curves. In this way, time offers the opportunity to create a mathematical model of variations in the diffusion process (Young, 2006).

The concept of diffusion in communication is linked to other important concept, which is the "adoption". There are some things that can't be collectively adopted yet that everyone can adopt or not, like the telephone. Others, on the other hand, the group accepts as a whole with no room for individual choice (Katz & Hamilton, 1963). Unquestionably, the mode of adoption—individual or collective—plays a critical impact in shaping what society considers appropriate. In contrast to other innovations that can be accepted and diffused after being adopted individually, some inventions call for collective adoption, which means that they can only be done collectively (Katz, 1962).

Communication channels have a significant part in determining how new innovations and ideas spread since people's perceptions are crucial in determining how an innovation should be evaluated (Harrison, 2001).

The perceived personal benefit derived from the adoption of an innovation must be superior compared to an existing system of use. Perceived ease of use facilitates adoption, while more complex innovations and ones that are difficult to understand and use typically take longer to spread (Ermecke et al., 2009). This is one of the most crucial characteristics of the new innovation that aid in its diffusion.

The main thesis is that any diffusion process requires that the proposed innovation "fit" with the culture and values of a group or an individual's personality in order for it to be accepted and adopted (Valente, 1995).

### **Tiktok Platform**

Tiktok platform for short videos was launched by Zhang Yiming in 2017 in China as the international version of the popular Chinese platform Douyin. The app gives the ability to shoot, publish and share content (Kaye, 2022). This platform was created mainly to simulate lyrical video for lip-synced and dance for entertaining then it has grown into a full-blown video service, with content available for all kind of viewers. While many Chinese applications have failed to succeed outside China, like WeChat, Tiktok has managed to push itself onto the foreign market (Zuo, & Wang, 2019; Ceci, 2022). Tiktok app snowballed into the most widespread application in 2020 as it was downloaded 850 million times in 2020 and reaching 740 million new users in 2021. Even if it wasn't launched till 2017, Tiktok was the 7th most downloadable application in the first quarter of the twenty-first century, and appears to be a real competitor against Facebook's hold on social media in the West (Fannin, 2019; Iqbal, 2023).

Users of Tiktok can select songs as musical background via this software, taking a short videos of a certain length and download them to form their own works. TikTok gives users the latest information about music, meeting the users need to catch up with the music trend (Wang et al., 2019). Tiktok algorithm implements the ability to precisely push content based on user preferences and needs (Yang et al. 2019).

On Tiktok, The demand for knowledge has been highly fulfilled. For instance, in various short videos of the app, there are painting and calligraphy tutorials, food tutorials, and even tips related to everyday life, which get a high level of attention (Xu, 2018). Many short videos on Tiktok platform are sought after because they are characterized by hilarity, exaggeration and novelty and provides users away to freely use their imagination and creativity (Yang, 2018).

Among users who use Tiktok, there are corporate users as well as individual users. Business users use who usually utilize Tiktok to conduct marketing campaigns to increase awareness and achieve brand value, while Individual users, whether they are celebrities or not, employ Tiktok to publish short videos, and promote themselves to others for gaining more recognition and attention, thus enhancing self-worth (Zuo, & Wang, 2019). In return there are negative effects of using the Tiktok platform, one of them that watching TikTok for extended periods of time lowers the attention span of users. According to a study done by Microsoft, the average duration of human attention is 8 seconds now, making Tiktok videos of 15second perfect for the modern mind (Hollarbush, 2022).

### **Goals and objectives**

There are two goals in this research. The first goal is to educate people about the rapid diffusion of Tiktok platform during the recent years in order to provide them an insight about the reasons, factors and characteristics that helped to accept it among users and adopt it under the perception of Diffusion of Innovation theory.

As is well- known, Tiktok platform is an example of a social media that born outside the Western sphere and then became efficient across the globe after being used heavily in China (Zuo & Wang, 2019). With the rise of Tiktok as a social media platform since its debut in 2016, the social media app Tiktok has attracted a broad range of users and the heterogeneity of users creates variety in the patterns of its use and adoption (Gu et al., 2022). In terms of uploads and monthly usage in minutes, Tiktok has gone beyond other well-known social media applications, such as Facebook and Instagram (Briskman, 2022). Tiktok is now a global phenomenon with over one billion users and is available in over 150 countries (Southern, 2021), in addition to its fast-growing user base, Tiktok distinguishes itself from other social media applications with its high user engagement (Scherr & Wang, 2021). These figures indicate the need to explore the factors that encourage and motivate people to trail the application and then adopt it.

Tiktok often provides users with a space where they can create or find a community with similar interests (Navlakha, 2021). Many reasons could explain why users try Tiktok and decide to adopt it later, some of these reasons could be the desire of socially rewarding presentation of self and arising valued gratification from the feature of Tiktok due to self-generating and uploading content, in addition to trendiness and being cool, new, and exciting to use. Novelty; which means having the possibility to experience new things, and using Tiktok to escape or forget work pressure, school and collage responsibilities, or boredom which called escapist addiction (Scherr & Wang, 2021).

The second goal of this research is to educate people about the reasons that motive users not to accept and adopt Tiktok platform after trying it or even not having the desire to try it at the first place due to many possible factors like cultural values, gender and even age, or the desire to quit the application because of several reasons such as, according to Southern (2021), the addictive nature of the platform along with privacy-related aspect enforced by location tagging and sharing videos recorded from home with a possibly large strange audience.

The uncontrolled and problematic usage of social media platforms has commonly been compared to addiction (Ryan et al., 2014) and that could be implemented on Tiktok as well, which gives a sign to users to stop using it temporarily or permanently to save themselves of addiction. According to Tang et al. (2017) the addiction on Tiktok app was rather stronger, particularly among younger users and female users. This is consistent with previous results on social media addiction being higher among women and particularly high in China. There may be cultural factors involved that explain the gendered importance of the addictive escape that Tiktok fills in young women. (Scherr & Wang, 2021).

It is important to identify the cultural values that prompt users to accept and adopt the Tiktok platform after experience it or even accepted for the first time or refusing to adopt it at all. This would give an impression as to why it is so widespread among specific categories of users. It's also important to understand the motives behind Tiktok negative challenge participation and time wasting that could encourage people not to adopt Tiktok platform after a while of using or reject adopt it at the first place due to its negative impacts (Roth, 2021).

### **The importance of the study**

There are two importance in this paper. First, this study came to highlight the diffusion of Tiktok, the short video platform which has proven its place among social media platforms since its inception in 2016 under the perception of Diffusion of innovation theory.

At the beginning, Tiktok has achieved success in China with its Chinese version of the application called Douyin. After its diffusion within that social network, the English version of the application made its way into the music industry because of its ability to promote viral music (Patel & Binjola, 2020). From there, many users of Instagram application downloaded their favorite Tiktok videos to their Instagram pages as well as their stories (Wang et al., 2019). Notably, one of the most important reasons why Tiktok has spread is because its users post their videos on their other social networks, which has led to other users being introduced to the Tiktok app and significantly increasing its spread (Feldkamp, 2021).

It is noticeable that media studies about Tiktok are still continuing and evolving especially after the platform success in attract very large numbers of users since its establishing. After browsing media studies about the short video platform Tiktok, it's noticeable that most of these studies have concentrated on the patterns and motivations of using this app by focusing on the benefits that the user derives after adopting this social platform and their decision to continue using it. Some of these studies have also tried to identify the reasons why users rely on the Tiktok platform as a source of information, especially news.

However, this study tries to recognize the most important characteristics and features that make the Tiktok platform very widespread around the world, especially in Palestine in order to understand the reasons behind the user's acceptance of this social platform and their decision to adapt, and understand the factors that helped in confirmation the usage of Tiktok and continue utilizing after trying it for a while.

Secondly, this study came to highlight any weaknesses in Tiktok platform and monitoring the reasons behind the rejection of some segments of society to adopt Tiktok or reject to continue using after trying it, and explore the characteristics that prevent some users from taking the decision of adoption and acceptance of the app. This study will research Tiktok platform under the lens of Diffusion of Innovation theory to understand the factors that motive people to adopt it and understand the reasons that push users to stop using the app after a while and understand the laggard's point of view for being the last to adopt.

One of the features of short video platforms such as Tiktok is the inability to review the content available on it due to the huge numbers of users because of the ease of making a personal account on it (Yang, 2018). The Tiktok platform has been able to gather large numbers of users from multiple and diverse backgrounds but at the same time they are not communicating with each other effectively (Wang et al., 2019). Tiktok users follow videos on the platform and just watch or like, and likes for one video may reach tens of thousands and views to millions. This fosters a culture of numbers rather than a culture of communication (Yang & Ma, 2019).

Most of Tiktok users get addicted to the platform this is because the platform's algorithm delivers personalized content to each user and is generated in a very quick manner, the users find themselves in front of attractive and endless content and this results in a great waste of time on using the app every day (Francisco & Ruhela, 2021).

Thus it can be noted that the Tiktok platform has some weaknesses or downsides that can prevent some users from completing its adoption, or can make some individuals refuse to use it from the basis.

### **The Problem of the study**

Tiktok platform is popular around the world, including Palestine. Some studies suggest that the number of users in that platform increases day by day. Hence, studying the adoption of this platform from the point of view of diffusion of innovations theory is an important thing that can add to media studies.

Based on the above, this qualitative study tries to explore and understand the factors that affect the adoption and acceptance of Tiktok platform in the Palestinian society under the lens of diffusion of innovation theory by highlighting several issues about the way Palestinian users get to know Tiktok for the first time, and the accurate time they started using it. Wondering about the frequency of using the app by Palestinian users, in addition to identifying the key characteristics of Tiktok platform that make it attractive to adopters in the Palestinian society and exploring the benefits that Palestinian users receive as a result of using Tiktok platform in their daily life. Furthermore, identifying weaknesses of Tiktok platform that might prevent Palestinian users from adopting the platform, and finally, discover how the perceived relative advantage of Tiktok platform compared to other social media platforms influence its adoption among different segments of the Palestinian society.

### **The Theory of the study**

This study relies on Diffusion of Innovation theory that was established by the American communication theorist and sociologist, Everett Roger in 1962 (Lundblad, 2003). The diffusion of innovation theory offers a methodical explanation of how an innovation spreads through different social systems and describes how individual differences lead people to accept innovations at various times and make use of various informational quantities and sources (Conrad & Dillon, 2022). Rogers's theory gives a framework for understanding, predicting, and accounting for elements that can speed up or slow down the spread of innovations (Mustaffa, 2011).

According to Rogers's theory, the diffusion is expressed as a process of "how an innovation is communicated through specific channels for an extended period of time throughout the members of a social system" (Rogers, 1983, p. 5). Rogers' definition of diffusion included four basic elements; first of all, is the innovation itself, which is the central element of the diffusion process, since it serves as the topic of communication and the main consideration for potential adopters (Hornor & Emerson, 1998). A new concept, product, or method that is regarded as novel or distinctive by the participants in a social system is referred to as "innovative". The innovation could be the launch of a new product, a new technology, or a new method of doing things (Sahin, 2006). The second element of the theory is communication channels which refers to the means by which information about the invention is communicated from the source to the potential users (Dearing & Cox, 2018). These channels may be mainstream media, like radio, television, or newspapers, or they may be interpersonal, like friends, relatives, or opinion leaders (Isman, & Dagdeviren, 2018). Time is the third crucial component of the invention diffusion process. On a micro level, such as a person adopting an innovation, or on a macro level, such as the economic growth or technological advancements of a society, the diffusion of the innovation process can be monitored over time (Gomulko, 1971; Conrad & Dillon, 2022 ).The theory assumes that the adoption process or the rate of diffusion can be represented by an S-shaped curve, which shows that as an innovation is accepted more widely, the rate of adoption first starts slowly, then quickly rises, and finally slows down (Rogers, 1983). The social system is the fourth component of the diffusion process. According to the theory, the diffusion process, therefore, takes place inside a social structure, which can be a group, a business, a community, or a society. The social system's participants engage in interpersonal interaction through various communication channels and share knowledge about the invention (McAnany, 1984).

Based on the relative timing of their acceptance of an innovation, Rogers (1983) divided adopters into five types. Innovators, who are the first to adopt a new idea. The theory assumes that they are bold, risk-takers, and open to experimenting with novel concepts. Compared to the average adopter, they are typically younger, more socially advanced, and wealthier (Davies, 1979). The second group of people to adopt a new idea are early adopters. They are respected by their colleagues, considered thought leaders, and frequently asked for advice (Miller, 2015). According the theory, the third group of people to accept an innovation is the early majority. The theory assumes that they take their time making decisions and usually accept innovations only after the early adopters have demonstrated their viability. Compared to early adopters, they are frequently older, of lesser social standing, and with less money (Valente, 1996).

The fourth demographic to adopt a new innovation is the late majority. The theory assumes that they are resistant to change and are more likely to adopt a new idea until it has gained widespread acceptance (Holden, 1972). Laggards, these people, according to the theory, are the last to adopt an invention. The theory assumes that they are conservative, sensitive to change, and resistant to accept innovations until they are absolutely necessary. In comparison to the early majority and the late majority, they are typically older, have a lesser social position, and

have less financial means (Sahin, 2006). The properties or traits of innovations that are most likely to influence the rate and scope of adoption and dissemination have been thoroughly explored by Rogers (1983) and Greenhalgh et al. (2004). The primary characteristics for which there is a substantial body of evidence are relative advantage, compatibility, complexity, trialability, and observability (Rogers, 1983; Greenhalgh et al., 2004). The theory assumes that only if an innovation proves superior to the idea, thing, or program it replaces will it be implemented, and that innovations that align with the values, norms, principles, and perceived needs of the target users are more likely to be adopted (Oldenburg & Glanz, 2008). Moreover, the theory suggests that easy-to-use inventions are more likely to be adopted, while more complex technologies are adopted less successfully (Davies, 1979). The theory contends that innovations are more readily accepted when their target customers may test them out in small doses and that innovations will be embraced more readily if their advantages can be quickly understood and seen by others (Holden, 1972).

The theory serves in understanding how trends develop and serve to determine if a new introduction will succeed or fail (Conrad & Dillon, 2022).

The current study has used the theory of the diffusion of innovations to identify the attractive factors and reasons that drive individuals to make decisions of adopting and accepting Tiktok platform, and to identify the most important characteristics and features of this platform and have led to it spreading very widely around the world, as well as identifying the most important factors that drive some people not to accept and adopt this platform despite its global fame.

### **Literature review**

There are several studies addressed the subject of social media platforms diffusion, acceptance and adoption. The first one was done by Roth et al. (2021) which was entitled: "A study of adolescents' and young adults' Tiktok challenge participation in South India". The aim of this study was to examine the reasons why people participate in social media challenges on Tiktok in a region of southern India with significant internet usage, paying close attention to how teenagers feel about the challenges and the platform as a whole. The study also sought to determine the elements that influence young people's behavioral intentions to engage in challenges and activities on Tiktok.

The method used in the research included conducting semi-structured interviews with 25 youths between the ages of 13 and 25 who resided in the Indian states of Tamil Nadu and Kerala. The selection of participants was based on their participation in social media challenges as well as their regular and active use of social media. The interviews were performed over the phone or in person, with the participants' permission, and audio recorded. According to the survey, most participants took part in social media challenges on Tiktok because they enjoyed them and thought they were manageable and under their control and that taking part in online challenges increased their confidence. The study also discovered that participants' peer groups had a significant impact on them. In addition, the study discovered that individuals' ability to obtain support from other participants had a significant role in determining how often they participated in social media challenges.

The current study intersects with the study of Roth et al. (2021) as they used interviews as a tool to determine the factors that drive users to adopt the Tiktok platform.

The second one was done by Scherr and Wang (2021), which was entitled: "Explaining the success of social media with gratification niches: Motivations behind daytime, nighttime, and active use of Tiktok in China".

This study aimed to identify the primary motives for using Tiktok and examined gender, age differences among users. The study conducted a survey contained 1051 Tiktok users in China during November 2019. The participants were required to be more than 18 years of age and know Tiktok well to receive an e-mail invitation to the questionnaire. The questionnaire included demographic questions, questions about Tiktok use, and a list of statements catching different motives for using Tiktok. The study used descriptive statistics, correlation analysis, and multivariable tests to analyze the data. The study found that there are four primary motives for using Tiktok among Chinese users include socially rewarding self-presentation, trendiness, escapist addiction, and novelty. The study revealed that novelty is the most significant motive for using Tiktok among Chinese users, followed by socially rewarding. The study also found that there were gender differences in the four motives for using Tiktok among Chinese users. Specifically, the motive of escapist addiction was more relevant for women than for men. This suggests that while gender is one of the strongest predictors for Instagram use, Tiktok seems to be equally attractive to both men and women, with some differences in the motives for using the app. The study revealed that socially rewarding self-presentation was related to active Tiktok use and that Tiktok has evolved into a significant source of entertainment.

Scherr and Wang (2021) revealed the motivations that encourage users to use Tiktok platform. This helped the current study in building the theoretical framework through identifying the most important characteristics that affect the adoption and acceptance of Tiktok platform.

The third study was done by Wang et al. (2019), which entitled: " Causes and Characteristics of Short Video Platform Internet Community Taking the Tiktok Short Video Application as an Example". The purpose of this study was to look into the traits and requirements of the online community using Tiktok short video platform as an example, covering cognitive, pleasurable, social, and personal integration, and rejuvenation requirements. The study also intended to examine the elements influencing users' media preferences and their aggregation into online communities.

Based on the study's main objective, a selective literature review was part of the approach. To learn more about the Tiktok user base and their motivations for utilizing the platform, the authors read pertinent literature and interviewed 5 Tiktok users. In addition to a web-based survey that was developed to find out how many users have just posted a few videos or have a modest number of fans to watch other people's videos, study the factors influencing the user's selection of media, and gather into an online community. Online interviews with certain Tiktok users were also conducted. The Tiktok short video platform meets its users' needs for cognitive stimulation, enjoyment, social integration, stress relief, and rejuvenation. The study also found that the app satisfies users' requirements to keep up with musical trends by giving them access to the most recent music information. It offers users a space where they are free to express their creativity and imagination. The study discovered that Tiktok satisfies users' social needs by enabling them to interact and engage with friends, family, and other people. In order to momentarily relieve stress and unwind, the platform also assists users in finding sensory stimuli in a bland and uninteresting life. The study's findings imply that Tiktok has evolved into a significant source of entertainment in contemporary society.

The current study has benefited from Wang et al. (2019) in building the theoretical frame work.

The fourth study was done by Yang et al. (2019) which was entitled: " Analysis of the Reasons and Development of Short Video Application—Taking Tiktok as an Example. This qualitative study aimed to discuss the popularity of the short video app Tiktok. Several topics related had been covered such as, the demographics of users, the production of content, supervision, and sustainability of recommendations. Additionally, it cited a number of academic works that discuss communication theories and techniques.

The study reviewed the literature synthesized information from various academic sources related to communication research and methods. The research discusses various aspects of the short video application Tiktok. The research started with the definition of short videos then counted the features of the short videos on Tiktok platform such as it is easy to make and spread quickly. The study also mentioned that short videos on Tiktok are rich and engaging, and that they reject the distinctive structures and logic found in traditional video. According to the study, the target population of Tiktok platform is individuals between the ages of 20 and 29. It also pointed out that the users at this age are frequently students or recent graduates who lack a steady source of long-term income. The study also found that Tiktok's prominent categories such as fitness shaping, emotional interpretation, gorgeous landscape, and others are all well-liked by viewers and follow current trends. The study also noted that Tiktok's trendy content, high-end production values, and innovative advertising concepts all support its rapid expansion.

Yang et al. (2019), helped the current study in building the theoretical framework and identifying the most important characteristics that affect the adoption and acceptance of Tiktok platform among users which facilitated the process of preparing the current study interviews.

The fifth study was done by Zuo and Wang (2019), which was entitled: " Analysis of Tiktok User Behavior from the Perspective of Popular Culture". With an emphasis on the interaction between youth culture, mass consumption culture, the purpose of this study was to investigate the behavior and identity creation of users on the Tiktok platform. Additionally, the study investigated user behavior on the platform and Tiktok's function in modern popular culture.

The qualitative approach has been used in order to achieve the purpose of the study. The study divided Tiktok users into three roles based on their different behaviors; firstly: users as popular culture producers; who usually produce content on the platform and create independent cultural value and they can be ordinary persons, internet celebrities, famous stars, or business organization. Secondly: users as popular culture disseminators who spread popular culture by uploading videos to social media or taking part in the information-dissemination process using the recommendation algorithm of the platform. Thirdly: users who utilize the platform as consumers of popular

culture by only watching videos, pay for commercials or subscribe to their preferred live broadcasters. The motivation Analysis of Tiktok user Behavior, as described in the study included entertainment Pursuit and Self-expression. According to the study, individuals will continually modify their behavior in order to follow the group's behavior. The study argued that the majority of mobile internet users would be motivated to learn about and utilize Tiktok, especially those who like to follow the popular culture and that they would join Tiktok by following their friends or influential figures to feel a part of the movement.

The study of Zuo and Wang (2019) intersects with the current study in using a qualitative approach. The current study has also benefited from Zuo and Wang (2019) in building the theoretical framework.

The sixth study was done by Isman and Dagdeviren (2018), which entitled: " Diffusion of Twitter in Turkey". The purpose of this study was to apply Rogers' diffusion theory to the spread of Twitter in Turkey. The study examined Twitter's consumption in Turkey and how it rose to become one of the most popular microblogging services there. The four components of Rogers' theory: innovation, communication channels, time, and social system were also examined in the study in order to explain their role in Twitter diffusion in Turkey.

This qualitative study examined Twitter's acceptance in Turkey. According to the study, social networking websites are the most popular online activity for internet users in Turkey, and social media platforms offer users a variety of opportunities, including information seeking, and uploading content like videos, photos, and status updates. With a penetration rate of 44% of the population, the research contended that Twitter has emerged as one of the most popular microblogging services in Turkey. The study also examined Twitter's consumption in Turkey and how it has gone beyond the point of diffusion. The study suggested that the spread of Twitter in Turkey was significantly aided by the mass media, particularly television. The study explained that television producers displayed hashtags on the screen to make viewers more engaged when watching reality shows and news programs. The viewers used the hashtags to share their thoughts and opinions in a form of tweets on Twitter. In terms of time, the study suggested that the spread of Twitter in Turkey exceeded the diffusion threshold. The study also highlighted the importance of language support and agents of change in the diffusion of Twitter in Turkey.

The current study benefited from Isman and Dagdeviren (2018) in building the theoretical framework, particularly, in regarding the elements of the diffusion theory and developing the study instrument.

The seventh study was done by Ma et al. (2014), which was entitled: " Understanding news sharing in social media. An explanation from the diffusion of innovations theory". The research aimed to utilize from the diffusion of innovations theory to investigate several influences on news sharing in social media platforms such as individuals, networks and news attributes that might affect the intention of users to share news on social media.

The method involves a questionnaire instrument, the sample used in this study consisted of 309 respondents, both undergraduate and graduate students from a large local university. The sample contained males and females between the ages of 19 and 61. The questionnaire was developed to discover user's perception about the quality level of the news that is shared on social media, as well as how they usually use it to share news. The study used the diffusion of innovation theory to provide a framework to explain what factors may increase or hinder the spread of news on social media. The study linked the theory with news sharing on the basis that timely and new news conforms to innovation standards. The study looked at two types of individual influence: opinion-seeking and opinion leadership. The ability to share relevant knowledge with others and shape their views through information networks is referred to as opinion leadership while people's tendency to seek news stories from their contacts referred to opinion seeking. The finding showed that self-perceptions of opinion leadership had an important direct connection with the intent to share news, the study did not find a connection between credibility of online news, liking news or news relevance with news sharing intention. The study revealed that perceived preference for online news was positively associated with news sharing intention.

Ma et al. (2014) contributed in developing the theoretical framework of the current study because of its use to the theory of diffusion of innovations.

The eighth study was done by Koçak and Erol (2013) which was entitled: " Social media from the perspective of diffusion of innovation approach". This study aimed to explain social media from the standpoint of the diffusion of innovation theory and to pinpoint the variables that influence users' decisions to accept or reject social media, as well as the traits of earl / late adopters and rejecters. The study also tried to comprehend the individual side that has difficulty with the innovation and to offer significant hints about social media's positive and negative perceptions that influence the adoption procedure.

In this theoretical study, the diffusion of innovation theory and its use in social media was discussed. The decision-making process for innovation and how it relates to the acceptance or rejection of social media were both explained by the authors using a literature review and theoretical framework. They also offered future topics for research to determine the elements that influence the decision to adopt or reject social media as well as the traits of early/late adopters or rejecters. The authors contend that key elements influencing the persuasion process include social media qualities including compatibility, complexity, trialability, observability, and relative advantage. Additionally, they contend that some of the reasons people utilize social media include communication, self-expression, sociability, entertainment, unrestricted access to knowledge, and keeping up with current trends. The authors argued that social media might be viewed as a significant innovation since it offers an entirely new and novel method of interpersonal contact and that social media's extensive adoption and diffusion might be linked to the innovation-related decision-making process.

The current study intersects with the study of Koçak and Erol (2013) in the fact that the two studies are based on the theory of the diffusion and its application on social media sites as a modern communication tool.

The ninth study was done by Mustafa et al. (2011) which was entitled: "Diffusion of Innovations: The Adoption of Facebook among Youth in Malaysia" The purpose of this study was to evaluate the reasons that encourage youth to adopt Facebook and the purpose of using it among youth in Malaysia. The study also aimed to advance knowledge of how and why young people use Facebook as well as the factors that affect their acceptance and adoption.

The study's methodology includes 200 surveys distributed to young individuals in Malaysia's Klang Valley between the ages of 15 and 25. The poll gathered information on the respondents' gender, ethnicity, level of education, and work position as well as other demographic details. The diffusion curve was also employed in the study to divide the respondents into several adopter groups according to how well they embraced innovation. The results of this study showed that young people in Malaysia's Klang valley were still in the late majority when it came to use Facebook. The study revealed that the most important component for laggards, late majority, and early majority was peer pressure, but not for innovators and early adopters. The results showed that young people in Malaysia's Klang valley use Facebook primarily as a means of communication with friends and to reconnect with old friends. The study also discovered that youth are becoming more proficient Facebook users, with their knowledge and expertise growing as a result of the greater time spent on the site. The study suggested that in order to lessen the ambiguity around the innovation, interpersonal networks of close peers could encourage the late majority to use Facebook.

Mustafa et al. (2011) contributed in developing the current study theoretical framework and intersected with it in examining the acceptance and adoption social media platform.

The last study was done by Ermecke et al. (2009), which entitled: "Agents of Diffusion: Insights from a Survey of Facebook Users". This study aimed to examine the phenomenon of person-to-person communication and influence on Facebook diffusion, specifically in relation to the adoption and recommendation of new products.

This study used the theory of diffusion of innovation as a framework in order to understand the adoption and recommendation of new products on Facebook. The study emphasized the significance of an individual's perception of an innovation's characteristics, including its ease of use and relative advantage, and how these perceptions influence the decision of adoption and the tendency to suggest innovations to peers on Facebook. It also identifies consumers' social systems and communication channels as essential determinants of the diffusion of innovations. The study examined interpersonal communication and influence on Facebook using an online questionnaire that received 475 responses. It was disseminated through a variety of media, including personal Facebook contacts, blogs, college websites, and mailing lists. Respondents were questioned about their use of particular Facebook apps and the methods they use to share recommendations with others. The study results showed that active peer recommendations have a strong influence on the adoption of new products (Facebook applications) on the platform. The study also discovered that social networks have automated news feeds that inform users about any updates to their friends' profile pages, including their adoption of particular services. As a result, this feature is likely to hasten information sharing among platform users and, as a result, promote viral marketing. The study also suggested that users are more likely to recommend a certain service based on how their peers are taking advantage of it.

The current study benefited from the study of Ermecke et al. (2009) in building the theoretical framework and developing the study instrument.



## Methodology

### The questions of the study

This qualitative study was designed to discover the factors affecting the acceptance and adoption of Tiktok Platform among the Palestinian users through the lens of diffusion of innovation Theory. Several questions are raised to achieve the purpose of the study. These questions are:

1. How did Palestinian users get to know Tiktok for the first time? And when did they start using it?
2. Do the Palestinian users use Tiktok platform in regular basis?
3. What are the characteristics of Tiktok that make it appealing to Palestinian users?
4. What are the benefits that Palestinian users receive as a result of using Tiktok platform in their daily life?
5. What are the negativities of Tiktok platform that might prevent Palestinian users from adopting the platform?
6. Are there any other platforms that Palestinian users prefer to use instead of Tiktok?

### Identification of the population

According to Ipoke annual report for Palestinian statistics, the percentage of social media usage in 2022 in Palestine was 65.7%. The report shows that the number of Palestinians using the Tiktok app in the West Bank and Gaza is about 2 million, up to 38%, and it is considered to be a preferred application, particularly after Corona (Ipoke, 2022).

### The sample of the study

The sample of this study includes 10 Tiktok Palestinian users who use the platform for different purposes. These 10 users were selected using the purposeful sampling technique, which is a non-probability way of gathering data, as the study aims to discover the factors that lead to Tiktok platform acceptance and adopting among Palestinian individuals who have Tiktok account and usually use it. Purposive sampling is widely employed in qualitative research to locate and select particular individuals who provide an enormous amount of relevant data about a particular topic (Palinkas et al., 2015).

### Data Collection

This qualitative study has used the Semi- structured interviews as a tool to collect data from the sample that has been chosen purposefully. The interview, according to Brennen (2017), is a concentrated, deliberate conversation between two or more people. The Semi- structured interview questions for the study were pre-formulated and applied to each respondent. Six open-ended questions on the interview form reflected the study questions. The features of the Tiktok platform that encourage adoption, the usefulness of using the platform from the users' point of view, the platform's weaknesses from the users' perspective, and whether there are any other platforms that could replace the Tiktok platform were all questions that were asked during the interviews. Based on previously established codes, the interviewees' responses were analyzed.

### Coding scheme

This study included several codes, the way to get Know about Tiktok for the first time, the regularity of using, the platform characteristics, platform usefulness, the platform weak points and alternatives of Tiktok platform. These codes were actually created as qualitative considerations to aid in the task and reflect the study's mission.

**Table (1): coding scheme**

The code	1	2	3	4	5	6	7	8	9	P10
The way to learn about Tiktok for the first time.										
regularity of using										
The platform characteristics										
Platform usefulness										
Platform negativity										
Other alternatives of the platform										

### Data analysis

In this study, qualitative research method was used in order to research the factors that affect the acceptance and adoption of Tiktok platform among Palestinian users. Large family of research approaches are referred to as qualitative research seeks to generate explanations by analyzing data (Cropley, 2015).

When people's subjective experiences are the focus, qualitative research is typically used (Fossey et al., 2002). The codes utilized in this qualitative study were a reflection of the study's questions. Each code articulates the specific research question. The first code, "the way to know about tiktok platform," is a reflection of the study's first question, which inquires about how Palestinian users first learned about tiktok and when they first began using it in order to identify the type of adopters. The second code, "the regularity of using the platform," responds to the second study's inquiry regarding the frequency of use of the Tiktok platform. To track the adoption's confirmation, it is crucial to inquire about usage frequency. The third code, "the platform characteristics," is a reflection of the third question, which questioned what aspects of Tiktok appeal to Palestinian adopters given that, in accordance with Roger's theory, the innovation characteristics play a crucial role in the adoption decision. The "Platform usefulness" code, which responds to the fourth question concerning the advantages Palestinian users of Tiktok experience as a result of utilizing the platform in their daily lives, is the fourth code. The fifth code, "Platform weak points," is a response to the fifth question, which questioned whether Palestinian users of Tiktok might be discouraged from using the platform due to its flaws. The final code, "Other platforms," refers to the last inquiry, which asked whether Palestinian users preferred using any other platforms in place of Tiktok in order to ascertain any comparative benefits of the Tiktok platform.

### Definition of terms:

This study includes the following terms: diffusion, innovation, adoption, social media, Tiktok and Palestine. Diffusion: the process through which innovations are disseminated over time among members of a social system via specific routes (Miller, 2015). Diffusion in this study refers to the manner in which Tiktok has spread among Palestinian users.

Innovation: is the development of novel concepts, items, practices, or ideas (Sahin, 2006). The Tiktok platform is referred to as innovation in this study.

Adopting something: entails changing one's behavior from what one previously did, such as using a new product or developing a new behavior. The person must view the idea, behavior pattern, or thing as innovative or inventive for it to be adopted (Goss, 1979).

Social media: is a category of digital technology that enables user-generated content and personalized profiles that promote engagement through likes, shares, comments, and discussions. Examples of social media include Facebook, Twitter, YouTube, and Tiktok (Carr & Hayes, 2015).

Tiktok, which was launched by Zhang Yiming in 2016, is the worldwide version of the well-known Chinese platform Douyin. The platform allows users to capture, publish, and share material. (Kaye, 2022).

Palestine: also known as Filastin (Biger, 1981). A country in southwest Asia, on the eastern shore of the Mediterranean. Due to its geographic center, it serves as a bridge between Asia, Africa, and Europe, which make up the Old World (Ehrlich, 2001).

### Limitations of the study

This study sought to discover the factors that lead to the acceptance and adoption of Tiktok under the lens of diffusion of innovation theory and has five limitations:

1. The study was limited to Palestinian individuals who have Tiktok account and often use it.
2. Semi- structured interviews were conducted during May 2023 with 10 Palestinians who use Tiktok and adopt it for various goals.
3. This study was conducted during the spring semester of the school year 2022-2023.
4. The results of this study represent one case and is confined within the limits of Palestinian society. Consequently, its results cannot be generalized.
5. This study represents a case limited to persons who have been interviewed from Palestinian society. No comparisons have been made with other cases.

### Data analyzing and findings

This section includes answering the study's questions by analyzing the data of in depth-interviews that were conducted with 10 Palestinian users of tiktok Platform.

Q1: How did Palestinian users get to know Tiktok for the first time? And when did they start using it?

**Table (1): the way to learn about Tiktok**

Code 1	the way to learn about Tiktok
Participant 1	" I get to know Tiktok app via YouTube ads in 2020"
Participant 2	"I got to know the Tiktok platform after its videos went viral on social media platforms, and I set up an account since 2021"
Participant 3	" I get to know Tiktok app via YouTube ads since 2019 "
Participant 4	"My friends advised me to open an account on tiktok after they tried it and I started using it since 2021"
Participant 5	"I imitated my friends who have an account on the tiktok app and started using it in 2022"
Participant 6	"I watched a lot of Tiktok videos on Instagram and started using the app since 2021"
Participant 7	"My relatives have recommended it to me and I have opened an account on Tiktok since 2021"
Participant 8	"I watched Tiktok videos on Facebook and started using it in 2020"
Participant 9	"My friend recommended Tiktok for me and I started using it since 2021"
Participant 10	" I watched a lot of tiktok videos on social media and started using the app since 2022"

the way to learn about Tiktok	
Via other social media sites like Facebook, Instagram	4 interviewees
The impact of friends and relatives	4 interviewees
YouTube ads	2 interviewees
Sum	10 interviewees

**The result:**

Table (1) shows the diversity of the responses of the interviewees about the way they first knew Tiktok, where the answers show that users got to know the Tiktok platform in various ways, including YouTube ads, and the recommendation of close friends and relatives to use the platform. Four interviewees were also encouraged to expertise the application after the spread of the Tiktok short videos on other social media sites, especially Facebook and Instagram.

Participant 1, a PhD student in communication and media studies said: "I get to know Tiktok app via YouTube ads. I was curious to experience the app during the Corona and quarantine and I said I wouldn't lose anything if I tried it." Participant 2, Participant 6, Participant 8 and Participant 10 cleared that they got to know Tiktok for the first time after the massive spread of videos made through the Tiktok application to other social media sites, especially Instagram and Facebook. While Participant 4 said that: " My friends advised me to open an account on Tiktok after they tried it and found it very funny". Participant 5 also stated that: " I imitated my friends who have an account on the Tiktok app. I found that Tiktok amusing application and it is good for me when I have a free time and I don't want anything serious". Participant 7 explained: "" My relatives have recommended it to me and I have opened an account on Tiktok since 2021".

It's noted that the people interviewed belong to different scientific backgrounds, but they were all curious to experience the app.

These results correspond with Roth et al. (2021), Mustaffa et al. (2011) and Ermecke et al. (2009), Which emphasized that the desire to imitate peers was one of the main drivers of the experience of social media applications and this is consistent with the theory of the diffusion of innovations that assumes that the invention requires a social incubator to spread.

Q<sub>2</sub>: Do the Palestinian users use Tiktok platform in regular basis?

**Table (2): The regularity of using**

Code 2	The regularity of using
Participant 1	" I use it regularly for up to 2 hours a week"
Participant 2	" I use it regularly for no more than an hour a day"
Participant 3	" I use it regularly for about an hour and a half a day"
Participant 4	" I use it regularly for about two hours a day"
Participant 5	" I don't use it regularly and I may not exceed two hours a week"

Participant 6	" I rarely use Tiktok, but the app is still on my phone"
Participant 7	"I use the Tiktok app daily for at least two hours".
Participant 8	" I use the Tiktok app regularly for at least three hours a day"
Participant 9	" I use the Tiktok app regularly and intensively"
Participant 10	" I don't use the tiktok app on a regular basis, but it's probably a weekly hour"

<b>The regularity of using</b>	
Using Tiktok platform on regular basis	7 interviewees
Not using the platform on a regular basis	3 interviewees
Sum	10 interviewees

**The result:**

Table (2) shows the diversity of interviewees responses about the regularity of their use of the Tiktok application, where the answers show that majority of the interviewees regularly use the application either weekly or daily for an hour to more than 3 hours, While Participant 9 admitted that she uses the application extensively, possibly for up to four hours per day or more, she found this to be unsatisfactory as she said: " I use the Tiktok app regularly and intensively for more than 4 hours a day unfortunately, I think this is a big waste of time." The dentist Participant 6 said that she "rarely uses the app" as she don't have much time during the day due to her intensive work duties, but she cleared that she likes to explore the app from a while to while because it is "amusing app and sometimes contains useful information" as she described.

Q3: What are the characteristics of Tiktok that make it appealing to Palestinian users?

**Table (3): the characteristics of Tiktok**

Code 3	<b>the characteristics of Tiktok</b>
Participant 1	"Easy and fast spread of videos among users".
Participant 2	"Easy to produce videos, add music, templates without the need for complex montage software, it contributes to keeping up with trends and it is free with quick spread of videos when using the appropriate hashtags ".
Participant 3	"Free, easy to use, supports Arabic language, fun content, doesn't need experience to use, following people from all over the world, select the topics you want to follow".
Participant 4	" easy to use and I it provides me the content that I prefer"
Participant 5	" Free and easy to use"
Participant 6	" Easy to use ,supports Arabic language and varied content"
Participant 7	"Free, entertaining, supports Arabic language ,does not need prior experience and includes varied content"
Participant 8	"Ease of use, the diversity of cultures on it, high video quality. The algorithm of the app is excellent because it shows me what I like to watch "
Participant 9	"easy to use, diverse content but I can choose what I want to watch"
Participant 10	"Free and easy to use. It provides me the content I love and prefer"

<b>the characteristics of Tiktok</b>	
Easy to use, easy to produce videos, add music, templates	9 interviewees
Free	5 interviewees
Provides me the content that I prefer	5 interviewees
Varied content	4 interviewees
Supports Arabic language	3 interviewees
Does not need prior experience	2 interviewees
Fast spread of videos among users	2 interviewees

- The total number of interviews was not included in the previous table because the interviewee may have mentioned more than one feature in his/her response.

**The result:**

Table (3) shows the variety of responses from interviewees about the characteristics of Tiktok application that motivated them to use and adopt it. The majority of interviewees cleared that the most important characteristic that encouraged them to adopt and use the application was its ease of use, as well as the fact that it is a free application, provides them with the content they prefer and like.

Participant 2 encouraged to use and adopt the app as it: "easy to produce videos, add music, templates without the need for complex montage". Participant 3 said that he was motivated to use the app as it "supports the Arabic language and doesn't need a prior experience to use". Participant 6 and Participant 7 said that the app "doesn't need experience to use and support Arabic". Participant 8 cleared that "Tiktok high video quality" encouraged her to adopt the app, and she described the algorithm of the app as "excellent" because it shows her what she like to watch, and she added for more explanation: "If I make a quick skip about unwanted content for me, the app doesn't show me the same as these videos and vice versa for content I've watched fully". Participant 4, and Participant 9 noticed this point too, as they stated that the content of Tiktok is divers but still they can choose what they want to watch.

These answers reflect a great awareness among the people interviewed of the characteristics of the Tiktok application and an understanding of the reasons why they use and adopt it.

Q4: What are the benefits that Palestinian users receive as a result of adopting Tiktok platform in their daily life?

**Table (4): the benefits of adopting Tiktok**

Code 4	The benefits of adopting Tiktok
Participant 1	" To pass the time and get rid of the stress and pressure "
Participant 2	" I prefer to watch trends on Tiktok, follow some useful accounts and watch videos of Israeli intrusions to the Palestinian cities that do not post via Facebook "
Participant 3	"fill my free time, creating and editing videos, watching and participating in trends, publishing positive content"
Participant 4	"Fill my free time and watch the most common and strange as it showcases all cultures regardless of the user's location"
Participant 5	"On tiktok, I enjoy watching short videos with simple content. Sometimes I watch Live broadcasts of Israeli intrusions into my city".
Participant 6	"I follow Celebrity News and I follow the Palestinian activists who photo any political events across the country"
Participant 7	" I use tiktok to watch trends without participating in them"
Participant 8	" my ability to publish videos that I produce"
Participant 9	" to pass the time and enjoy something not serious"
Participant 10	" watching funny videos and enjoy my free time"

The benefits of adopting Tiktok	
To pass the time and get rid of the stress	5 interviewees
Watch or participate in trends	3 interviewees
Watch political events or Israeli intrusions	3 interviewees
watching funny videos	2 interviewees
publish videos	2 interviewees
Watching useful content	1 interviewees
Follow Celebrity News	1 interviewees

- The total number of interviews was not included in the previous table because the interviewee may have mentioned more than one feature in his/her response

**The result:**

Table (4) shows the diversity of the responses of the interviewees to the usefulness of the Tiktok application. The interviewees believe that there are many advantages to utilize and implement the application. Five of them use the app to pass the time. Three of interviewees mentioned that they adopted Tiktok to watch quick videos with a variety of subjects like cooking videos, home care, gardens, and decor or to follow amusing content. Three interviewees adopted tiktok to watch or participate in trends. Two of the interviewees use the app to make their own quick videos. One of the interviewees use tiktok to follow celebrities.

Participant 1 said that he usually use Tiktok to "pass the time and get rid of the stress and pressure". Participant 2 said that she likes to watch trend on Tiktok and follow some useful accounts that showing Palestinian cities as a beautiful destination". She also pointed out to the ability to "watch videos of Israeli intrusions to the Palestinian cities that do not post via Facebook, for example". Her observation corresponds with majority opinion of Palestinians who consider Tiktok as a Chinese app, places fewer restrictions on Palestinian content than Meta social media apps, which have stricter policies on Palestinian digital content.

Participant 3, said that he usually watches Tiktok videos after finishing his work as a means of entertainment and recreation and added: " I like my experience with Tiktok, as I have the ability to create and edit my own videos, watching and participating in trends and re- publishing positive content and creative ideas that may help other people". Participant 6 said that she "likes to watch Tiktok to follow celebrity news". Participant 4 said about using tiktok: " I usually use the app to fill my free time and watch the most common and strange as it showcases all cultures regardless of the user's location". Participant 5 stated: "On tiktok, I enjoy watching short videos with simple content. Sometimes I watch live broadcasts of Israeli intrusions into my city".

Participant 6 cleared: " I follow Celebrity News on tiktok, and I follow the Palestinian activists who photo any political events across the country".

Participant 7 stated: " "I use tiktok to watch trends without participating in them". Participant 8 counted several advantages of adopting Tiktok app, as she said: " The first benefit for me is my ability to publish videos that I produce containing Koranic verses or religious information. There are other benefits, as I follow different contents as cooking channels or channels for space information that I love"

Participant 9 who works long hours during her shifts, said that: " I am using Tiktok app to watch videos with entertaining and non-serious content to get rid of the stress and pressure I feel during the day".

These results correspond with Wang et al. (2019), Yang et al. (2019), Zuo and Wang (2019).

Q5: What are the negatives of Tiktok platform that might prevent Palestinian users from adopting the platform?

Code 5	the negatives of Tiktok
Participant 1	"There is no control over published content, I see all kinds of contents. I am mature, I can understand and evaluate what I see, but I don't know about teenagers and children "
Participant 2	" The platform allows the posting of any kinds of content whatever it was"
Participant 3	"Waste time and addiction to watch. Getting used to following short videos I think tiktok causes the tendency toward short content, I don't have the patience to watch any long videos"
Participant 4	"Some forms of content on the Tiktok platform are inconsistent with religious and social values"
Participant 5	"I feel that Tiktok could cause children's addiction to it. In addition, tiktok display immoral content"
Participant 6	" I think Tiktok is wasting my time and display socially inappropriate content"
Participant 7	" Negative and harmful content usually, but if I was able to control how many hours I use it during the day, I don't see a downside, because simply the content I don't want to repeat, I can do skip and it doesn't appear to me again, and I can also report it".
Participant 8	Sometimes, I spend so much time on Tiktok, because videos with short and amusing content flow quickly. I feel like I am not having the ability to concentrate with long content right now because of the addiction to the short content".
Participant 9	"Tiktok is full of negative content and there are videos that are inconsistent with the values of religion in addition to harmful videos especially for children. This requires parents to sensitize their children about many things they can see through this app"
Participant 10	" "A great waste of time and never benefit. Only those who achieve records by live broadcasts"

the negatives of Tiktok	
Waste of the time	5 interviewees
Displaying immoral, negative and harmful content that incompatible with the Palestinian society's values.	5 interviewees
Addiction to short videos watching	3 interviewees
Losing the ability to watch long content as a result of getting used to watch short videos.	2 interviewees

**The result:**

Table (5) shows the views of the interviewees on the negatives of the Tiktok application. According to five of the interviewees, the possibility of posting all kinds of content on the Tiktok application, even if it is harmful, abusive or immoral in a manner that is contrary to the religious values and social norms that are prevalent in Palestine is one of the most negative points regarding to Tiktok. This content is often exposed to children and adolescents, who are the largest group of users of Tiktok. In addition, the application according to five of the interviewees may cause considerable waste of time. Three of the interviewees cleared that spending too much time on Tiktok could lead to addiction to watch short. According to two interviews, becoming addicted to watching brief videos results in a loss of the capacity to watch long content.

About the nature of Tiktok content, Participant 1 said: "There is no control over published content, I see all kinds of contents. I am mature, I can understand and evaluate what I see, but I don't know about teenagers and children". Participant 2 stated: "The platform allows the posting of any kinds of content whatever it was even sexual overtones, that can negatively affect children, for example, especially that most unethical videos appear quickly".

About wasting time, Participant 3 cleared: "I think Tiktok is wasting my time and it can cause watching addiction. In my opinion, getting used to watch short videos may causes the tendency toward short content, now I don't have the patience to watch any long videos". Participant 6 also said: "I think Tiktok is wasting my time and display socially inappropriate content". Participant 8 declared: "Sometimes, I spend so much time on Tiktok, because videos with short and amusing content flow quickly. I feel like I am not having the ability to concentrate with long content right now because of the addiction to the short content".

Participants 4, 5 and 9 also talked about the nature of content on tiktok that they considered it, in some conditions, not appropriate and incompatible with the Palestinian society's values and could cause watching addiction. Participant 4 said: "Some forms of content on the Tiktok platform are inconsistent with religious and social values". Participant 5 said: "I feel that Tiktok could cause children's addiction to it. In addition, tiktok displays immoral content". They talked about responsibility of parents to make their children aware of what they may see on Tiktok. Participant 9 said: "tiktok is full of negative content and there are videos that are inconsistent with the values of religion in addition to harmful videos especially for children. This requires parents to sensitize their children about many things they can see through this app".

Participant 7 talked about how tiktok content could be "Negative and harmful", but at the same time she considered that she can control the nature of content on tiktok. She said: "If I was able to control how many hours I use it during the day, I don't see a downside, because simply the content I don't want to repeat, I can do skip and it doesn't appear to me again, and I can also report it".

Participant 10 noted that Tiktok most beneficiary is people who use the app for live streaming where they make financial profits. She said: "using the app, could be a great waste of time and never benefit. Only those who achieve records by live broadcast".

Q6: Are there any other platforms that Palestinian users prefer to use instead of Tiktok?

**Table (6): Tiktok alternatives**

Code 6	Tiktok alternatives
Participant 1	" YouTube, gives more space in the duration of videos"
Participant 2	" Instagram is better and restricted in terms of bad scenes"
Participant 3	"I prefer to use Tiktok as I love watching short videos"
Participant 4	"All apps are means of communication, but in different ways. If I had to cancel Tiktok I think Instagram app would be a good choice"
Participant 5	"I prefer using Tiktok as its particularly for short videos that don't need an effort to use and watch"
Participant 6	" I prefer to use Instagram because its content is more restricted and contains the feature of stories"
Participant 7	"I prefer to use Instagram because its content is not limited to short video but rather photos and stories"
Participant 8	" I don't see a full alternative to it, because the policy of other apps has become more complicated"
Participant 9	" I can settle for Facebook because it contains short videos and reels and contains photos and written content"

Participant 10	" I think YouTube is a satisfying alternative with more diverse and longer content in terms of time"
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Tiktok alternatives	
Instagram	4 interviewees
YouTube	2 interviewees
Facebook	1 interviewees
No alternative to tiktok	3 interviewees
Sum	10 interviewees

**The result:**

Table (6) shows the diversity of the responses of interviewees about other applications that they might prefer to use instead of Tiktok. The responses indicate that two of the interviewees prefer to use YouTube to view the videos as it provides videos with longer duration than those on Tiktok. Participant 1 said:" I prefer YouTube as it gives more space in the duration of videos, especially when I need a deep explanations"

Four interviewees also indicated that they tended to use Instagram instead of tiktok, because it controls more the content provided, and provides videos, photos and stories. Participant 2 said: "Instagram has many features of tiktok but its content is better and restricted in terms of bad scenes. It's also easy to use and wider spread specifically after adding reels"

One interviewee said that she prefers to use Facebook because it contained video and story features with the possibility of publishing written posts. Participant 9 said "I can settle for Facebook because it contains short videos, reels, contains photos and written content".

But at the same time, three of the people interviewed explained that they prefer to use Tiktok because they like to watch short videos that offer very simple and fast content, which is what the Tiktok platform provides. Participant 3 cleared by saying:" "I prefer to use Tiktok as I love watching short videos that provide me simple and quick content, but if I need to get more explanation on a particular subject, I usually use YouTube".

One interviewee considered that there is no real alternative to the Tiktok platform because it provided unrestricted content in contrast to other platforms that imposed many limitations on content. Participant 8 cleared this point by saying:" "I don't see a full alternative to Tiktok, because the policy of other apps has become more complicated for Palestinian digital content" and she added:" These restrictions are imposed not only on immoral content, but also on freedom of opinion and expression, where Meta's platforms impose a lot of pressure on published Palestinian content, considering it to be abusive of the Israeli occupation".

**Conclusion:**

This study aimed to discover the factors affecting the acceptance and adoption of Tiktok platform among Palestinians through the Lens of Diffusion of Innovation Theory. The study sought to research how Tiktok app has diffused among the Palestinian users, and discover the characteristics of Tiktok platform that affect its adoption among them, in addition to discover the benefits that Palestinian users are gaining from Tiktok adoption. The study also sought to identify the reasons that derive Palestinian users to prefer Tiktok to other platforms.

This study used the qualitative methodology and utilized semi – structured interviews to accomplish the goals of the research and answer its questions. These interviews were based on a pre-established set of questions that were asked to all respondents. Semi- structured interviews were chosen because they flexible and give the opportunity to ask follow-up questions to delve more deeply into topics addressed.

Ten interviews were done with diverse Palestinian Tiktok users to discover the characteristics and determinants that motivate them to use and adopt Tiktok and reveal the reasons that may derive users to prefer other platforms to use.

This study reached the following results:

1. The study revealed that users got to know the Tiktok platform in various ways, including YouTube ads, and the recommendation of close friends and relatives to use the platform. Some were also encouraged to expertise the application after the spread of the Tiktok short videos on other social media sites, especially Facebook and Instagram.
2. The results show that majority of the interviewees regularly use the application either weekly or daily for an hour to more than 3 hours.



3. The majority of the interviewees cleared that the most important characteristic that encouraged them to adopt and use the application is its ease of use, as well as the fact that the application is free. The application also supports the Arabic language and doesn't need a prior experience to use according to the interviewees. . The algorithm utilized in the app that allows users to watch videos with content they prefer is one of the most significant factors, according to interviewees, that led them to choose the Tiktok platform. When a user finishes a particular video, the app determines that the viewer found the content to be interesting and shows them further videos with that same type of content.
4. The interviewees believe that there are many advantages to utilize and implement the application. Five of them use the app to pass the time by watching quick videos with a variety of subjects like cooking videos, home care, gardens, and decor. The interviewees also use the app to make their own quick videos, watch and engage in trends, follow celebrities and to research the cultures and life experiences of users from around the globe. Compared to Meta social networking apps, which have tougher limits on Palestinian digital content, the interviewees declared that Tiktok as a Chinese app places fewer limitations on Palestinian content that offers information about Israeli Violations.
5. The ability to upload any kind of content on the Tiktok application, even destructive, abusive, or immoral stuff that is contradictory to the religious beliefs and social norms that are common in Palestine, is one of the most major negative aspects of Tiktok, according to the interviewees. Additionally, the application may waste a significant amount of time and promote the addiction to watch brief videos, according to the interviewers.
6. The findings also demonstrated that users who favor using the Tiktok app on other platforms are those who are attracted to short videos that provide information in a straightforward manner without much explanation or who enjoy creating their own videos without the need for sophisticated montage software.

### Further Recommendations

Several recommendations can be made in light of the study's findings. It is important to have special future studies in the Arab world that analyze the individual features of users who rely on the Tiktok app such as sex, age, education, technical expertise, interests and other individual trends. These features are essential for better understanding the target audience and identifying the factors affecting them. This study also suggests that more research should be conducted on what motivates people to use brief videos for amusement, information, and other purposes. Particularly since people have tended to favor visual material over written articles.

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## Investigation of the Effect of Burnout Levels and Organizational Cynicism Attitudes of Teachers Working in Public Schools in the Kyrenia Region on Teacher Performance

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### ABSTRACT

The aim of this study is to determine the effect of burnout levels and organizational cynicism attitudes of teachers working in public schools in Kyrenia region on teacher performance. The research was conducted using the relational survey model, one of the quantitative research methods. The population of the study consisted of 431 teachers working in the Kyrenia region in the TRNC, while the sample was determined by stratified sampling method. Accordingly, the sample consisted of 320 teachers working in official secondary and high schools in Kyrenia districts in the 2023-2024 academic year. The data were collected using the personal information form created by the researcher, the Occupational Burnout Scale developed by Minaz (2019), the Organizational Cynicism Scale for Teachers developed by Sağır and Oğuz (2012), and the Teacher Job Performance Scale developed by Limon (2019).

According to the results of the study, it was determined that the participants experienced moderate burnout in general and were emotionally and behaviorally distanced from their institutions, the factors that negatively affected their performance were at a moderate level, and the participants had a moderate negative attitude towards the school. While it was determined that the employees showed a moderate level of participation in organizational decision-making processes, it was observed that the dimensions of teacher performance were at a moderate level and overall performance was high. According to the results of the analysis, strong and significant relationships were found between professional burnout and emotional and behavioral distancing from the organization, factors that reduce performance, negative attitudes towards school and organizational cynicism. A negative and significant relationship was found between professional burnout and teacher performance. However, the relationship between organizational cynicism and teacher performance was not significant.

**Keywords:** Burnout, Occupational burnout, Organizational cynicism, Teacher performance.

## 1. INTRODUCTION

### 1.1. Problem

In order for the individual to realize his/her own potential and to engage in behaviors that will benefit the society and himself/herself, it is important to guide the individual and enable him/her to develop various skills as a goal of education. In this context, one of the main purposes of education is to guide individuals on various issues, to offer different solutions to problems, and to contribute to their personal and social development (Duman, Sak, & Sak, 2020).

The teacher is one of the key actors in the educational process, and his/her role in this process, the behaviors he/she exhibits, and his/her interactions greatly affect not only his/her own development, but also the expectations of others around him/her, such as students, parents, administrators, colleagues, and other members of society (Makovec, 2018). The teacher's professional behavior has a direct impact on student achievement and can also contribute to students' social and emotional development. The teacher is expected to not only transfer knowledge to students, but also to guide them and effectively lead the learning process. It is also important for the teacher to work collaboratively by communicating effectively with parents, to work harmoniously with the school administration and to cooperate with colleagues. In this way, the teacher can create a positive learning environment and have a broad impact by taking into account the expectations of a range of stakeholders in the educational process (Can, 2004).

These expectations make a profession with high responsibilities such as teaching even more stressful and increase the level of teacher burnout due to this stress. Teachers are faced with a range of tasks such as not only managing

lessons but also supporting student development, communicating effectively with families, and keeping up with educational policies. This wide range of responsibilities can put intense pressure on teachers (Mahmood & Sak, 2019). The expectations teachers face are not only about academic achievement, but also about supporting students' social, emotional and cognitive development. These multifaceted expectations may require teachers to constantly adapt, be open to innovation and push their personal boundaries. At times, this can lead to feelings of burnout and elevated stress levels. Therefore, measures such as support for teachers, structural adjustments in education systems and solidarity among teachers can help them cope with this stress (Tümkiye & Çavuşoğlu, 2010).

Occupational burnout can cause serious problems in an individual's life. Addressing these problems, Işıkhan (2016) categorized the consequences of occupational burnout under three main headings: personal, work-related and family-related. Some of the personal consequences include physical fatigue, difficulty in starting the day, decreased sense of achievement and negative feelings about self-esteem. The effects of occupational burnout on working life include a decrease in professional success, absenteeism and the desire to change jobs. This situation may create a feeling of dissatisfaction and dissatisfaction in the individual's work life. In addition, the fact that emotional exhaustion is closely related to occupational burnout may cause these negative effects to spill over into family life. Increased family conflicts and estrangement between family members are among the negative effects of professional burnout on family life (Işıkhan, 2016). In this context, understanding and preventing the effects of occupational burnout is an important step to improve the individual's overall quality of life.

In various recent studies, the concept of organizational cynicism, in which the negative feelings of the individual are not only directed towards his/her colleagues and his/her own person, but also towards the organization or senior managers (Alan & Fidanboy, 2013). Ercan and Kazançoğlu (2019), while explaining the concept of cynicism, emphasized burnout and explained that cynicism tends to feed negative emotions such as pessimistic personality, negative life philosophy, burnout and frustration, and trust problems.

In this study, unlike the literature, burnout levels and organizational cynicism attitudes were evaluated within the scope of their effects on teacher performance. Burnout levels and organizational cynicism attitudes are factors that can significantly affect teacher performance. High burnout can lead to loss of motivation and job satisfaction in teachers, which can negatively affect classroom interactions and student achievement. Organizational cynicism, on the other hand, can weaken employees' commitment to the organization and negatively affect collaboration and performance. These phenomena may increase teachers' thoughts of job change and there may be difficulties in bringing long-term stability to the education system. Therefore, it is important to take supportive measures to help teachers cope with burnout and organizational cynicism in order to improve the quality of education (Erdoğan & İraz, 2019).

Based on this information, the problem statement of the study was determined as "Do burnout levels and organizational cynicism attitudes of teachers working in public schools in Kyrenia region have an effect on teacher performance?".

### **1.2. Purpose and Importance of the Study**

The purpose of this study is to determine the effects of burnout levels and organizational cynicism attitudes of teachers working in public schools in Kyrenia region on teacher performance. The importance of this study is to deeply understand and evaluate the effects of burnout levels and organizational cynicism attitudes of teachers working in public schools in Kyrenia region on teacher performance. This research can make an important contribution to develop strategies to cope with the challenges in the field of education. The main purpose of the study is to determine the effects of teachers' burnout levels and organizational cynicism attitudes on teacher performance. In this context, hypotheses were formulated to examine the potential effects of demographic factors such as gender, age, marital status and professional experience on teachers' burnout and organizational cynicism levels. The results of the study can help us understand how teachers cope with these phenomena and how they affect their performance. The findings may provide important clues on how educational policies and school management can be organized to increase teachers' job satisfaction and productivity. This study can be a valuable resource for decision makers and practitioners in the education sector by providing a basis for understanding the complex relationships between teachers' working conditions, emotional states and performance. This information can provide starting points for developing strategies to ensure that teachers are in a healthier and more motivating work environment.

### **1.3. Hypotheses of the Study**

The research hypotheses are given below:

H1: There is a relationship between teachers' burnout levels and organizational cynicism attitudes and teacher performance.

H2: There is a relationship between teachers' burnout levels and teacher performance.

H3: There is a relationship between teachers' organizational cynicism attitudes and teacher performance.

H4: There is an effect of teachers' burnout levels and organizational cynicism attitudes on teacher performance.

#### 1.4. Definitions

**Burnout:** It refers to a condition that occurs as a result of continuous stress, excessive workload, emotional exhaustion and negative experiences related to work (Tümkiye, 2016).

**Occupational Burnout:** It refers to a condition that occurs as a result of stress, excessive workload, emotional exhaustion and negative experiences related to work (Cemaloğlu & Şahin, 2007).

**Organizational cynicism:** It refers to an individual's negative, distrustful and critical attitude towards the organization (Aslan & Terzi, 2023).

**Performance:** It refers to how effectively an individual, group or organization performs a specific task or function (Aydoğmuş, 2023).

**Teacher Performance:** It is a concept that evaluates a teacher's effectiveness in the educational process, his/her teaching skills, classroom management skills and overall contribution to student achievement (Biçer & Tahtaloğlu, 2023).

## 2. CONCEPTUAL FRAMEWORK

### 2.1. Burnout and Occupational Burnout

Burnout is a condition that generally results from a combination of factors such as overwork, stress and emotional exhaustion. This condition is characterized by a person's physical, emotional and mental energy feeling depleted. Especially factors such as intense work pace, being under constant pressure, work imbalances, incompatibility of personal expectations and job requirements can cause burnout syndrome. Occupational burnout, on the other hand, usually occurs as a result of prolonged exposure to work or occupational stress and pressures. Symptoms such as poor performance at work, lack of motivation, lack of enjoyment at work, and a constant feeling of fatigue are signs of occupational burnout. Occupational burnout not only affects an individual's own work productivity, but can also negatively affect their overall quality of life. Ways to reduce the risk of occupational burnout include balancing work and personal life, learning stress coping techniques, building support systems, exercising regularly and taking up hobbies. Employers improving the workload and working conditions of employees and providing a supportive working environment can also reduce the risk of occupational burnout (Battal, 2022).

Occupational burnout is recognized by the World Health Organization as an occupational disease that has detrimental effects on physical and mental health and can manifest itself through emotional, behavioral and psychosomatic symptoms. Occupational Burnout Syndrome can show physical, emotional and mental symptoms. Symptoms of physical burnout include chronic fatigue, weakness, loss of energy, wear and tear, increased susceptibility to illness, frequent headaches, nausea, muscle cramps, back pain, and sleep disturbances. These symptoms may occur as a result of work stress and overwork and may negatively affect work performance, personal life and general health (Seyyar & Öz, 2007).

### 2.2. Organizational Cynicism

Organizational cynicism is a concept that refers to employees' feelings of distrust, hopelessness and indifference towards the organization and the work environment. It is used to describe situations in which employees develop negative perceptions about the leadership, policies, functioning or culture of the organization. Organizational cynicism is usually caused by a combination of many different factors. These factors may include lack of communication in the organization, injustice, constantly changing goals or management style. The competitive atmosphere in the organization, stress and pressures in the workplace can also trigger organizational cynicism. Organizational cynicism can reduce employees' commitment to their jobs, decrease their motivation and negatively affect their job performance. It can also lead to the formation of negative relationships between employees by weakening cooperation within the organization. Ways to reduce organizational cynicism can include open and effective communication, fairness and transparency, encouraging employee participation, leadership reliability and dedication. Organizations can develop various strategies to understand and meet the emotional and psychological needs of employees. This can help employees develop a more positive attitude towards the organization and create a more positive work environment in the organization (Torun, 2016).

Considering that cynicism affects individuals' perceptions, expressions, evaluations and expectations towards other

people and shapes their behaviors, it is understood that this phenomenon can affect not only individual and social life but also organizational life. Organizational cynicism is important for human-oriented organizations in terms of achieving their goals and regulating human relations. In order to adapt to increasing competition conditions and rapidly changing internal and external environmental conditions, it is necessary to make the best use of human resources, it is a fact that organizations have to understand and manage individuals, and in this context, cynicism is an important issue for organizations. Organizations can develop various strategies to understand and manage employee cynicism. The first step is to encourage open and effective communication within the organization. An environment where employees can express their feelings, share their concerns and make suggestions should be created. Applying the principles of fairness and transparency can increase employees' trust in the organization and reduce cynicism. Organizations can develop various programs and policies to increase employee motivation, job satisfaction and emotional well-being. This can increase employee commitment to the organization and reduce cynicism (Kesen et al., 2019).

Organizational cynicism is often associated with employees' experiences at work and can take various forms. These can manifest in different forms, reflecting employees' attitudes towards the organization, their colleagues and working conditions. For example, one type of organizational cynicism, "institutional cynicism", is associated with employees' distrust and hopelessness towards their organization and its institutional structures. In this case, employees may believe that there are hidden agendas lying behind the real intentions and goals of their organizations. Another type of "occupational cynicism" refers to the hopeless and negative attitude of employees towards their profession, sectors or jobs. In this case, employees may question the value of their jobs and despair of changes in their sectors or professions. A type called "colleague cynicism" refers to a negative attitude that employees have towards their coworkers, colleagues or other people in the workplace. In this case, employees may perceive their coworkers as untrustworthy, selfish or indifferent and may avoid cooperation. Each of these types reflects different aspects of organizational cynicism and employees' negative perceptions of their work environment. Therefore, it is important for organizations to identify and understand these types of cynicism and develop appropriate strategies to reduce their negative effects (Alhas, 2022).

### **2.3. Performance and Teacher Performance**

Performance refers to how effectively an individual or an organization performs its work or tasks over a given period of time. Performance is usually assessed as the ability to achieve certain goals, meet expected standards or accomplish a specific task. Teacher performance, on the other hand, refers to the level of effectiveness and efficiency demonstrated by teachers in educational institutions to increase student achievement and improve learning environments. Teacher performance is influenced by a combination of factors such as lesson planning, use of teaching methods, assessment of student progress, classroom management skills, student support and communication. The evaluation of teacher performance can include a range of criteria such as student achievement, classroom observations, review of lesson plans and materials. This evaluation process can be used to identify teachers' strengths, identify areas for improvement and support their professional development (Kesen et al., 2019).

The concept of performance refers to the degree to which an activity or work achieves set objectives. This concept is usually associated with measurable results and is considered as the best result achieved in a given period of time. Performance includes the quality and quantity of activities performed to achieve predetermined goals. As Torrington and Hall note, performance is often associated with the concepts of effectiveness, efficiency and output. That is, how effectively a job or activity is done, how efficient it is, and what quantity or quality of output is achieved are important factors determining performance. Another definition of performance is the applicability of predetermined criteria to achieve a specific objective. According to this definition, performance is evaluated as the totality of the activities necessary to achieve certain objectives. To summarize, the concept of performance refers to the quality, quantity and effectiveness of the activities performed to achieve the set objectives. Performance is an indicator of the behaviors and efforts required to achieve the set goal and is usually assessed by measurable results. Factors affecting performance are important in determining the success of an employee in fulfilling his/her duties in an institution or organization (Battal, 2022).

Knowledge-skills, motivation and work environment are among the main factors that determine teacher performance. It is stated that when these elements are lacking, teacher performance can be negatively affected. Therefore, it is important to maximize these three elements in order to achieve high levels of performance. Knowledge-skill refers to the level of competence determined depending on the qualifications of the teacher. This includes the teacher's expertise in his/her subject, his/her ability to convey the right information to students, and his/her ability to manage the teaching process effectively. Motivation determines the teacher's ownership of the job and the effort he/she will exhibit. The teacher's enthusiasm for his/her job, his/her ability to motivate students to succeed, and his/her openness to continuous development and learning are among the important elements of motivation. The work environment provides the teacher with the working conditions and

organizational supports necessary for him/her to do his/her job. Providing elements such as tools, equipment, materials, environment and information that the teacher needs positively affects the teacher's performance. In addition to these elements, teacher competencies are also important. The teacher competencies identified by the Ministry of National Education were determined as a result of workshops organized with the participation of various experts, academics and teachers. These competencies include the teacher's possession of professional and pedagogical knowledge, student-centered teaching, taking into account the individual differences of students, and continuous professional development. These competencies are considered to play an important role in evaluating teacher performance (Dedebali & Süral, 2022).

### 3. METHOD

#### 3.1. Methodology of the Study

This study was conducted with the relational survey model, one of the quantitative research methods. The relational survey model is a quantitative research method used to understand the relationships between variables. This model enables the researcher to collect and analyze data to evaluate the relationships between variables and to examine the effect of a particular variable on another variable (Yıldırım & Şimşek, 2016).

#### 3.2. Population and Sample

The population of the study consists of 431 teachers working in Kyrenia region in TRNC. The sample of the study was determined by stratified sampling method. Stratified sampling method is a sampling method based on the principle of dividing a population into different subgroups (strata) and taking samples from each stratum. This method aims to make sample selection more representative and effective by taking into account the heterogeneous structure of the population. Accordingly, the sample consists of 320 teachers working in official middle and high schools in Girne districts in the 2023-2024 academic year.

#### 3.3. Data Collection Tools

The data were collected using the personal information form created by the researcher, the Occupational Burnout Scale developed by Minaz (2019), the Organizational Cynicism Scale for Teachers developed by Sağır and Oğuz (2012), and the Teacher Job Performance Scale developed by Limon (2019).

The Occupational Burnout Scale developed by Minaz (2019) uses a Likert-type rating from 1 to 5 to assess the participants' level of occupational burnout, with 1 meaning "never" and 5 meaning "always". For item analysis, corrected item-total correlation coefficients were calculated. The construct validity was examined by exploratory factor analysis. As a result of this analysis, it was determined that the scale was unidimensional and consisted of 22 items. In addition, it was determined that the scale explained 32.24% of the total variance and had an eigenvalue of 7.09. The KMO sampling adequacy coefficient was also found to be .90. The reliability of the scale was evaluated with Cronbach's alpha internal consistency reliability coefficient. This coefficient measures the internal consistency of the scale and was found to be .89. The corrected item-total correlation coefficients of the scale ranged between .37 and .67.

The "Organizational Cynicism Scale for Teachers" developed by Sağır and Oğuz (2012) has 25 items in total and has a four-factor structure. Each factor represents the dimensions of organizational cynicism measured in different fields. Factors and item numbers of the scale: Distancing from the Organization: 7 items; Factors Reducing Performance: 9 items; Negative Attitude Towards School: 5 items; Employee Participation in Decisions and Practices: 4 items. For each item, the participants made a five-point Likert-type evaluation as "1 = Strongly Disagree", "2 = Disagree", "3 = Undecided", "4 = Agree", "5 = Strongly Agree". Reliability and validity studies of the scale were conducted by Sağır and Oğuz. The reliability coefficients were determined as ".86" for the first factor, ".88" for the second factor, ".85" for the third factor and ".68" for the fourth factor. These results show that the scale is a reliable and valid measurement tool.

The Teacher Job Performance Scale (TJPS), developed by Limon (2019) to measure teachers' performance, is designed to assess teachers' performance through self-report and consists of three dimensions and 37 items in total. The scale is graded on a 5-point Likert scale. The dimensions of the scale are as follows: Task Performance: 16 items; Contextual Performance: 9 items; Adaptive Performance: 12 items. The Cronbach's alpha reliability coefficient of the scale was calculated as .94, which indicates that the scale has a high reliability. The correlation coefficients calculated for the internal consistency of the scale ranged between  $r=.55$  and  $r=.86$ . These results led Limon to conclude that the OCBQ is a valid and reliable measurement tool.

In this study, the Cronbach's Alpha value for the Organizational Cynicism Scale was 0.932, for the Occupational Burnout Scale was 0.876, and for the Teacher Job Performance Scale was 0.971. These results show that all three scales were designed in a reliable and consistent manner and can be used.



### 3.4. Data Analysis

The study data were analyzed using the SPSS 28.00 program. The results of the normality test confirmed that the data were normally distributed. Therefore, it was deemed appropriate to use parametric tests. One of the analysis methods used in the study was correlation analysis, which examined the relationships between variables. In addition, regression analysis was used to measure the effect of one variable on other variables and the degree of this effect. These analyses were conducted in accordance with the purpose and hypotheses of the study and the findings obtained were interpreted.

## 4. FINDINGS

Table 1. Demographic Information

		n	%
Gender	Woman	194	60,6
	Male	126	39,4
Age	30 years and below	57	17,8
	31-35 years old	74	23,1
	36-40 years old	46	14,4
	41-45 years old	58	18,1
	46 and above	85	26,6
Marital status	Married	183	57,2
	Single	137	42,8
Type of school	Middle School	119	37,2
	High School	201	62,8
Duration of work at current school	0-3 years	99	30,9
	4-7 years	99	30,9
	8-11 years	10	3,1
	Over 12 years	112	35,0
Occupational seniority	0-5 years	84	26,3
	6-10 years	51	15,9
	11-15 years	49	15,3
	16-20 years	69	21,6
	21 years and above	67	20,9
	Total	320	100,0

According to demographic information, women (60.6%) are slightly more represented than men (39.4%) in the gender distribution of the sample of 320 people participating in the study. Looking at the age distribution, it is observed that the majority of the participants are 31 years and older. The largest age group is the age group of 46 and over (26.6%), while the smallest age group is the age group of 30 years and younger with 17.8%. In marital status, it is seen that the majority of the participants are married (57.2%) and those who are single are 42.8%. According to the type of school studied, 62.8% of the participants work at the high school level, while 37.2% work at the secondary school level. According to the duration of study in the current school, the majority (35.0%) have been working for 12 years or more. The least amount of time is 3.1% of employees who work between 8-11 years. Looking at the professional seniority, it is seen that the majority (63.5%) have 16 years or less seniority, while those with the highest seniority are 21 years or more with 20.9%.

Table 2. Minimum, Maximum, Mean and Standard Deviation Values of Scales and Sub-Dimensions

Scale dimensions	Min.	Max.	Ort.	Ss.
Professional burnout (General)	27,00	105,00	58,1219	13,71134
Moving Away from the Institution (Affective and Behavioral)	7,00	33,00	19,0406	6,81380
Factors That Reduce Performance	9,00	42,00	24,7813	8,93598
Negative attitude towards school	5,00	23,00	11,5031	4,75084
Participation of Employees in Decisions and Implementations	4,00	20,00	13,5469	3,91577
Organizational cynicism (General)	25,00	107,00	68,8719	19,20666
Task Performance	41,00	80,00	66,0594	10,54352
Contextual Performance	13,00	45,00	30,7531	7,63047
Adaptive Performance	25,00	60,00	46,9219	8,32058

Performance (General)	79,00	185,00	143,7344	24,57555
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Participants generally demonstrate a level of burnout ranging from 27.00 to 105.00 on the Professional Burnout Scale. The mean value represents the average level of burnout among participants, calculated as 58.1219. The standard deviation measures the variability of burnout levels; in this example, it is calculated as 13.71134. A higher standard deviation value indicates that data points are more dispersed around the mean, suggesting greater variability in burnout levels.

Participants demonstrate a moderate level of emotional and behavioral detachment from their organizations. The average detachment score is calculated as 19.0406, with a standard deviation of 6.81380. This may indicate issues such as low job satisfaction, lack of motivation, or distrust in the organization. Factors negatively affecting participants' job performance are found to be at a moderate level. The average performance-reducing factor score is 24.7813, with a standard deviation of 8.93598. Elements such as workload, communication deficiencies, or management problems may be among the potential factors affecting participants' performance. It is observed that participants exhibit a moderate level of negative attitude towards the organization. The average negative attitude score is measured as 11.5031, with a standard deviation of 4.75084. This could be associated with dissatisfaction with the organization, perceptions of unfair treatment, or workplace stress. Participants are observed to have a moderate level of involvement in organizational decision-making processes. The average participation score is 13.5469, with a standard deviation of 3.91577. Employee involvement in decision-making processes can be an important factor in organizational commitment and job satisfaction. This association may be attributed to employees being knowledgeable about institutional decisions and actively participating in the process.

The average task performance score is 66.0594, with a standard deviation of 10.54352. This suggests that participants' ability to complete specific tasks is at a moderate level. Task performance reflects employees' ability to complete their work in accordance with established standards. The average contextual performance score is 30.7531, with a standard deviation of 7.63047. This indicates that participants' contextual skills, such as adapting to workplace culture and collaboration, are at a moderate level. Contextual performance evaluates relationships and teamwork in the workplace. The average adaptive performance score is 46.9219, with a standard deviation of 8.32058. This suggests that participants' ability to adapt to the organization's goals and contribute is at a moderate level. Adaptive performance reflects how well employees adapt to the organization's culture and values. The average overall performance score is 143.7344, with a standard deviation of 24.57555. This indicates that participants' overall performance is high.

Table 3. The Relationship Between Teachers' Burnout Levels and Organizational Cynicism Attitudes

		Moving Away from the Institution (Affective and Behavioral)	Factors That Reduce Performance	Negative attitude towards school	Participation of Employees in Decisions and Implementations	Organizational cynicism (General)
Professional	r	,661**	,600**	,655**	-0,064	,663**
Burnout	p.	0,000	0,000	0,000	0,253	0,000

According to the results of the analysis;

- It is observed that there is a strong relationship between occupational burnout and emotional and behavioral distancing from the institution ( $r = 0.661$ ). This indicates that as occupational burnout increases, so does the level of emotional and behavioral distancing.
- In addition, there is a strong correlation between occupational burnout and factors that reduce performance ( $r = 0.600$ ). It shows that as occupational burnout increases, the factors that reduce performance tend to increase.
- There is also a strong correlation between professional burnout and negative attitudes towards school ( $r = 0.655$ ). It shows that as professional burnout increases, so do negative attitudes towards school.
- However, there was no significant relationship between occupational burnout and employees' participation in decision-making processes ( $r = -0.064$ ). This indicates that there is no direct relationship between the level of professional burnout and participation in decision-making processes.
- Finally, it is observed that there is a strong relationship between occupational burnout and organizational cynicism ( $r = 0.663$ ). It shows that as professional burnout increases, the level of organizational cynicism also increases.

Table 4. The Relationship Between Teachers' Burnout Levels and Teacher Performance

		Task Performance	Contextual Performance	Adaptive Performance	Performance (General)
Professional Burnout	r.	-.577**	-.612**	-.574**	-.632**
	p.	0,000	0,000	0,000	0,000

According to the results of the analysis;

- There is a strong and negative correlation between occupational burnout and task performance ( $r = -0.577$ ). This indicates that task performance decreases as occupational burnout increases.
- Likewise, there is a strong and negative relationship between occupational burnout and contextual performance ( $r = -0.612$ ). It indicates that contextual performance decreases as the level of professional burnout increases.
- A strong and negative relationship is also observed between occupational burnout and adaptive performance ( $r = -0.574$ ). That is, it indicates that adaptive performance decreases as occupational burnout increases.
- Finally, there is a strong and negative correlation between occupational burnout and overall performance ( $r = -0.632$ ). It indicates that as occupational burnout increases, overall performance decreases.

Table 5. The Relationship Between Teachers' Organizational Cynicism Attitudes and Teacher Performance

		Task Performance	Contextual Performance	Adaptive Performance	Performance (Overall)
Moving Away from the Institution (Affective and Behavioral)	r	-.293**	-.551**	-.311**	-.402**
	p.	0,000	0,000	0,000	0,000
Factors That Reduce Performance	r	-.303**	-.531**	-.374**	-.421**
	p.	0,000	0,000	0,000	0,000
Negative attitude towards school	r	-.435**	-.587**	-.473**	-.529**
	p.	0,000	0,000	0,000	0,000
Participation of Employees in Decisions and Implementations	r	.134*	0,088	0,001	0,085
	p.	0,016	0,118	0,991	0,130
Organizational cynicism (General)	r	-.325**	-.570**	-.401**	-.452**
	p.	0,000	0,000	0,000	0,000

According to the results of the analysis;

- There is a negative correlation between emotional and behavioral withdrawal from the institution and teacher performance. Relationships with task performance ( $r = -0.293$ ), contextual performance ( $r = -0.551$ ), adaptive performance ( $r = -0.311$ ), and overall performance ( $r = -0.402$ ) were all statistically significant.
- A negative relationship is also observed between the factors that reduce performance and teacher performance. Relationships with task performance ( $r = -0.303$ ), contextual performance ( $r = -0.531$ ), adaptive performance ( $r = -0.374$ ), and overall performance ( $r = -0.421$ ) were all statistically significant.
- There is also a negative relationship between negative attitudes towards school and teacher performance. Relationships with task performance ( $r = -0.435$ ), contextual performance ( $r = -0.587$ ), adaptive performance ( $r = -0.473$ ), and overall performance ( $r = -0.529$ ) were all statistically significant.
- There is a weak relationship between employee participation in decision-making processes and teacher performance. The association with task performance was statistically significant ( $r = 0.134$ ), but the associations with other performance measures were not statistically significant.
- In general, there is a negative correlation between organizational cynicism (general) and teacher performance. Relationships with task performance ( $r = -0.325$ ), contextual performance ( $r = -0.570$ ), adaptive performance ( $r = -0.401$ ), and overall performance ( $r = -0.452$ ) were all statistically significant.

Table 6. The Effect of Teachers' Burnout Levels and Organizational Cynicism Attitudes on Teacher Performance

	Non-Standardized Coefficients		Standardized Coefficients		
	B	Standard Error	Beta	t	p.
	Constant	210,692	4,782		44,061
Professional burnout	-1,061	0,104	-0,592	-10,203	0,000
Organizational cynicism	-0,077	0,074	-0,060	-1,031	0,304

R	R <sup>2</sup>	F
,633 <sup>a</sup>	0,401	106,179

Dependent Variable: Teacher performance

According to the results of the analysis;

- Occupational burnout (Occupational Burnout): The standardized coefficient (Beta) value is -0.592 and the p-value (p) is 0.000. This indicates that teacher performance decreases as professional burnout increases, and this relationship is statistically significant.
- Organizational cynicism: The standardized coefficient (Beta) value is -0.060 and the p-value (p) is 0.304. This signals that teacher performance decreases as organizational cynicism increases; however, this indicates that the association is not statistically significant.

## CONCLUSION AND RECOMMENDATIONS

The study results show that participants generally experienced moderate burnout and became emotionally and behaviorally distant from their institutions. It was observed that the factors that negatively affected their performance were at a moderate level and the participants had a moderate negative attitude towards school. It has been determined that employees have moderate participation in organizational decision-making processes. In the dimension of teacher performance, task performance, contextual performance, and adaptive performance were found to be moderate. It was observed that the overall performance was high. According to the results of the analysis, strong and significant relationships were found between professional burnout and emotional and behavioral distancing from the institution, factors that reduce performance, negative attitudes towards school and organizational cynicism. It was found that there was a negative and significant relationship between professional burnout and teacher performance. However, it was observed that the relationship between organizational cynicism and teacher performance was not significant.

Based on these results, the following recommendations have been prepared:

It is important for organizations to provide emotional and behavioral support to employees. Guidance and counseling services can be provided to employees to deal with problems such as low job satisfaction and lack of motivation.

Factors that reduce performance such as workload, lack of communication and management problems need to be identified and resolved. More effective communication channels can be established and the performance of the employees can be increased by balancing the workload.

It is important to increase the satisfaction levels of teachers in order to reduce negative attitudes towards school. By providing a fair working environment, it can be aimed to reduce factors such as the perception of unfair treatment and workplace stress.

Greater participation of employees in corporate decision-making processes should be encouraged. It can be predicted that organizational commitment and job satisfaction will increase by taking the ideas and opinions of the employees and increasing their participation in decision-making processes.

In order to reduce organizational cynicism, it is important to strengthen internal communication and adopt the principles of open communication and transparency. It should be aimed to increase the confidence of the employees and to strengthen their commitment to the organization.

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## Investigation of the Self-Confidence and Self-Efficacy Levels of Football Referees

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### ABSTRACT

This study aims to examine the self-confidence and self-efficacy levels of soccer referees. It was conducted with relational using survey model quantitative research method. The sample of the study consisted of 100 people working as football referees in Nicosia, Famagusta, Kyrenia, Güzelyurt and İskele districts in TRNC. As data collection tools, a form containing personal information of the participants, the Self-Confidence Scale developed by Akın (2007) and the Referee Self-Efficacy Scale developed by Myers, Feltz, Gullien, and Dithurbide (2012) and the Turkish validity oath reliability study conducted by Karaçam and Pular (2017) were used.

According to the data obtained, it is seen that soccer referees generally have a high level of self-confidence and self-efficacy. Of particular, it is noteworthy that the average values of general self-confidence and general self-efficacy are quite high. However, there are lower means values in some areas in the subscales, indicating that there is potential for improvement in certain areas. Moreover, a positive oath significant relationship was found between self-efficacy levels of soccer referees oath internal self-confidence. Similar to a positive oath significant relationship was found between external self-confidence and self-efficacy levels (Sertel, Gökbörü & Yınal, 2023). Similar results were obtained by examining self-efficacy in general, and positive oath significant relationships were found between physical self-efficacy, game knowledge, decision making, pressure oath communication and self-efficacy. However, the relationship between external self-confidence and self-efficacy was not statistically significant the effect of general self-confidence on self-efficacy levels are statistically uncertain As a result, it is seen that external self-confidence does not have a significant role in explaining self-efficacy levels, but the The effect of general self-confidence is uncertain. Others variables may need to be taken into consideration to further explain this model

**Keywords :** Football, Referee, Self-confidence, Self-efficacy.

### 1. INTRODUCTION

Self-confidence is a concept that expresses an individual's level of belief about his own abilities, values, and himself in general. This includes an internal evaluation of the individual's ability to evaluate his or her own potential, establish relationships with others, direct goals, and cope with difficulties (Şahin et al., 2023). Self-confidence refers to the individual's capacity to make a positive assessment of his or her own abilities. This includes self-confidence, belief in one's own abilities, and belief in achieving success in various areas in one's life. Self-confidence can have a significant impact on an individual's emotional health, social relationships, and overall quality of life (Yılmaz and Ağgön, 2023).

Self-efficacy is a concept that refers to an individual's belief in being able to accomplish a particular task or situation. In other words, self-efficacy relates to an individual's confidence in their own abilities, knowledge, skills, and experiences. The concept of self-efficacy comes into play when an individual evaluates his belief about his ability to cope with a particular task (Atif Atasoy et al., 2023).

Football referees are people who manage football matches and enforce the rules of the game. These referees have responsibilities such as ensuring that the match is orderly and fair, controlling player behavior, applying penalties and generally maintaining the order of the game. Football referees are managed by a team consisting of a chief referee and side referees, usually on the field (Köse et al., 2023). While the 1st referee directly manages on-field events, linesmen often assist with matters such as offside. Referees are responsible for ensuring the order of the game by making decisions such as controlling scuffles between players and determining fouls and penalties (Akdağcık, 2023).

### 1.1. Problem

Self-confidence and self-efficacy are very important in football referees because these characteristics enable referees to make quick and correct decisions during the match. Since football matches are played at a dynamic and fast pace, the referees' self-confidence and competence are critical in terms of their ability to maintain control on the field. Additionally, referees with high self-confidence can gain the respect of players and team representatives, which helps them maintain on-field discipline. Therefore, it is vital for football referees to have strong self-confidence and self-efficacy for officiating matches in an orderly and fair manner. For this reason, studies on the subject in the literature provide important information. For example, according to Karabulut's (2019) research, the level of sports self-confidence was found to be higher in men, lower age groups and weak athletes. Additionally, it has been observed that there is a positive relationship between the number of years of sports and sports self-confidence. These findings reveal that factors such as gender, age group and level of sportsmanship may have an impact on sports self-confidence. In Karagün's (2014) research, it was determined that sports self-confidence differs in various sports branches. According to the results of the research, the highest level of self-confidence was found in athletes active in judo. Then, it was determined that the self-confidence levels were high in football, wrestling, bodybuilding and basketball athletes, respectively. In the study conducted by Fahiminezhad et al. (2014) with volleyball, basketball and handball athletes, it was observed that sports self-confidence did not differ in terms of these branches. In other words, the sports self-confidence levels of athletes in these three sports are similar.

When the literature was examined, it was determined that there was a limited number of studies on referee self-efficacy, but there were some studies on athletes and coaches (Pineau and Glass, 2014; Feltz and Magyar, 2006). It has been emphasized that the concept of self-efficacy is especially important for athletes, coaches and managers and can similarly be valid for referees (Gill, 2004). In this context, it has been observed that referee self-efficacy is defined as the referee's ability to perform his or her job functions (Guillen and Feltz, 2011). In the study conducted by Türker and Yılmaz (2023), it was determined that chess referees had high levels of professional pleasure, self-efficacy and low levels of burnout. According to the scores of the scales used in the research, no significant differences emerged between factors such as gender and educational status. However, it has been observed that referees' self-efficacy levels vary depending on their years of service.

When the studies were examined, it was seen that referees' self-efficacy levels were associated with certain characteristics (Guillen and Feltz, 2011). These characteristics include being more accurate in their decisions, more effective in their performance, more commitment to the profession, more respect from coaches, managers and other officials, and lower stress levels (Tuero et al., 2002). These findings show that referees' self-efficacy is related to certain characteristics and experiences they have. Therefore, it is important to understand and support referees' self-efficacy to increase and improve their performance.

Based on this information, the problem statement of this study is "What are the self-confidence and self-efficacy levels of football referees?" It was determined as.

### 1.2. Aim

The aim of this study is to examine the self-confidence and self-efficacy levels of football referees.

#### 1.2.1. Hypotheses

The research hypotheses are given below:

H1 : There is a relationship between the self-confidence and self-efficacy levels of football referees .

H2 : Football referees' self-confidence levels have an effect on their self-efficacy levels .

#### 1.2.2. Assumptions

The assumptions of the research are listed below;

- It was assumed that the chosen method was suitable for the objectives of the research.
- It was assumed that the scales and questions used were appropriate in terms of reliability and validity.
- Validity and reliability of the data were assumed.

#### 1.2.3. Limitations

This research; Those who are football referees in Nicosia, Famagusta, Kyrenia, Güzelyurt and İskele districts of TRNC; It is limited to the source and scale questions used.

#### 1.2.4. Definitions

Sports: It is a type of activity that includes physical activity, competition and entertainment elements (Yıldız and Yıldız, 2020).

Referee: is the activity of people who manage a sports competition, apply the rules of the game and make decisions during the competition (Baxter et al., 2023).

Self-confidence: It is a positive belief and evaluation that an individual feels about his or her own abilities, worth and abilities (Şahin, Türegün and Şahin, 2023).

Self-efficacy: It refers to an individual's belief about his ability to accomplish a certain task or activity (Çelikay and İnandı, 2023).

### **1.3. Importance of the Study**

Football referees are people responsible for providing fair and effective management of sports competitions. Therefore, their level of self-confidence and self-efficacy can have a significant impact on their performance. This study aims to determine the self-confidence and self-efficacy perceptions of football referees, evaluate the relationship of these factors with referee performance, and identify areas that referees may need. The findings can be an important guide in the design and implementation of football referees' training and development programs.

## **2. CONCEPTUAL FRAMEWORK**

### **2.1. Sports and Refereeing**

Sports holds an important place in human history. While humans have enjoyed physical activities for thousands of years, sports are still recognized as an important tool for health, competition and recreation today. The power of sport lies in its ability to bring individuals and communities together. Even though people coming together on the football field have different backgrounds, cultures and beliefs, they share the enthusiasm of being a team and achieving a common goal. Sports not only contributes to physical health, but also contributes to the acquisition of important values such as character development, leadership skills and team spirit. The universality of sports encourages the participation of people of all age groups, which helps create an inclusive environment in societies. Sport brings people together, promotes health, shapes character and strengthens societies (Ekmekçi, 2017).

The person who manages the competitions, supervises the flow of the match and determines the results within the framework of the rules chosen and determined by the managers of the sports organizations is called the referee. The referee undertakes various duties on and off the field. It has important functions such as ensuring the fair progress of the game, ensuring communication between athletes and preserving the spirit of competition. The quality of a competition, viewing pleasure, fairness Compliance with the playing principles and the effectiveness of communication largely depend on the referee's decisions. Refereeing requires various characteristics such as knowledge, experience, level of education, competence, character, physical and mental strength. These qualities enable the referee to function effectively and reliably on the field. Refereeing is a duty that requires seriousness and importance and requires being open to continuous development and learning. Referees must constantly renew themselves, increase their command of the rules and strive to perform at their best. In this way, a fair and reliable competition environment can be provided in sports organizations and contribute to the development of sports (Uzun, 2008).

Football refereeing is a challenging profession that requires certain discipline and talent. The ability of referees to make quick decisions, read the game well, show determination and perform under pressure is important. Other important qualities that referees must have include objectivity, fairness and command of the rules. Football refereeing is an important element that ensures that football matches are managed fairly and regularly. Referees perform a variety of duties on and off the field and function effectively in a competitive and emotional environment due to the nature of football (Erdoğan, 2020).

### **2.2. Confidence**

The concept of self-confidence is an important subject that has been intensively researched and studied in psychology and social sciences from past to present. In particular, self-confidence is a fundamental phenomenon that plays a critical role in the formation of personality. Self-confidence refers to an individual's belief in achieving success in a particular activity. This belief often stems from positive expectations about the ability or competence to accomplish a particular task. With the rise of positive psychology, the tendency to focus on human strengths and positive qualities has increased (Şahin et al., 2023). Self-confidence is one of these positive qualities and can reduce stress and anxiety related to an individual's performance. An individual's self-confidence includes positive beliefs about his or her ability to successfully perform a specific task. Self-confidence encompasses an individual's optimistic beliefs about himself and reflects the strength of his belief in performing



a behavior that will result in success in a particular task. These strong beliefs can increase an individual's motivation, help them focus on their goals, and improve their ability to cope with challenges. Self-confidence plays an important role in an individual's life and affects many areas such as personal success, happiness and life satisfaction (Roy et al. , 2022).

Internal and external self-confidence are important concepts that express an individual's belief and confidence in himself, but they have different aspects. Intrinsic self-esteem refers to an individual's feelings about their own worth, abilities, and self-perception. This includes a positive attitude and beliefs towards oneself. Inner self-confidence is based on an individual's internal resources, strengths and achievements. This means recognizing one's own worth, respecting oneself, and having confidence in oneself. Internal self-confidence is based on the individual's inner balance and solidity, regardless of external factors (Yılmaz and Ağgön , 2023) . On the other hand, external self-esteem is the confidence of an individual based on external factors, approval, acceptance and positive evaluation of others. This refers to one's trust in others' perspectives and reactions. External self-confidence is often based on external factors such as physical appearance, social status, achievements, or how one is perceived on social media. A person feels self-confidence according to the impact of environmental influences and external evaluations on him (Kasımoğlu, 2018).

### **2.3. Self-sufficiency**

The concept of self-efficacy refers to an individual's belief that he or she can perform a particular task or accomplishment. This belief relates to the belief that one can cope with a task by relying on one's own abilities, knowledge and experience. Self-efficacy is based on an individual's ability to evaluate and use his or her own internal resources. The concept of self-efficacy was first put forward by Albert Bandura (Çelikay and İnandı, 2023) . According to Bandura , self-efficacy belief is an important factor that directs an individual's behavior, emotions and thoughts. This belief affects a person's ability to cope with the challenges they face and has a major impact on their motivation. Self-efficacy refers to an individual's self-confidence and belief that he or she can achieve success in a particular field or subject. This belief strengthens one's ability to achieve goals, overcome challenges, and cope with negative situations. Self-efficacy can help a person achieve success in various areas of their life and increase overall life satisfaction. The concept of self-efficacy supports the process of achieving goals and achieving positive results by increasing the individual's self-confidence and motivation. Therefore, a supportive environment, an effective self-evaluation process and success experiences are important to develop and strengthen individuals' self-efficacy (Çetin, 2019).

Self-efficacy refers to a person's belief that he or she can successfully complete an activity. This concept is based on a belief that a person can organize the activities necessary to increase his performance to the desired level. According to Albert Bandura , self-efficacy reflects an individual's belief that he or she can successfully complete a particular task or activity with his or her current abilities, knowledge, and experience. According to another definition, self-efficacy represents the individual's current view of success or failure (Çelikay and İnandı, 2023). The individual's perception of how to cope with normal situations and problems forms the basis of the concept of self-efficacy. This perception is influenced by the person's own abilities, thoughts, emotional reactions and relationships with the environment. A strong sense of self-efficacy can significantly increase a person's satisfaction while improving their performance. Strengthening self-efficacy can increase an individual's motivation and self-confidence, enabling them to achieve their goals more effectively. Therefore, strategies such as gaining experience, receiving positive feedback, and increasing success experiences are important to improve individuals' self-efficacy (Dışlitaş , 2019 ) .

## **3. METHOD**

### **3.1. Research Model**

This study is a quantitative research method and was conducted with the relational screening model. Relational survey model is a research model used to examine and understand the relationships between variables. This model often includes data collection tools such as surveys, measurements, and observations. Since this model is used to understand and model the relationships between certain variables, it is an appropriate choice to understand the relationship between the self-confidence and self-efficacy levels of football referees (Karasar, 2007).

### **3.2. Sampling Method**

The sample of the study was determined by the purposeful sampling method. Purposive sampling is a widely used method to determine the characteristics of a particular population or to focus on a specific problem. This method allows researchers to collect data within the framework of a specific research question or hypothesis and therefore ensures that the selected sample best meets the purpose of the study (Özer, 2023) . In this context, 100 football referees in the districts of Nicosia, Famagusta, Kyrenia, Güzelyurt and İskele in TRNC constituted the

sample of the study.

### 3.3. Collection of Data

In the study, data were collected with a personal information form, the Self-Confidence Scale developed by Akın (2007) and the Referee Self-Efficacy Scale developed by Myers, Feltz, Gullien and Dithurbide (2012) and whose Turkish validity and reliability study was conducted by Karaçam and Pular (2017).

**Self-Confidence Scale:** A 33-item self-confidence scale developed by Akın (2007) will be used. This scale consists of two subscales: internal self-confidence and external self-confidence. While the internal self-confidence sub-dimension evaluates characteristics such as the individual's self-love, self-recognition, and positive thinking skills, the external self-confidence sub-dimension includes external characteristics such as the individual's social relations and interaction with the environment. The scale uses a 5-point Likert type classification and was filled out by the participants within the scope of the personal information form.

**Referee Self-Efficacy Scale:** This scale, developed by Myers, Feltz, Gullien and Dithurbide (2012) and whose Turkish validity and reliability studies were conducted by Karaçam and Pular (2017), is used to measure the self-efficacy of referees. The scale consists of 18 items and 5 sub-dimensions: physical competence, game knowledge, decision making, pressure and communication. Each subscale assesses the referee's confidence in a particular skill or area of competence. The scale also has a 5-point Likert type structure and does not contain reverse coded expressions. The reliability coefficient of the original scale is 0.90. In this study, the Cronbach's Alpha value of the Self-Confidence scale is 0.974 and the Cronbach's Alpha value of the Self-Efficacy scale is 0.989. Both scales appear to be quite reliable.

### 3.4. Analysis Method

were analyzed using SPSS 28.00 program. First of all, normality test was performed in the study. According to some sources, it is stated that the skewness and kurtosis values should be between -2 and +2 or -3 and +3. Accordingly, the skewness and kurtosis values of these scales can be considered normal since they are close to these ranges. For this reason, parametric tests were performed in the study. It is used to perform statistical analysis of certain parameters (e.g. mean, variance, correlation), such as t-test, ANOVA, Pearson correlation, and these tests are usually designed based on normal distribution.

## 4. FINDINGS

### 4.1. Demographic Information

Table 1. Demographic Information

		n	%
Gender	Male	81	81
	Woman	19	19
Age	16-20 years old	26	26
	21-26 years old	26	26
	27-31 years old	16	16
	32-37 years old	19	19
	38 and over	13	13
marital status	Married	28	28
	Single	72	72
Educational background	High school	22	22
	Associate Degree	14	14
	Licence	46	46
	postgraduate	18	18
Division	Candidate Referee	22	22
	Super League Referee	18	18
	Super League Assistant Referee	5	5
	A Class Referee	6	6
	B Class Referee	14	14
	C Class Referee	35	35
	Refereeing time	0-11 months	15

	1-5 years	41	41
	6-10 years	19	19
	11-15 years	16	16
	16-20 years	4	4
	20 and above	5	5
Factors that lead to starting refereeing	my own will	50	50
	friend incentive	34	34
	family incentive	7	7
	environmental impact	9	9
Expectations from refereeing	To do sport	20	20.0
	Hobby	25	25.0
	Career	49	49.0
	Other	6	6.0
	Total	one hundred	one hundred

The majority of participants in the study were male (81%) and single (72%). When the age distribution is examined, it is seen that the participants are generally between the ages of 16-26. When looking at the educational status, it is observed that the majority of the participants received undergraduate education (46%) and then continued postgraduate education (18%). When looking at the distribution according to referee classifications, the largest group is C Class Referees (35%), while A Class Referees and Super League Referees are also represented at a significant rate. When examined in terms of referee time, it is seen that the majority of the participants have been refereeing between 1-5 years (41%). Regarding the reasons for starting their referee career, more than half of the participants (50%) stated that they started refereeing out of their own desire. Peer encouragement (34%) and environmental influences (9%) are also observed to play an important role. Additionally, the rate of those who started refereeing with family encouragement is lower (7%). In terms of expectations from refereeing, 20% of the participants stated that they expected to do sports, 25% stated that they expected to pursue a hobby, 49% stated that they expected to pursue a career, and 6% stated other reasons.

#### 4.2. Self-Confidence and Self-Confidence of Football Referees Self-Efficacy Levels

Table 2. Analysis Results for Football Referees' Self-Confidence and Self-Efficacy Levels

	Min.	Max .	Cover.	Ss .
inner self-confidence	31.00	85.00	67.0412	12.30084
external self-confidence	24.00	80.00	63.4444	12.10517
Self-confidence general	55.00	165.00	130.3021	24.17921
physical self-efficacy	5.00	25.00	20.7500	5.24043
Game information	3.00	15.00	12.4500	3.18892
To decide	3.00	15.00	12.7500	3.20156
Oppression	3.00	15.00	13.0900	3.27554
Communication	4.00	20.00	17.1000	4.36353
Self-efficacy (general)	18.00	90.00	76.1400	18.49271

When the statistics regarding the self-confidence and self-efficacy levels of football referees are examined, it is seen that they are generally at a high level. The mean value of internal self-confidence is 67.0412 and its standard deviation is 12.30084, while the mean value of external self-confidence is 63.4444 and its standard deviation is 12.10517. The average value of general self-confidence was determined as 130.3021 and the standard deviation was 24.17921. Physical self-efficacy averaged 20.7500 (standard deviation: 5.24043), game knowledge averaged 12.4500 (standard deviation: 3.18892), decision making averaged 12.7500 (standard deviation: 3.20156), pressure averaged 13.0900 (standard deviation: 3.27554) and communication averaged It is around 17.1000 (standard deviation: 4.36353). The mean value of self-efficacy (general) was determined as 76.1400 and the standard deviation was 18.49271. These statistics show that referees' confidence and competence levels are generally solid, but there is potential for improvement in certain areas.

Since the scoring system used here is from 1 to 5:

- Low: scores between 1 and 2.
- Medium: scores of 3.
- High: scores between 4 and 5.

When comments are made based on the points given:

- Physical self-efficacy: This value can be interpreted as "medium" since it received a score of 20.75.
- Game information: Since it received 12.45 points, this value can be interpreted as "medium".
- Verdict: Since it received 12.75 points, this value can be interpreted as "medium".
- Print: Since it received 13.09 points, this value can be interpreted as "medium".
- Communication: Since it received a score of 17.10, this value can be interpreted as "high".
- Self-efficacy (overall): This value can be interpreted as "high" since it received a score of 76.14.

### 4.3. The Relationship Between Self-Confidence and Self-Efficacy Levels of Football Referees

Table 3. Relationship Between Self-Confidence and Self-Efficacy Levels of Football Referees (Correlation Analysis)

		physical self- efficacy	Game information	To decide	Oppression	Communication	Self-efficacy (general)
inner self- confidence	r	.513 **	.450 **	.496 **	.502 **	.483 **	.514 **
	p.	0.000	0.000	0.000	0.000	0.000	0.000
external self- confidence	r	.464 **	.418 **	.466 **	.454 **	.468 **	.476 **
	p.	0.000	0.000	0.000	0.000	0.000	0.000
Self- confidence (general)	r	.517 **	.457 **	.510 **	.507 **	.502 **	.525 **
	p.	0.000	0.000	0.000	0.000	0.000	0.000

According to the data obtained, a positive and significant relationship was determined between physical self-efficacy and internal self-confidence ( $r = 0.513, p < 0.001$ ). Similarly, positive and significant relationships were determined with internal self-confidence in the areas of game knowledge, decision-making, pressure and communication ( $r$  values 0.450; 0.496; 0.502; 0.483;  $p < 0.001$ , respectively). A similar relationship was seen between external self-confidence and self-efficacy levels. A positive and significant relationship was found between physical self-efficacy and external self-confidence ( $r = 0.464, p < 0.001$ ). In addition, positive and significant relationships were determined with external self-confidence in the areas of game knowledge, decision-making, pressure and communication ( $r$  values 0.418; 0.466; 0.454; 0.468;  $p < 0.001$ , respectively). Similar results were obtained by examining self-confidence in general. A positive and significant relationship was found between physical self-efficacy and self-confidence ( $r = 0.517, p < 0.001$ ). Similarly, in other areas, positive and significant relationships were determined between game knowledge, decision-making, pressure and communication, and self-confidence ( $r$  values 0.457; 0.510; 0.507; 0.502;  $p < 0.001$ , respectively). These findings show that football referees' self-confidence levels are an important factor affecting their self-efficacy.

In this case, the hypothesis "H<sub>1</sub>: There is a relationship between the self-confidence and self-efficacy levels of football referees" is accepted.

### 4.4. The Effect of Football Referees' Self-Confidence Levels on Their Self-Efficacy Levels

Table 4. Effect of Football Referees' Self-Confidence Levels on Self-Efficacy Levels (Regression Analysis)

	unstandardized Coefficients		Standardized Coefficients		
	B.	std . error	Beta	t	p.
Still	27,145	8,428		3,221	0.002
external self-confidence	-0.503	0.687	-0.354	-0.732	0.466
Self-confidence (general)	0.627	0.347	0.874	1,806	0.074

R=.529; R2 =., 280

F= 18.0815 p =0.000

The external self-confidence coefficient (-0.503) has a negative value, but is not statistically significant ( $t = -0.732, p = 0.466$ ). This suggests that external self-confidence does not have a decisive effect on self-efficacy. The overall self-confidence coefficient (0.627) has a positive value, indicating a positive impact on self-efficacy levels. However, it is not statistically significant ( $t = 1.806, p = 0.074$ ). This shows that it is not clear whether general self-confidence has a decisive effect on self-efficacy levels. The overall performance of the model was measured by the R square value. It can explain 28% of the variance explained by the model. F statistics were used to test the significance of the model and the results were significant ( $F = 18.0815, p < 0.05$ ). As a result, it appears that external self-confidence does not have a significant role in explaining self-efficacy levels, but the effect of general self-confidence is unclear. Other variables may need to be taken into account to further explain

this model.

In this case, the hypothesis "H<sub>2</sub> : Football referees' self-confidence levels have an effect on their self-efficacy levels" is accepted.

## CONCLUSION AND RECOMMENDATIONS

When we examine the self-confidence and self-efficacy levels of football referees, we see that they generally have a high level of self-confidence and self-efficacy. In particular, it is noteworthy that general self-confidence and general self-efficacy values are quite high on average. However, lower average values are noticeable in some areas of the subscales. There are values indicating a certain development potential in scales such as physical self-efficacy, game knowledge, decision-making, pressure and communication. These findings suggest that football referees' overall confidence and competence levels are solid, but that there are opportunities for further attention and development in certain areas.

According to the data obtained, a positive and significant relationship was determined between the self-efficacy levels of football referees and their internal self-confidence. Similarly, a positive and significant relationship was determined between external self-confidence and self-efficacy levels. Similar results were obtained by examining self-confidence in general, and positive and significant relationships were determined between physical self-efficacy, game knowledge, decision-making, pressure and communication, and self-confidence. However, the relationship between external self-confidence and self-efficacy is not statistically significant. The effect of general self-confidence on self-efficacy levels is statistically uncertain. The overall performance of the model was measured with the R square value and the significance of the model was tested with the F statistic. As a result, it appears that external self-confidence does not have a significant role in explaining self-efficacy levels, but the effect of general self-confidence is unclear. Other variables may need to be taken into account to further explain this model.

Based on the research findings, the following recommendations have been developed:

- In order to increase the self-efficacy of football referees, training and development programs focusing on improving self-efficacy in sub-areas such as physical self-efficacy, game knowledge, decision-making, pressure and communication should be organized. These programs may include a variety of exercises, simulations and techniques to increase referees' competencies in certain areas.
- Self-confidence enhancing activities should be organized to increase the internal and external self-confidence of referees. For example, it is important to support referees' self-confidence through methods such as individual or group work, sharing success stories, motivational speeches and psychological support.
- Mentorship programs consisting of experienced referees should be established. They can share their experiences by guiding new referees. This can increase the competencies of new referees, particularly in practical areas such as physical self-efficacy, game knowledge and decision-making.
- To support the personal development of referees, courses should be organized on topics such as leadership, communication, stress management and decision-making. Such courses can help referees become more effective both on and off the field.
- A regular and fair system should be established to evaluate the performance of referees and provide feedback. This can help referees recognize their strengths and identify areas for improvement.
- It is important to examine other variables that affect self-confidence and self-efficacy (e.g., education level, experience, personal characteristics) in more detail. This can help us gain a more comprehensive understanding of referees' performance and confidence.

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## Perceived Usefulness, Ease of Use, and Usage of Distance Education Systems: Evidence from Turkey

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### Abstract

Distance education and e-learning have become pivotal during the COVID-19 pandemic, offering a solution to maintain education continuity amidst restrictions. This study delves into the application of the Technology Acceptance Model (TAM) to assess the acceptance and utilization of e-learning among university students, with a particular focus on Turkey. This geographical context presents an opportunity to investigate the multifaceted factors influencing the effectiveness of e-learning, which have received limited exploration thus far. A survey-based quantitative approach employs Structural Equation Modeling (SEM) to understand student attitudes toward distance education and investigate the relationships among various dimensions such as learning, usage, and barriers. The study, conducted among 1040 undergraduate students enrolled in Turkish distance education programs, reveals significant positive relationships between learning and usage dimensions, while negative relationships exist between learning and barriers and usage and barriers. The findings underscore the importance of enhancing the ease of use of distance education platforms and addressing encountered barriers to foster effective utilization. Recommendations include establishing robust support mechanisms, improving training programs, and facilitating better communication channels between students and educators. The study contributes to the understanding of e-learning acceptance and usage among university students, providing insights for designing more effective educational interventions and enhancing higher education systems, especially in the case of Turkey.

**Keywords:** Distance Education, E-Learning, Higher Education; Student Attitudes; Structural Equation Modeling, and Technology Acceptance Model

### Introduction

Distance education and e-learning can be defined as a learning model that delivers knowledge and skills to students through the Internet or other digital technologies. In this educational model, students receive their lessons via online platforms instead of traditional classroom settings. E-learning methods utilize tools such as content in various formats, interactive materials, video conferences, live sessions, and learning management systems (Bates, 2011). This allows students to receive education independently of spatial and temporal constraints. The global education landscape has been significantly impacted by the COVID-19 pandemic, emphasizing the importance of distance education and e-learning. During this period, with the closure of traditional classroom environments, educational institutions and students rapidly turned to digital platforms. Amid the pandemic, face-to-face education became impossible due to the necessity of maintaining physical distance, reducing contact, and quarantine requirements, highlighting the prominence of distance education and e-learning alternatives. Notably, during measures taken to control the spread of COVID-19, e-learning and distance education have offered a solution to minimize health risks (Dhawan, 2020 & Liguori, 2020). Students have been able to receive education from their homes or in a safe environment, thus supporting efforts to prevent the spread of the pandemic.

Additionally, distance education and e-learning can enhance educational equity by overcoming geographical barriers and providing access to individuals living in remote areas or with physical disabilities, thereby expanding the reach of educational services and creating an equitable learning environment. A study by Alsobhi et al. (2021) emphasizes that the COVID-19 pandemic has accelerated the digital transformation in education and increased the significance of e-learning. Throughout the pandemic, distance education and e-learning have demonstrated the resilience and adaptability of educational systems and enhanced their capacity to cope with similar emergencies in

the future. Therefore, distance education and e-learning have played a significant role in education during and after the pandemic.

TAM is widely used in information systems and technology to understand how users accept a technology developed by Davis et al. (1985, 1989, 1993). The TAM encompasses a set of variables that influence the process of users accepting a technology. These variables include perceived ease of use, perceived usefulness, social interaction, attitude toward technology, experience, and demographic factors. Essentially, the decision of users to accept a technology is determined by the balance between perceived usefulness and perceived ease of use. In this research, the TAM, one of the most widely utilized models in information systems research, has been predominantly utilized to assess its influence on the adoption of e-learning as a platform (Venkatesh, 2000). This study investigated perceptions of ease of use, usefulness, usage expectations, satisfaction, and demographic characteristics of university students towards the distance education system within the scope of technology adoption theory (Venkatesh et al., 1996, 2003). E-learning has become a mandatory and increasingly popular learning approach in higher education institutions during COVID-19, with many universities integrating e-learning services into their programs. At the same time, some have built their distance education systems.

The purpose of distance education is not to replace the traditional classroom environment but to provide new opportunities for interaction and communication between students and instructors. This study aims to investigate the acceptance levels of e-learning at universities as a practical learning tool by individual users and to develop an e-learning usage model based on students' perceptions, attitudes, expectations, and satisfaction with the e-learning system.

However, despite the extensive adoption of e-learning, there exists a research gap concerning the nuanced factors influencing its acceptance and efficacy among university students in the case of Turkey. Understanding the determinants of e-learning acceptance and usage can inform the design of more effective educational interventions and contribute to enhancing higher educational systems based on the case of Turkey. Thus, this study aims to investigate the acceptance levels of university e-learning as a practical learning tool by individual users. Specifically, it seeks to develop an e-learning usage model grounded in students' perceptions, attitudes, expectations, and satisfaction with the e-learning system.

The structure of the paper is outlined as follows: firstly, the TAM is reviewed in the present section, which serves as the theoretical framework for understanding technology adoption. Following that, the methodology section delineates the research design, data collection procedures, and analysis techniques, incorporating Structural Equation Modeling (SEM), confirmatory factor analysis, and internal consistency analysis (Jöreskog & Sörbom, 1982; Schumacker & Lomax, 2010). Ultimately, the paper wraps up with discussions regarding the implications of the findings and potential directions for future research.

### **Data Collection and Measurement**

This research aims to understand student attitudes toward distance education and examine the relationships between these attitudes. The study employs a quantitative research design, generally adopting a relational and descriptive approach. Data is collected through a survey that gathers numerical data, which is then evaluated through statistical analysis to reach quantitative results. This study embraces both relational and descriptive research approaches. The relational approach focuses on understanding and assessing the relationships between student attitudes, while the descriptive approach aims to describe and explain student attitudes comprehensively.

This study adopts a descriptive research design and employs a survey model for data collection. SEM is employed as the analysis method to evaluate the relationships between dimensions of student attitudes. Additionally, a descriptive approach is adopted in the research. The descriptive approach aims to detail and describe student attitudes comprehensively. Descriptive statistics help define essential variables such as demographic characteristics of the sample and scores on the attitude scale towards distance education, among others.

The study population comprises students enrolled in undergraduate-level distance education programs in Turkey. A convenient sampling method is used in the research, involving selecting participants that are easily accessible to researchers. The study sample consists of 1040 undergraduate students enrolled in distance education programs. Many of the included students reside in metropolitan areas. Among the participants, 904 students live in metropolitan areas, 25 in non-metropolitan cities, 90 in districts, 3 in towns, and 18 in rural areas. Regarding gender distribution, the sample consists of 273 male and 767 female students.

The data collection tool used in the research is a survey form consisting of three main sections:



**Attitude Towards Distance Education:** This scale measures students' attitudes toward distance education. It comprises twenty items in three dimensions: learning, usage, and barriers.

**Situational Feature Questions:** Special situational feature questions are included to understand students' experiences and usage of distance education.

**Demographic Questions:** Fundamental questions such as gender, department, class, and place of residence are included to understand participants' demographic characteristics.

### **Statistical Methods**

In this study, SEM is used for data analysis. SEM is a statistical technique that models and analyzes causal relationships between variables (Hoe, 2008). This modeling approach is commonly used to examine and understand complex structures across various disciplines, especially in social sciences such as business management, psychology, education, health, and marketing, to analyze models that include latent variables (variables that cannot be directly measured or observed) along with observed variables (variables that researchers can directly measure or observe) such as those observed in this research. This model allows researchers to test causal relationships between variables within a specific theoretical framework and match observational data with these relationships (Loehlin and Beaujean, 2016).

The discriminant and convergent validity of the study is supported by confirmatory factor analysis (Fornel, 1981). Confirmatory factor analysis is a commonly used method to test these types of validity, during which researchers evaluate the degree of accuracy underlying the factors beneath the scales while assessing discriminant and convergent validity (Kline, 2013). Discriminant validity confirms that each scale represents different conceptual factors, whereas convergent validity confirms that each factor demonstrates consistency among measured variables (Cable and DeRue, 2002). These two types of validity are used together to ensure the reliability and accuracy of measurements. Internal consistency analysis assesses whether the measurement tool is internally consistent by examining correlations among different scale items or elements (Hajjar, 2018). It measures how well the scale items agree, indicating whether they measure the same concept. Internal consistency analysis uses statistical criteria such as Cronbach's Alpha. Cronbach's Alpha is a reliability coefficient that measures the internal consistency of all scale items within a measurement tool (Taber, 2018). Values usually range from 0 to 1, where a Cronbach's Alpha value of 0.70 or higher indicates an acceptable level of internal consistency (Spiliotopoulou, 2009). Internal consistency analysis provides assurance that the measurement tool is reliable and stable, yielding consistent results. The reliability of this study is also supported by internal consistency analysis.

The dataset acquired for the study underwent exploratory factor analysis using the IBM SPSS Statistics Standard Concurrent User V 26 (IBM Corp., Armonk, New York, USA) statistical package program. In exploratory factor analysis, factors are derived as linear combinations of observed variables. These factors represent hypothetical variables constructed from the observed variables. Before conducting factor analysis, it is crucial to evaluate the suitability of the data by examining the correlation matrix. If a substantial portion of the coefficients in the correlation matrix is below 0.30, employing factor analysis may not be suitable. Bartlett's sphericity test is used statistically to test the correlation between variables in the data matrices. Bartlett's test of sphericity tests whether the created matrix between questions is an identity matrix.

Furthermore, the KMO measure, derived from correlation and partial correlation coefficients, serves as a crucial criterion for assessing the data's suitability for factor analysis. In this study, the principal component method was employed to extract factors. The selection of an appropriate number of factors was guided by the criterion of retaining factors with eigenvalues greater than one (Ruscio and Roche, 2012). Additionally, factor rotation was conducted to elucidate the variables contributing to each common factor, utilizing the varimax method (Mvududu and Sink, 2013). Confirmatory factor analysis was also employed to assess the alignment of the factors derived from exploratory factor analysis with theoretical or hypothetical factor structures. Exploratory factor analysis typically precedes scale development and the evaluation of structural validity. Conversely, confirmatory factor analysis validates the structure obtained from exploratory factor analysis or a predetermined theoretical factor structure. While exploratory factor analysis determines the optimal number of factors based on the data matrix, the number of factors is predetermined in confirmatory factor analysis. For this study, confirmatory factor analysis was conducted using the Amos (Version 24.0) statistical package program.

### **Findings**

The KMO test evaluates the adequacy of the distribution for factor analysis, with values exceeding 0.80 indicating excellent suitability. In this study, the KMO value attains an excellent level. The Bartlett test yielded a statistic of 11,957.741 ( $p < 0.05$ ), indicating the multivariate nature of the variable being measured in the population parameter.

No constraints were imposed on the number of factors in this research, and factors with eigenvalues surpassing 1.50 were incorporated into the scale. Eigenvalues of 1 or higher are deemed significant in factor analysis. Additionally, the variance ratios obtained in this study, falling within the 40% to 60% range, are considered satisfactory.

**Table 1:** Common Factor Variances and Factor Loadings for Attitudes Towards Distance Education Scale

Scale Items	Factor Loadings		
	Learning	Usage	Barriers
<i>The lessons given by the distance education system are more memorable.</i>	0.858		
<i>I understand the relationships between concepts better in the lessons given with the distance education system.</i>	0.822		
<i>The distance education system makes the lessons more understandable than traditional methods.</i>	0.808		
<i>The use of the distance education system in lessons increases my motivation.</i>	0.798		
<i>Following the lesson with the distance education system is easier than traditional methods.</i>	0.791		
<i>Using the distance education system in lessons develops my researcher spirit.</i>	0.768		
<i>The distance education system helped me to use my time more efficiently.</i>	0.753		
<i>The courses taken with the distance education system contribute to my personal development.</i>	0.695		
<i>I take notes more easily in the distance education system courses than in the classroom.</i>	0.640		
<i>I started using internet resources related to my field more effectively during the distance education system process.</i>	0.538		
<i>The distance education system and its applications are easy to use.</i>		0.766	
<i>The distance education system unit provides sufficient support when I need it.</i>		0.758	
<i>The distance education system unit of the university provides sufficient training at the beginning of each academic year.</i>		0.693	
<i>I have the necessary knowledge and skills to use the distance education system.</i>		0.617	
<i>Recording the lectures and providing the opportunity to watch them again is beneficial for my learning.</i>		0.525	
<i>I do not have problems preparing homework for the courses taught with the distance education system.</i>		0.419	
<i>I have technical problems in using the distance education system.</i>			0.745
<i>I have difficulty in using the distance education system.</i>			0.679
<i>Using the distance education system makes it difficult for me to communicate with the lecturer.</i>			0.607
<i>The courses taught with the distance education system bring me an additional workload.</i>			0.567
Eigenvalue	6.399	3.461	2.023
Variance explained (%)	31.997	19.307	10.113
Cronbach's Alpha ( $\alpha$ )	0.939	0.782	0.68
Total variance explained (%)		59.417	
Kaiser Meyer Olkin (KMO)		0.939	
Bartlett's test		11,957.74**	
Cronbach's Alpha ( $\alpha$ )		0.829	

Note. \* $p < 0.05$ ; \*\* $p < 0.01$

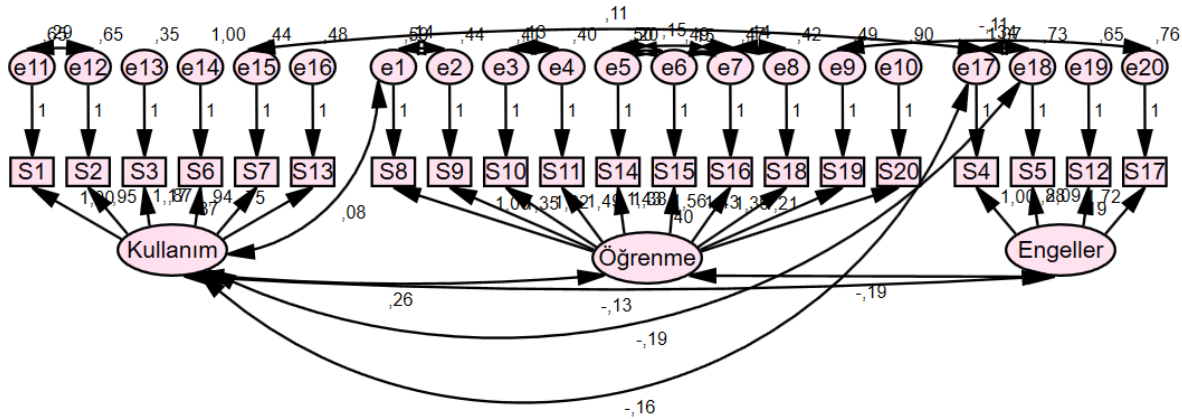
As seen in Table 1, the factor loadings of the questions in the first dimension (Learning) range from 0.538 to 0.858, those in the second dimension (Usage) range from 0.419 to 0.766, and those in the third dimension (Barriers) range from 0.567 to 0.745. It is considered sufficient since Cronbach's Alpha ( $\alpha$ ) is above 0.70. Therefore, it can be said that the three dimensions of the Attitude Towards Distance Education Scale measure different characteristics. According to these results, the developed survey is a reliable measurement tool. The model obtained for the Attitude Towards Distance Education Scale consists of three dimensions ( $\chi^2 = 704.578$ ,  $df = 154$ ). Fit indices related to this model have shown that the model is acceptably compatible (Table 2).

**Table 2: Fit Indices of the SEM**

Indices	Good Fit	Acceptable Fit	Fit Index of the Model
$\chi^2/df$	$\leq 3$	$\leq 4-5$	4.575*
RMSEA	$\leq 0.05$	0.06-0.08	0.059**
IFI	$\geq 0.95$	0.94-0.90	0.954**
CFI	$\geq 0.97$	$\geq 0.90$	0.954*
GFI	$\geq 0.90$	0.89-0.85	0.935**
TLI	$\geq 0.95$	0.94-0.90	0.943*

Note. \*Acceptable fit; \*\*Good fit

Based on the fit indices evaluated in Table 2, it is evident that the model exhibits excellent fit characteristics. The model under examination is depicted in Figure 1.



**Figure 1: Confirmatory Factor Analysis Model of Attitude Towards Distance Education Scale**

After the improvements were obtained, the relationships resulting from the analysis are provided in Table 3. A statistically significant positive relationship was found among the sub-dimensions of the Attitude Scale Towards Distance Education ( $p < 0.05$ ).

**Table 3: SEM Regression Weights After Adjustments According to Modification Indices**

Path	Standardized Estimate ( $\beta$ )	Estimate ( $\beta$ )	Standard Error	Critical Value	p
Learning ↔ Usage	0.617	0.258	0.023	11.356	0.001**
Learning ↔ Barriers	-0.704	-0.194	0.022	-8.990	0.001**
Usage ↔ Barriers	-0.491	-0.131	0.018	-7.122	0.001**

Note. \* $p < 0.05$ ; \*\* $p < 0.01$

Statistically significant relationships were found between the Learning and Usage sub-dimensions ( $p < 0.05$ ). Statistically significant relationships were also observed between the Learning and Barriers sub-dimensions ( $p < 0.05$ ), as well as between the Usage and Barriers sub-dimensions ( $p < 0.05$ ). Overall, when these results are examined, it can be concluded that the survey results for the Attitude Towards Distance Education Scale represent a reliable and valid measurement tool.

### Conclusions and Recommendations

This study examines relationships between the dimensions of learning, usage, and barriers using Structural Equation Modeling (SEM). A positive and significant relationship was identified between learning and usage. Additionally, a negative and significant relationship between learning and barriers is found, as well as a negative and significant relationship between usage and barriers. Structural Equation Modeling helps us understand the relationships among the factors of the Attitude Scale for Distance Education. When examining the relationships among students' dimensions of learning, usage, and barriers, a positive connection is found between learning and usage. This result indicates that students perceive distance education as an effective learning tool, and utilizing it more effectively positively impacts learning.

Furthermore, the negative relationship between learning and barriers suggests that while distance education contributes positively to students' learning processes, reducing encountered difficulties is also crucial. Similarly, the negative relationship between usage and barriers indicates that more effective utilization of distance education

can alleviate barriers. Improving the ease of use of distance education systems and applications can help students use this platform more effectively. User-friendly interfaces can enhance students' motivation and attitudes toward Distance Education. Support mechanisms should be established to address barriers encountered in distance education usage. A system should be established to provide technical support and assist students in accessing educational resources more effectively. The quality of training programs related to distance education should be enhanced, especially ensuring that the training offered by distance education Implementation and Research Centers is more comprehensive and tailored to student needs. Findings suggesting that distance education usage complicates student-faculty communication recommend using various communication tools to strengthen communication between educators and students. Regular feedback and interactive learning environments should be established. Social support mechanisms should be created for students to share their experiences with distance education usage. Students who share their experiences can inspire others to use distance education effectively and offer solutions to problems they encounter.

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## Semiotic Analysis of Perception Management through Technology-Assisted Training in the Military Field Study on Black Mirror TV Series

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### Summary

Defense industry is one of the sectors that boosts technological advancement and act as a trigger. In this industry, where personnel training plays a vital role, supporting military training with technology provides a great advantage on the battlefield. When we look at the problems that need to be solved, it is seen that the soldier's devotion to duty, his sense of absolute obedience and the soldier's need to be free from emotional depression.

Recently, the masses have undergone intense migration movements due to the climate crisis, epidemics, hunger and wars. In this context, it seems that local people in the migrated region have a feeling of fear and hatred towards the newcomers. Mass media are the primary factors that cause this perception, called xenophobia.

In this study, how perception management can be done through mass media and what the consequences may be will be discussed from a dystopian perspective and using the semiotic analysis method. As an example, through the images and dialogues in the "Men Against Fire" episode of the Black Mirror series, it will be examined how the soldier's motivation to become conditioned to the task during the training process is provided with technological support, and how effective the media can be in the context of perception management. As a result of the research, the outrage that xenophobic thought will cause in society, the dangers that arise in case of loss of control, and the role of the media in this process will be revealed and solution suggestions will be offered.

### Introduction

4.76 billion people are active social media users, it is possible to say that the digital world is a widespread communication channel. (Wearesocial, 2023) Social media, which is the main source of news and information and the main communication assistant for billions of people globally, has the potential to easily impact on user individuals. (Ahmed, Chen and Chib, 2021).

Due to the features of digital media such as being individualized and reaching everyone, instant sharing, snap sharing of photos, videos and audio recordings, and easy interaction within and between groups, it has become increasingly easier to direct people, groups or societies after perception management. Famous war strategist Sun Tzu said, "The great success is to win by breaking the enemy's resistance without fighting." by emphasizing the importance of using propaganda and manipulation with his philosophy. (as cited in Ayhan and Çakmak, 2018)

Although the use of technology in military training, as in every field, may mean that it will complete existing deficiencies, it may also mean that it will create problem areas. It is envisaged that technological support, which provides benefits for overcoming problems experienced by military personnel such as composure, shooting skills and mission focus in a conflict environment, may also create some negative repercussions such as confidentiality and ethical problems.

Today, due to many reasons such as climate change, political crises, energy problems and civil wars, the number of people migrating around the world shows an increasing trend, reaching 218 million as of today (IOM UN Migration, 2022). Local people in the receiving countries; they generally have a hatred based on fear towards these immigrated people who have different cultures, languages, skin colors and ethnic structures. It is seen that this concept, called "xenophobia", is considered dangerous by masses such as political figures, ultra-nationalist movements (Karabulut, 2022) and spiteful crowds on social media, resulting in both regional and global problems.

In this study, the episode "Men Against Fire" which is the 5th episode 3rd season of the "Black Mirror" series, will be discussed, where the use of technology in the field of military training and the negativities it may create in the near future are presented through a dystopian (chaotic future) narrative.

### **Media and Communication Transforming with Technological Development**

It is known that people have developed techniques that contain the messages they want to convey, using many communication methods since the neolithic times when they started living together. Mass communication has spread to wide areas thanks to traditional media organs such as newspapers, telegraph, radio and television. Especially in the early 1990s, mass communication became digital, and with social media, people began to share information, interact with each other, expand their social networks and establish virtual friendships. As the amount of sharing and diversity has become unlimited over time, social media has turned into a vortex that draws all humanity into itself.

The digital medium, known as the world of social media, has revealed that Marshall McLuhan's global village theory has become a reality, and has shown that it has become an area where world borders have relatively disappeared and social, cultural, economic and political values and information are easily made available for common use (Kapan and Üncel , 2020). The digital phenomenon, which has become two-dimensional with the recent rapid development of technology and the emergence of artificial intelligence and virtual reality environments, continues its evolution in three dimensions. In this context, the awareness of artificial intelligence, augmented reality, cloud technology, 5G speed internet and blockchain technologies is increasing. (Lee et al., 2021). Three-dimensional virtual world technology, which is expected to take more part in our lives in the near future, will make its impact felt in all areas, from art to industry, from the gaming industry to health. (Sun et al., 2022)

### **Conflicts Encountered in Military Training and Reflections of Technological Support**

In military conflict situations, it is quite common for soldiers to encounter emotional problems, and these problems can manifest in a variety of ways. Many studies show that military personnel are under intense stress during conflict, which can cause emotional problems (Smith, 2017). Uncertainty, danger, and constant and high levels of arousal in conflict zones can make it difficult for soldiers to cope with emotional problems such as anxiety and fear. (Johnson, 2018). Additionally, it has been determined that traumatic events experienced during conflict can lead to serious emotional problems such as post-traumatic stress disorder (PTSD). (Brown, 2019).

However, emotional problems are a vital concern not only for military personnel, but also for soldiers' families. (Jones et al., 2016). The emotional depression that soldiers experience during conflict can cause problems such as anxiety, concern and depression in their families. This situation causes the complex relationship between the emotional health of military personnel and family dynamics (White & Smith, 2020). Understanding the effects of emotional problems on military personnel can help military leaders and healthcare professionals deal with these problems effectively. Appropriate support and resources must be provided to protect and improve soldiers' emotional health during conflict. (Taylor, 2015)

Technological three-dimensional visuals are produced in military areas where technological developments are most intense, and augmented reality performance has been revolutionary in the military training system as well as in different fields. Before a detailed analysis of the usage areas, the current development of virtual and augmented reality technology will be briefly examined.

The foundations of virtual reality (VR) technology date back to the mid-20th century. The first VR experiences began in the 1950s and early 1960s, with devices built by scientists and engineers. These days, they generally provide simple visual and audio feedback and are used for military training and research services.

In the late 1960s and early 1970s, some basic VR systems emerged, discovered by Ivan Sutherland and other researchers. Sutherland's "The Sword of Damocles" presents 3D images through a mounted system. However, since these systems are generally large and expensive, they are used only in research laboratories. (Künüçen and Samur, 2021)

In the 1980s, VR technology became more commercially available and several companies began releasing VR devices and applications. In particular, Jaron Lanier's VPL Research company has commercially produced and sold many VR technologies. During this period, VR was seen to be particularly involved in studies in the fields of agriculture, education and animation.

The development of VR technology came to a halt in the 1980s, but began to revive in the early 2000s. Increasing processing power, advances in graphics technologies, and the emergence of portable components such as smartphones have fueled a revitalization of VR. Today, VR technology is used in many fields, including education, entertainment, healthcare, military and industrial applications. (Künüçen and Demirci, 2021)

Virtual reality (VR) and augmented reality (AR) are advanced technologies that have spread rapidly in recent years and offer a wide range of applications in different fields. These technologies allow users to experience the virtual environment by interacting with the real world.

Virtual reality (VR) is a type of technology that transports users to a completely virtual environment. Users with the help of VR headsets or glasses find themselves in computer-generated 3D environments. These environments can be related to the real world or a completely imaginary environment, depending on the user's preference. Users can navigate, interact and have various experiences in these virtual environments. For example, VR technology is widely used in the gaming industry, education, healthcare, and simulation fields (Mestre & Ribeiro, 2019).

Augmented reality (AR) is a type of technology that enriches the real world with virtual elements. AR applications allow users to see the real world and add computer-generated graphics, text or other digital content to these images. AR is used especially effectively in fields such as education, retail, architecture and tourism. Users can use technology more effectively by experiencing AR applications through devices such as smartphones, tablets or special AR glasses. (Kasahara, & Prado, 2019).

In addition to other areas of use, the rate of use of virtual and augmented reality is increasing in military training. These technologies offer various ways to provide a more effective, impressive and safe environment for the training of military personnel. While virtual reality places users in a completely virtual environment, augmented reality enriches the real-world environment with virtual elements. The use of virtual reality technologies in military training can be listed as follows;

*Simulations and Scenarios:* Virtual and augmented reality enable military personnel to experience scenarios they may encounter in real life. This can be achieved through simulations specifically designed for various military activities such as combat operations, terrain reconnaissance, tactical maneuvers.

*Medical Training and Injury Simulations:* Virtual and augmented reality allow medical personnel to practically experience injuries and emergencies they may encounter on the battlefield. This provides significant assistance in improving medical response skills and being able to work more effectively in field conditions.

*Team Collaboration and Leadership Training:* Virtual and augmented reality can deliver interactive scenarios to improve team collaboration and leadership skills across military units. Military personnel can work in these environments to complete complex missions and make tough decisions together.

To look at some examples from militaries around the world, the US Armed Forces conducts various programs to improve the tactical and strategic skills of military personnel using virtual reality simulations, while the British Royal Army offers specialized training programs to simulate military operations in field conditions using augmented reality. Military personnel fight against virtual targets in a real-world environment through AR glasses. (Xinxiong Liu et al. 2018)

### **Perception Management, Xenophobia as a Hate Speech and Its Social Effects**

Perception can simply be defined as the organization and interpretation of data carried by sensory organs in the brain. (Pustu, 2014, p.310) Perception means a person's understanding of the world. Being aware of what is happening around him, objects and situations, searching for and finding them when necessary, and arranging what he has obtained in a row means that the person has acquired perception (Gönerç, 2018, p.12). The entire process constructed to ensure that the perception process resonates with the individual is called perception management. In other words, perception management means creating, reproducing and managing the message intended to be given to the target audience or society for certain purposes (Başbüyük, 2014, p.47).

When we look at the history of the concept of xenophobia, it is seen that it consists of the combination of the word "foreign" used in the Ancient Greek language as "xénos" and the word "phóbos", that is, "fear" (Oxford Standard English Dictionary, 2006). The literal meaning of Xenophobia is defined as "*extreme hatred and fear towards people of foreign countries*" (Cambridge Learner's Dictionary English–Turkish, 2023). The concept of xenophobia, which derives from the same formation as the concepts of Islamaphobia and racism, which are based on fear, is also examined by multiple disciplines such as psychology, anthropology, sociology, theology and economics



(Karabulut, 2022). Xenophobia is fed by stereotypical, monotonous thoughts. According to Rydgren's (2004) perspective, an illusion occurs at the cognitive level after lack of information and misinformation. The prejudiced approach that emerges in this process is the main factor that brings about fear and hatred towards foreign groups. When examined according to social psychology, it is seen that xenophobia expresses the prejudiced, critical and exclusionary perspective of a defined internal group towards the external group outside the structure that it categorizes in accordance with its own dynamics (Karabulut, 2022). Recently, this concept emerged as fear and subsequent hatred towards immigrant groups and has increased its recognition as an attempt for "superiority" based on cultural foundations (The UN Refugee Agency, 2020).

Advertisements and movies use subliminal techniques to create perception in all countries. In this way, reality and imagination are drawn. One who can control perception also controls what the target audience has. Mass media, on the other hand, have the power to shape perception, lifestyle and eventually everything by dominating the eyes, ears and brain (as cited in Ayhan and Çakmak, 2018). Famous American politician and writer Henry Kissinger said, "*It is not so important that something is real; but it is very important that it is perceived as real.*" expresses it as. (Arğın, 2018, p.93)

Perception managers and manipulation experts use information like a "punch" to stun the target audience and ensure that the audience they determine acts in line with the desired goal. Consciously selected and edited information and visuals are frequently used by media manipulators. (Gültekin, 2020). The most effective weapon that can be used for this purpose is mass media.

State authorities and company owners, who have media weapons in their hands, skillfully use this power to direct the audience to the target they want. For this reason, they do not hesitate even for a moment to use "experts" on programs, to manipulate news sources, to show only what they want to see of the truth, and to change the agenda by financing alternative media sources. (Herman and Chomsky, 2017). The concept of xenophobia, which entered the literature in the last century, has become an increasingly important concept today. Following the September 11, 2001 attacks against the Department of Defense (Pentagon) in Washington DC, the capital of the United States (USA), and the buildings called the Twin Towers in New York, US President George Walker Bush launched a campaign against terrorist organizations in Afghanistan. The war caused all Muslims to be seen as potential terrorists in society (Karabulut, 2022). A person named Balbir Singh Sodhi, wearing a headscarf, was killed in the US state of Arizona on September 15, 2001, on the grounds that he was a Muslim, and the murder suspect stated during interrogation that he killed the person in question to take revenge for the September 11 terrorist attacks. Thus, it revealed how far xenophobic perception management can evolve (Winters, 2002). In addition to the migration movement that started with the turmoil that broke out in Syria in 2011 and the subsequent civil war, the climate crisis and famine in African countries and Asian geography, and the increasing migration movements towards Mexico and the USA after the political crises in Central America also contribute to the spread of xenophobia in the world has been an extremely important factor. As a result of the manipulative statements and news about refugees made by ultra-nationalist groups in countries that receive intense immigration, it has become commonplace for some segments of society to regard refugees as enemies, and unfortunately, this situation has led to divisions.

## Methods

Scenes selected from the series with the typical situation sampling method (Baltacı, 2018:251), which is a purposive sampling method used in evaluation studies where the effects of a certain application or program are investigated and which expresses situations that are not different from the universe with their basic features that have the ability to represent the universe, were used in Ssasure's sign-signifier-signified Semiotic analysis will be made with the table to be created under the headings shown.

In semiotic analysis, sections taken from scenes are evaluated as an indicator. The objects, people, places and words in the sections are signifiers and show certain mental concepts (Devran, 2010). In this way, it is aimed to analyze the background meaning of an image or text rather than its clearly stated meaning. With the mentioned reading method, it is not possible to comprehend what is clearly shown, but how it is constructed and what its real meaning is. (as cited in Ayhan and Çakmak, 2018)

## Black Mirror TV Series: Semiotic Analysis of "Men Against Fire" Episode

The TV series "Black Mirror", which was released in the United Kingdom in 2011, is about a dystopian world consisting of independent episodes, reflecting technology, modern social life and their effects on the individual. (Akgül and Şahin, 2022) The name of the series, which consists of 6 seasons and 27 episodes, means "Black Mirror" in Turkish. In the episode "Men Against Fire", which was released as the fifth episode of the third season of Black Mirror, a story is told through the near future life of a soldier named Stripe. The subject of the episode is

the process of extermination of a species called "roach", which is emphasized as a social threat, the realities faced by soldier Stripe and the problems that arise afterwards. The soldiers in the team, who are trained with high-tech equipment, have lenses in their eyes and an implant called "MASS" in their brains. Within the department, the MASS system has been described as the "most powerful military weapon." The team leader can convey the necessary orders for planning, informing and directing with the help of "augmented reality" technology, which means three-dimensional image, where real and virtual images can be presented simultaneously. All activities of soldiers, their vital values, and indicators in the field of shooting and training are supported by the "MASS" system. In the scenes where shooting training is presented to the audience, the accuracy of the shots and the soldier's success statistics after each shot are presented to the user. Thanks to this implant, soldiers can communicate with each other and access incoming intelligence reports instantly. It is presented to the audience that there are solutions to the emotional problems experienced by soldiers in real-world armies, that the soldier does not hesitate when shooting, does not feel any smell spreading around, does not hear the screams around him, and does not experience the feeling of remorse and fear felt when killing people.

The concept of "roaches", which constitutes the main subject of the series; It has been described as a zombie-looking creature that cannot speak, pollutes everything it touches, and creates great fear in society. It is understood that the soldiers' duty is to kill them.



**Figure 1:Men Against Fire Section 1 (02:26)**

**Sign:** Soldiers getting into a truck to go on duty

**Signifier:** Military truck bed, female soldier, mixed-race veteran, black junior soldier.

**Signified:** Xenophobic perception dialogue

**Narrative:** In the section where the team goes to the villagers after receiving notice that the enemy defined as "roach" has been seen, it is seen that Lennard, a hybrid senior soldier, scares Stripe, who is on the team's first "roach" hunting mission, about "roaches" with xenophobic expressions. In this scene, Lennard advises Stripe used that expression saying "try not to shit your pants when you see one of them. This will only make them angry." What is understood from this dialogue is these roaches look so bad that they scare the soldiers even if they are fully equipped and trained.



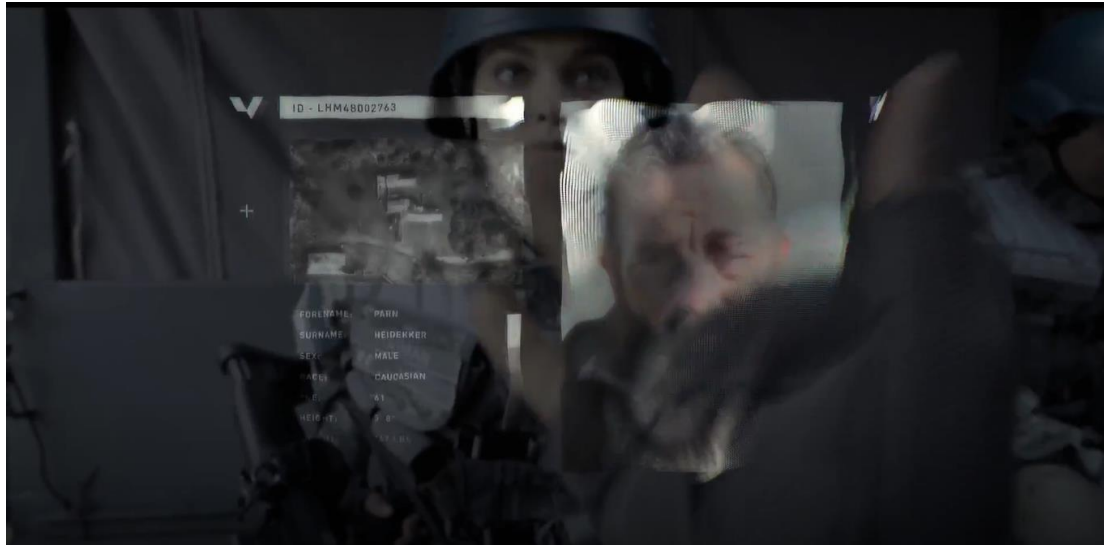
**Figure 2: Men Against Fire Section 2 (03:06)**

**Sign:** Team Commander Medina

**Signifier:** Team Commander Medina, five villager men, one team personnel soldier.

**Signified:** Community, security forces.

**Narrative:** Team personnel reached a village in the forest area that was reported to have been attacked by a "Roach". Team Commander Medina tries to communicate with the villagers; but the villagers speak Danish. Therefore, the conversation starts when the commander activates the simultaneous translation electronic device in his equipment. In the dialogue, the villager said that the roaches might have come, and when Medina asked if they had seen them, he said that they had not seen them, but that they had heard them, that they had entered the warehouse and taken food, and that they could no longer consume this food themselves. From this section, it is understood that the villagers were afraid and disgusted even though they did not see the "roaches".



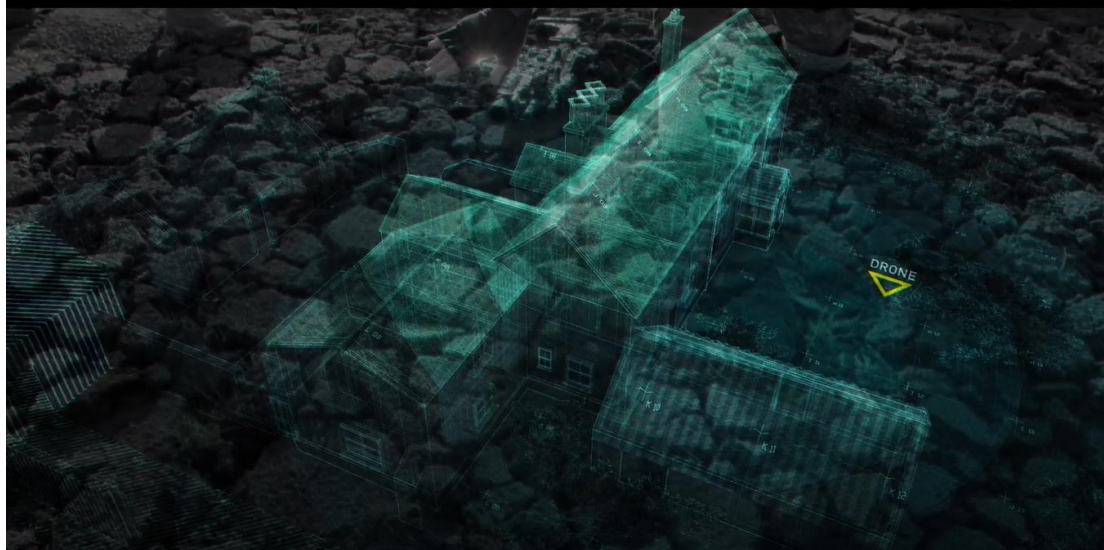
**Figure 3: Men Against Fire Section 3 (05:16)**

**Sign:** Briefing about Parn Heidekker

**Signifier:** A virtual image, female soldier named Raiman, soldier Stripe's hand

**Signified:** Briefing transmitted to soldiers via the MASS system.

**Narration:** With the information he received from the villagers, the team drives to the house of the clergyman Parn Heidekker, who helps the "roaches". It is seen that Stripe, who is on his first mission, is trying to understand the message reflected on the eye lens via MASS, so he is trying to hold the virtual image with his hand. This example is a simple example of such technologies that are likely to be available in the future and is considered useful for sharing intelligence simultaneously with the team.



**Figure 4: Men Against Fire Section 4 (06:49)**

**Sign:** Operation Order

**Signifier:** Virtual view of the building and drone, woman's hand.

**Signified:** Giving the operation order

**Narrative:** It is seen that team commander Medina expresses the action style of the team going to an operation regarding the building they will enter by gathering his team around him. In order to transmit this order, the scan made by the device that the personnel in the previous section hit the building is useful, and the augmented reality image that each personnel can see allows the team to collectively understand the details.



**Figure 5: Men Against Fire Section 5 (08:23)**

**Sign:** Team Commander Medina's conversation with Suspect Parn Heidekker at the table

**Signifier:** A darkened room, Team Commander Medina, Parn Heidekker, the Cross on the wall, sunlight leaking into the room, Medina's gun, composite helmet and candles on the table.

**Signified:** A mysterious room, a pious old man, a soldier extending a friendly hand.

**Narrative:** Team Commander Medina is seen talking to the suspect Parn Heidekker at his home. Team Commander Medina talks to Heidekker about where the "roaches" are hiding and explains his opinions about the "roaches". In his speech, Team Commander Medina started to give information about "roaches" by saying "...It is not their fault that they are like this, the dirt in their blood made them like this, this disease they carry..." Additionally, "...If we cannot stop roaches in the next 5, 10, 20 years, children will continue to be born and reproduce like this. "This cycle of pain will continue, and so will this disease." With his statement, he emphasizes that roaches are harmful to society, that they spread the disease in their blood by breeding and that they have to be stopped. Towards the end of his speech, Medina said, "You cannot see them as humans... If humanity is to continue living in this world, we must destroy them." He states harshly to Parn Heidekker that the being he refers to as "roaches" is a type of human, but that they must be destroyed for the continuity of the human race.



**Figure 6: Men Against Fire Section 6 (11:08)**

**Sign:** Roaches

**Signifier:** 3 zombie-looking screaming beings

**Signified:** “Roach”

**Narration:** During his search at home, Stripe checks behind the curtain and encounters roaches. These roaches, which have human bodies but have extremely frightening faces, behavior and sounds, try to shine a flashlight that shines green light on the face of soldier Stripe. Meanwhile, Stripe kills one of the roaches by shooting it. While one is attacking Stripe, the other is running away. Roaches, which have been mentioned since the beginning of the series and which the villagers fear even though they have not seen them, are presented to the audience for the first time in this scene.



**Figure 7: Men Against Fire Section 7 (13:18)**

**Sign:** Green Light

**Signifier:** Flashlight-like device, Killed Roach's hand

**Signified:** The invention that broke the Mass system

**Narrative:** In their first encounter from behind the curtain, the "roach" extends the green light-emitting device in his hand towards Stripe. Stripe, who took the flashlight emitting green light from the hand of the "roach" he killed after the fight, is seen to be disturbed by the reflection of light into his eyes while examining the flashlight. Stripe, experiencing tinnitus and mild dizziness, throws the device on the ground.



**Figure 8: Men Against Fire Section Section 8 (17:21)**

**Sign:** Target practice

**Signifier:** Gun sight, Shooting accuracy indicator, target

**Signified:** The evolution of shooting training

**Narrative:** Soldier Raiman, who could not hit the target during the operation, is seen training in the shooting field with Stripe. Thanks to the MASS implant, in the image coming to the eye lens, it is seen that there are values such as the location of the gun sight on the targets in the shooting area and the shooting hit rate. Thanks to virtual reality (VR), the shooter can see the accuracy of his shots and the results of the mission, and it is easier to follow his development.



**Figure 9: Men Against Fire Section Section 9 (20:31)**

**Sign:** Medical Examination

**Signifier:** A virtual apple tree, Stripe's hand, the doctor's image in the background

**Signified:** Control of the MASS system

**Narrative:** Team Commander Medina sends Stripe, a soldier who failed the shooting field and sports test, to a doctor. The doctor performs some tests during his examination. One of these is the test of touching the apples in the apple tree figure created with augmented reality. With this test, it is possible to check the transfer status of images created with augmented reality technology in the MASS system to the lens.



**Figure 10: Men Against Fire Section 10 (28:23)**

**Sign:** Soldier Stripe waking up from sleep in the ward area.

**Signifier:** Ward, soldier Stripe sitting on his bed, sleeping military personnel

**Signified:** Change of story

**Narrative:** Soldier Stripe is seen waking up due to the problem the green light caused in the MASS system. It is observed that Stripe, looking at his other friends, is surprised by their eye and hand movements. The audience is presented with the perception that Stripe, who is uneasy about his situation, will have a different situational awareness from this moment on.



**Figure 11: Men Against Fire Section 11(30:28)**

**Sign:** Stripe, a soldier smelling a handful of grass

**Signifier:** Soldier Stripe kneeling on the ground, an old-style car, a large building.

**Signified:** Beginning of normalization

**Narrative:** After his fight with the "Roach", it is seen that the soldier Stripe, who had problems with his MASS system due to the green light shined on his eye, began to feel different emotions from his other friends as time passed. The disappearance of the virtual image during the mission briefing, the realization that he could smell the grass, the feeling of fear, anxiety and help when the team commander Medina was shot, and the fact that he started to hear bird sounds reveal the fact that the MASS system suppresses human emotions.



**Figure 12: Men Against Fire Section 12 (36:13)**

**Sign:** Stripe and Raiman fighting

**Signifier:** Raiman, Stripe, an empty room

**Signified:** Soldier Stripe, freed from MASS influence, and Raiman, soldier under MASS control

**Narrative:** Soldier Stripe, who has different views and feelings from other soldiers, now sees the beings defined as "roaches" as civilians. Therefore, Stripe attacked Raiman to protect civilians. As a result of the double fight, both soldiers were injured and Raiman fainted. It is seen that the beings described as "roaches" since the beginning of the episode are actually humans, but due to the MASS system, the soldiers see them as "roaches" and enjoy killing them due to the effects of the system. It is understood that Stripe, like every soldier who has the perception that civilians are sacred, is trying to protect civilians, now called "roaches", due to the MASS system being disabled.



**Figure 13: Men Against Fire Section 13 (43:17)**

**Sign:** "Roach"

**Signifier:** A woman, soldier Stripe, bunker background.

**Signified:** A woman known as so-called roache, soldier Stripe lying on the ground, frightened.

**Narrative:** It is understood from Stripe's dialogue with the civilian Catarina, who wakes up in a shelter used by "roaches" in the scene, that he faces the truth. Catarina told Stripe how the "roache" process started.





**Figure 13: Men Against Fire Section 13 (50:48)**

**Sign:** Dialogue between soldier Stripe and psychiatrist Arquette

**Signifier:** Seated doctor and Stripe

**Signified:** Explanation of the actual situation

**Narrative:** In the scene on the screen, the dialogue between the soldier Stripe, who is waiting in a surveillance room, and the barracks psychiatrist Arquette is observed. During this dialogue, there are expressions that decipher the subject of the series.

### **Conclusion And Recommendations**

The episode "Men Against Fire", the 5th episode of the 3rd season of the Black Mirror series, produced by Charlie Brooker and directed by Jakob Verbruggen, in which the use of technology and mass communication devices is presented from a dystopian perspective in each episode, was examined with the semiotic analysis method. With this example, an episode is presented to the audience about the duty of soldiers, whose sense of conditioning has been increased and cleared of emotional feelings after technology-supported training and perception management, to clean the beings defined as "roach" from society.

The study shows how high-tech supported applications are used during military training and duty. In sections 2, 3, 4 and 8, which are analyzed semiotically, it is seen how technology is used in phases such as communication with civilians, intelligence sharing, operation preparation and shooting training. In this way, awareness of the task is increased and the operational process is accelerated.

When examined with the semiotic analysis method, it is observed that the sign "roach" is defined as the enemy and the existing fear is felt quite intensely in the society until the real meaning of the concept is revealed. Villagers were used as indicators to represent the society. Although the people living in the village do not see the "roach" with their own eyes, they want the destruction of the village warehouse plundered by "these roaches", and the fearful behavior of women and children reflects the impact of xenophobic messages given through mass media on society with a different approach.

Catarina, speaking representing the sign "roaches" in section 13 of the analysis, conveyed to the audience in a simple and understandable way how the process of being perceived as an "roach" began and continues. In the DNA scanning carried out upon the decision taken by the management, a perception management was carried out at a level that would allow the killing of people who were thought to pose a problem for the next generation, and to ensure this, the perception in the society was managed through mass media. As understood from the statement of soldier Lennard in the series, the idea of killing millions of people has been normalized.

When we look at the details of the sections, it is understood from the dialogue with Psychiatrist Arquette in section 14 that a process was initiated to cleanse the weak race from the world after the war. According to the results, it was imposed through all means of communication that these people were diseased and should be purged from society. The perception is created that the identities of the people referred to as "roach" in the conversation have somehow disappeared and that their right to life has been taken away due to genetic reasons. As can be understood from Arquette's statements, it is seen that the people defined as "roach" in society are actually individuals, but as a result of the mass screening and analysis carried out after the war, the massacre process was initiated in order to keep future generations disease-free and healthy, and the MASS system was used to prevent the soldiers who could do this from experiencing difficulties.

Just as the Hutu tribe, which controlled the media during the genocide that occurred in Rwanda in 1994, described the Tutsis, whom they saw as enemies, as "roaches" and reflected the genocide they supported with the perception of 'cleansing their own people', in the series, the groups that were believed to be enemies of society through the mass media. It is referred to as "roach". In the series, the message that perception management by advanced mass media organs in the future may lead to new genocides is put forward from a dystopian perspective. (<https://barisozcan.com/kara-aynadan-yansiyani-korku-black-mirror-s03e05/> Access Date 10 August 2023).

In this context, the trend of xenophobia, which continues in different geographies today, is becoming difficult to control with the help of mass media devices, and moreover, it seems to be fueled (The UN Refugee Agency, 2020). In this study, how this process may intensify in the future is reflected from a dystopian perspective. Digital media platforms, where unlimited information can be shared, the accuracy of information needs confirmation, and hate speech can spread uncontrollably, emerge as the easiest way to find mobility (Bursztyn et al., 2019). It should be foreseen that the chaotic situation that will occur when the xenophobic perception is managed by the state may lead to painful consequences that will go down in human history.

Increasing the level of digital media literacy and new media literacy of individuals, primarily in education and training institutions, will reduce the impact of ordinary perception management attacks. In order to minimize hate speech and prevent its spread through digital media, "hate crime" must be legally defined and have criminal sanctions. In order to reduce the problems that cause refugee crises, which have increased recently, taking measures through international actors such as the EU, the USA, China and the Russian Federation, through the UN, and reducing xenophobia by integrating refugees living in different countries into society is an important step and prevents the genocide, which is the subject of the chapter. It is thought that there will be strong action to pass. In this context, the trend of xenophobia, which continues in different geographies today, is becoming difficult to control with the help of mass media devices, and moreover, it seems to be fueled (The UN Refugee Agency, 2020). In this study, how this process may intensify in the future is reflected from a dystopian perspective. Digital media platforms, where unlimited information can be shared, the accuracy of information needs confirmation, and hate speech can spread uncontrollably, emerge as the easiest way to find mobility (Bursztyn et al., 2019). It should be foreseen that the chaotic situation that will occur when the xenophobic perception is managed by the state may lead to painful consequences that will go down in human history.

To ensure the security of countries, the use of technology in the training and monitoring of serving military personnel should be encouraged and maintained. However, when defining a target, it is important that it does not violate international law and ethical values.

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## Social Impact of Collaborative Teacher Community in Online Immigrant Integration Training

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### ABSTRACT

Since 2015, a continuous online integration training service has been active. In 2021, eight integration instructors, teaching online for two to six years across diverse regions participated in semi-structured interviews. Analysing the technology-mediated community formed by teachers and learners, we explored how the entirely online, gradually growing teacher community operates. The interviews revealed four influential categories for the teacher's work which encompass individual resources, antifragility<math>\leftrightarrow</math>resilience, collaborative resources, and an entrepreneurial mindset. An entrepreneurial mindset fosters collaboration and community, thereby enhancing learners' engagement in online learning and social inclusion. The study highlighted key factors for social impact within the community: informal teacher chats, the mentor-mentee model in learning design, shared materials, teacher rotation, direct collaboration with learners' environments and employers, and information shareability. This teacher community proved to be entrepreneurial and involves learners in co-design individualized integration training connected to their living situations. Entrepreneurial mindset. However, challenges in sustain, antifragile and developing online teaching, such as psychological insecurity, diversity of teachers and learners, heightened competition, time management, and workload, were also noted.

**Keywords:** artefacts, co-design, learning community, learning design, immigrants, collaborative learning

### Introduction

The teaching profession has evolved into a permanent full-time online occupation for many educators. This study's online teacher community has operated entirely online since 2015, devoid of geographical constraints. The community consists of integration trainers teaching adult immigrants. Initially composed of three individuals, the community expanded to nearly twenty teachers before the onset of the pandemic. The COVID-19 era brought in more members and new operational models as the online teaching cohort rapidly grew.

However, this study delves into the dynamic functioning of a collaboratively learning online teacher community, examining it as a social construct (Leoz & Petter 2018). It explores the entrepreneurial characteristics (Davis 2022; Seikkula-Leino et al. 2010) cultivated by online teachers constantly navigating risks and changes (Jones et al. 2023).

Aligned with the design science research paradigm (Hevner 2007), this research pertains to the technological artefact of online integration training design. This article specifically investigates the social sub-artefact, scrutinizing the social structure's impact on teachers' work and the online teacher community's dynamics. The interviewed educators are experienced online teachers, showcasing advanced self-efficacy (Saienko et al. 2020), often more pronounced in language teachers than in other domains (Simsek 2019). Their proficiency extends to online interaction and technology utilization (Archambault et al. 2010), influencing their teaching, personal practice, and community involvement.

The study provides additional insights into where the inter-teacher collaboration originates and how it becomes transformative in teachers' work. The article also investigates how advanced online teaching and a mature online teaching community are led and developed when the practices and routines of online teaching no longer raise questions within the community, and technological challenges or interacting with learners online becomes seamless and routine.

## Research background and literature review

### Online Integration Training as an Artefact

In Finland, integration training for adult immigrants focuses on employment-related education, encompassing language, cultural, and communication studies, along with vocational skills tailored for active participation in the digital society (OPH 2022). Unemployed immigrants are directed by the Employment and Economic Development Office (TE) to integration training programs offered by various service providers, procured through competitive bidding. Immigrants have the right to an integration plan and can participate in integration-promoting services, such as integration training, upon its formulation (Integration Act, 2010).

Online implementation emerged to address the need for accessible integration training in sparsely populated areas, starting with the first online implementation in Lapland, where the nearest educational facility might be hundreds of kilometres away. From 2015 to 2021, 630 immigrants to Finland, with varying language proficiency, diverse backgrounds, and different professions, completed online integration training (Haikala 2019; Haikala & Kuja-Lipasti 2021).

Cases have not been found in Finland or other countries where integration training starting from the beginner level of the target language has been organized entirely online. The training represented a novel technological-pedagogical design, developed collaboratively while being executed. Consequently, the community's actions within the design took on entrepreneurial characteristics. The organization granted the teaching team complete freedom to develop the training, starting from customer acquisition and comparative data exploration based on their experiences. The team's responsibilities encompassed managing funding instruments, implementing various stages of training, recruitment, team coordination, network collaboration, and end-to-end customer management in cooperation with the Ministry of Economic Affairs and Employment (TEM) and The Centres for Economic Development, Transport and the Environment (ELY centres). Continuous dialogue was maintained with funders and collaborating companies. A notable challenge in implementing the training was motivating learners, often directed to online training by the Employment Office when classroom-based courses were unavailable in the municipality at that time.

### Conditions for Teachers in Online Integration Training

Teachers are required to possess Skills 2030 capabilities (OECD 2023) to engage with learners and utilize resources when online integration training demands technological self-directedness (Saienko et al. 2020) alongside language and culture-sensitive skills (Henttonen & Alhanen 2023) to address a diverse learner body. As the self-directed team was provided a growth platform, a growing teacher community began evolving based on the needs that emerge when creating new content and functioning within an evolving online education system. The educational artefact was co-developed, relying on the actions of individuals and groups within the artefact. Co-development and actions are also definitions of entrepreneurial behaviour (Seikkula-Leino et al. 2010).

Teachers engaged in education primarily from home or in rented office spaces within their residential areas. The employer provided ergonomic desks, chairs, computers, technical peripherals, and, if needed, textbooks and learning applications. Recruitment sought curiosity toward online teaching, but prior teaching experience or familiarity with educational technology was not mandatory. After the pilot year, teachers were recruited for online integration training, including graduating or recently graduated teachers and experienced individuals new to technology, willing to venture into unfamiliar territory. Several instances suggest that younger teachers have better technological skills but lack pedagogical expertise, while experienced teachers struggle with smooth technology usage (Saienko et al. 2020; Nazari et al. 2019).

The training was divided into four modules, forming approximately a year's worth of studies (OPH 2012; 2017). Modules 1-4 covered the Finnish language and work readiness skills. Module 2 included a two-week work placement, and Modules 3 and 4 included longer work placements. During non-placements, teachers collaborated with a work partner or a small team online, instructing learners studying from home. Teaching sessions were conducted individually, but each learner group had at least two teachers working collaboratively. Throughout work placements, teachers travelled across Finland, guiding learners and employers at various work placement sites.

Collaborative dimensions in the design for teachers include a virtual teacher lounge 'coffee shop' for teacher interactions, as well as chats between smaller teams and individuals, enabling communication through text and video. Additionally, teachers have smartphones and the opportunity to arrange video conference meetings, along with two annual team-building days in person. Collaborative spaces between learners and teachers encompass shared group chats, rotating small group chats with text and group calling capabilities, and a video conferencing application utilized for daily collaborative language learning exercises.

### **The Teacher in a Learning Community**

Teachers' Technological Pedagogical Content Knowledge (TPACK) entails the management, fusion, and comprehension of subject matter, pedagogical skills, and technological expertise (Mishra & Koehler 2006). Professional learning based on individual needs without time and location constraints and the experience of belonging to an online community is generally acknowledged, even though teachers exhibit diverse user types online (Prestridge 2016). Through collaboration, teachers can redistribute, learn, and integrate available knowledge shared among colleagues with different expertise. They compile various knowledge resources, often shared within the teacher team (Yi-Fen et al. 2021). Regular time should be allocated for teacher collaboration (Akinyemi et al. 2019). Interaction encourages more active and profound learning, commitment, and community building (Archambault et al. 2010). Collaborative discussions following the Design-Teach-Reflect-Redesign cycle provide teachers with the opportunity to exchange personal TPACK packages and construct collective TPACK (Yi-Fen et al. 2021).

As our study seeks characteristics influencing teacher collaboration and commitment, TPACK anchored in technological expertise alone is insufficient as an analysis method; a broader examination of teachers' competencies is needed. In this study, the attributes of online integration instructors are reflected against the Entrepreneurship Education framework (EntreComp) described skills, referring to the teacher's ability to encourage learners and empower them to engage in self-driven actions, networking, and collaboration, guide in identifying and seizing opportunities, support creative learning, instill confidence in learners' abilities, and encourage risk-taking (Gibb, 2005, 57). When an entrepreneur refers to a person involved in business, an entrepreneurial teacher refers to an instructor's change-oriented mindset and attitude in teaching (Davis 2022). The role of an integration instructor involves motivating job-seeking and assisting learners in integrating into the Finnish job market.

Teacher autonomy is strong, which is one reason genuine collegiality, real interaction, and collaborative pedagogical work through collaborative learning are not commonly observed in the school environment (Peltonen 2014). The teacher's learning and reflection process which promotes critical thinking towards teaching is essential in transforming education into an entrepreneurial one. Teachers should envision the learner group as a learning community, where teachers have the motivation and understanding to adapt pedagogical and organizational practices to the practical reality (Seikkula-Leino et al. 2010). The agility of an enterprise's provided integration training is measured by the quantity of new training acquisitions, making collegial collaboration essential in continuous change and pedagogical innovation.

Comprehensive pedagogical leadership focuses on the learning of all community members, including learners, teachers, supervisors, and support services (Fonsén & Lahtero 2023, 174). The integration training is in constant flux, with the teacher's work and learners from different backgrounds changing rapidly (Jones et al. 2023), necessitating a supportive, innovative, and emotionally considerate leadership approach from management. Collective emotions (Farny et al. 2018) impact group-level dynamics, such as consensus and shared values. Building a new community raises common concerns and helps bring people together while mobilizing their affective experiences. Collective emotions fulfil an important justifying function, capturing what is the right thing to do in a certain setting, that is integral to the legitimation of practices creating new arrangements, and provide reasons for commitment. Collective emotions support the social activity of the community: maintaining the spread of practices and recreating the institution (Farny et al. 2018).

### **Methodology and data**

From the interview data, we examine the impact of the educational artefact on interpersonal relationships and interaction within the teachers' operating environment. Conversely, studying social impact is crucial in the development of this artefact because interaction among individuals, groups, organizations, and society can influence the artefact (Leoz & Petter 2018), enhancing its utility and relevance as a facilitator of societal challenges. Research questions:

1. What is required for teachers' collaboration in online training promoting the integration of adult immigrants?
2. How entrepreneurial features contribute to the social structure of online teachers?

Within the artefact, a functioning community forms a social sub-artefact. This community consists of teachers whose actions, as users of the design, re-design the artefact. The aim of this study is to evaluate the dynamic and collaborative online activities of the teacher community. If teachers exhibit an entrepreneurial approach, it can also influence learners, enhancing the societal impact of education (Jones et al. 2023; Peltonen 2014).

The semi-structured interviews involved eight teachers who have been teaching entirely online within the same community for up to two years. All eight interviewed teachers are native Finnish speakers. Six of them are qualified Finnish Language teachers, holding a master's degree in Finnish language or Finnish literature as their main subjects. Two of the interviewees have degrees in social sciences, education, and linguistics. At the time of the interviews in 2021, the online integration training artefact had been in continuous operation for six years. Two of the teachers had been involved since 2015, three since 2016, one since 2017, and two since 2018. Three of the interviewees worked as teachers, three had progressed from teachers to managerial positions, and two had changed jobs.

The interview material is handled anonymously; the analysis does not attribute responses to specific individuals. The interview questions (Appendix 1) were tailored based on the researchers' own experiences in teacher training, aiming to gather comprehensive information about teachers' individual TPACK skills, community practices, and dynamics. This somewhat limits the results since further examination revealed a need for more specific questions, particularly about data security and learner engagement methods. Experienced online teachers were selected for the interviews due to their advanced self-reflection skills, aiming to capture diverse changes in online teachers' self-efficacy and TPACK between 2015 and 2021.

The data has been processed by the designers using transcription software. They have read the transcripts, listened to the interviews multiple times, and compiled perspectives on teacher community engagement, design development ideas, and direct quotes that accurately comment on the subject. A qualitative content analysis was conducted by coding interesting elements in the material, which were then grouped into categories reflecting the social impact and structure of the artefact.

To ensure authenticity, the analysis includes numerous direct quotes (Appendix 2) that encapsulate essential viewpoints in the interviewees' own words. The use of direct quotations is justified as they reflect the interviewees' advanced reflective abilities as online teachers, avoiding a mere interpretation by the authors.

There's a risk of interpreting interviewee responses through the researchers' experiences since they have been close colleagues to the interviewees. Hartikainen, who conducted the interviews, taught in the design from 2017 to 2019, and Ahola was the original developer, teacher, and teacher trainer in the online integration training design. However, interviews would have been impossible without familiarity with the design and its operations. This familiarity might positively influence the interviewees' perceptions, making them feel more comfortable and potentially sharing more in-depth and diverse information than they would with an external researcher. Another advantage is that the interviewer knew the interviewees, enabling more focused and profound questions on topics where the interviewees were knowledgeable. To maintain objectivity, the dissertation supervisor, who approaches the research and data from an external academic researcher's perspective, collaborates in writing.

### **Findings: Collaborative learning teacher community**

The online teacher community is young and has been constructed without references to other online teacher communities. Since its inception online, this community lacked pre-existing customs or routines before entering the online sphere. This makes the community exceptional when compared to, for example, teacher communities during the COVID-19 era, which traditionally existed within physical walls and already had their own routines, dynamics, and ways of interaction.

At the time of the interviews in June 2021, the number of teachers online had significantly increased in a short period due to the surge in online education during the COVID-19 period across all types of training. In our analysis, we examined how the activities within the technological design impact the social structure of the online community and individuals' interactions and collaboration. Subsequently, we identified challenges and developmental needs of the community.

Four key categories emerged from the analysis. 'Individual resources' refer to resources inherent to an individual without the environment. 'Antifragility<math>\leftrightarrow</math>resilience' defines the environment and circumstances within which a teacher operates. Together, these two components form the basis for collaborative resources, serving as the foundation for genuine collaboration. Existing resources require a positive breeding ground, in this case, an entrepreneurial mindset, resulting in collaborative efforts.

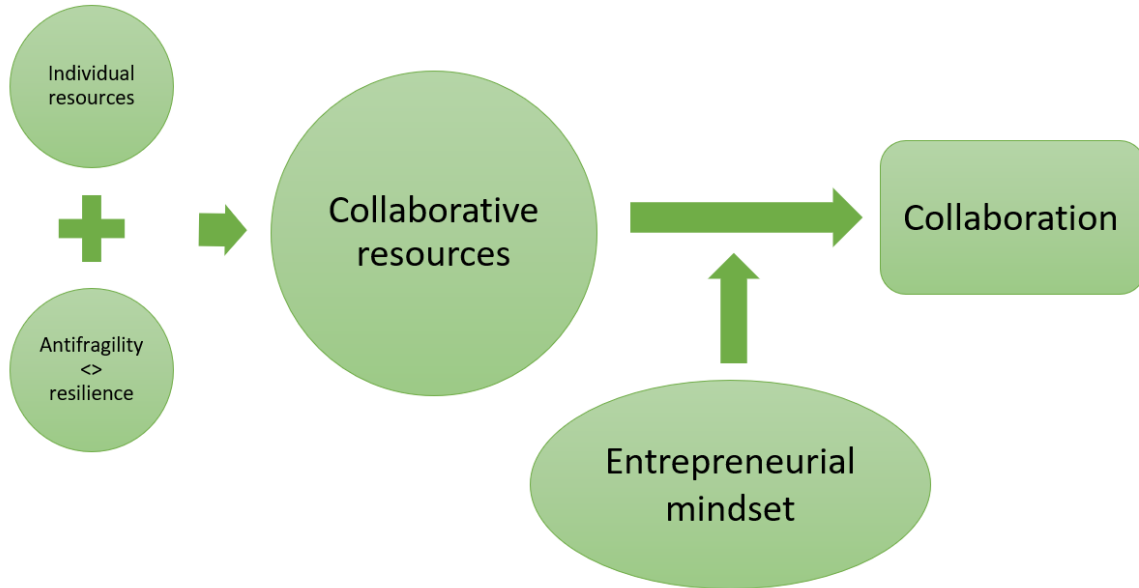


Figure 1. Categories that collectively generate innovative collaboration.

### Individual resources

Individual resources refer to personal skills and capabilities inherent in an individual regardless of the environment, but their utilization is influenced by the positivity of the environment.

Teachers were asked about the advantages and disadvantages of online learning for both teachers and learners. The primary benefit highlighted was the freedom that comes with work and study not being tied to a specific place or location. There's no need to commute to the workplace, and long distances don't hinder education. Additionally, the work area encompassed the entire country, eliminating the need to relocate for work, even if the next training session was in a different area.

The most crucial skills for teachers in an online setting included self-efficacy, soft skills, self-reflection, and aspects related to life management. Specifically, the ability to interact online and empathetically perceive social needs emerged as key skills for teachers in the online domain. Teachers must have the capacity to empathise with situations because they interact with people rather than merely 'talking to a computer.'

*“Listening, interaction, a certain softness: the online environment is tough, not forgiving for teachers, nor for learners. It’s easier to judge a teacher online, just as it is for a learner. One can maintain professionalism and seriousness, but laughter and humour are needed when engaging with learners and building a community. It’s crucial to establish trust with learners over the web so that they feel comfortable sharing and making mistakes. A technically inept teacher who can engage gets forgiven much more than a technically skilled teacher who simply conducts their teaching.”*

Furthermore, the benefits of online training, for both learners and teachers, included tranquillity, silence, space, and opportunities to focus. Online, learners hear well, eliminating the need to raise voices, making differentiation effortless by combining groups from different areas based on learning needs and language proficiency. Taking peaceful breaks is easier than in a classroom, and there is versatile material available in abundance. Some teachers mentioned that handling conflicts and ensuring physical safety worked well online as they could easily terminate starting situations by muting or removing a learner from the study space with a button press. However, forming close relationships online takes longer than in a classroom, resulting in fewer conflicts.

Teachers reported fewer absences as participation was possible even if there were minor compulsory engagements, often encountered by immigrants facing various settlement-related issues. Even the parents of young babies wanted to continue their training despite being on parental leave. Respondents also thought that online learners were easier to engage with privately and have confidential one-on-one conversations, away from others' sight. Due to individual conversation possibilities, trust relationships can be established more easily than in a classroom. Screen sharing and detailed examination of content together add significant value to online guidance. Moreover,



respondents mentioned significant developments in learners' ICT skills as they are more confident in contacting via instant messaging or calling, even if their language skills are not yet advanced.

The enabling multichannel aspect of the internet was said to assist both fast and slow learners. Online tools have many advantages in language learning as learners hear and see precisely what needs to be learned. Multichannel learning easily becomes highly intensive as online learning captures attention.

The disadvantages included complex instructions, the teacher talking excessively and too quickly without allowing learners to perform tasks themselves or concentrate on listening to them. Crucial qualities for an online teacher include problem-solving skills, patience, and approachability. In addition to plain instructions and teaching substance, the teacher's metalinguistic discourse is essential, such as providing detailed explanations of what is being done, how the recipient's screen should appear, and the type of activity required in the task. All respondents mentioned that teachers must pause more frequently online to listen, observe, and check whether the subject matter is understood.

Both studying and teaching online can be very lonely if face-to-face meetings are not arranged. Smooth collaboration in full-time online training requires regular contact, and physical contact is not always entirely replaceable. Greater investment is required in online community and presence although one can easily choose to remain isolated. Teachers think that due to the lack of face-to-face contact, some tasks take longer online as one needs to 'warm up' more slowly.

### **Antifragility, resilience and environmental influences**

The new working environment demands flexibility from teachers, the ability to learn new things, and tolerance for continuous changes. Teachers lived in different parts of Finland, so all team members worked either from their homes or in workspaces provided by the employer, but none worked in the same space as other teachers.

Teachers described the initial phase as a virtual teacher as extremely demanding. Initially, there was a lot to learn for both more experienced colleagues and those embarking on their teaching careers. Everyone said they had worked excessively at the start because there was so much to familiarize themselves with. The concept was new, so it started with building foundations, based on the contract made by the Centre for Economic Development, Transport and the Environment (ELY) and the training provider, as well as the curriculum for adult immigrants' integration training (OPH 2012; 2017).

At the beginning, each teacher had gone through shared online teaching practices, such as creating a daily learning program on a blog site, including a visually clear and accessible schedule, learning objectives and tasks, group work and allocations, links to communication tools, and video meetings, i.e., the "classroom," where learning activities took place during the day. Additionally, they were introduced to applications and what the teacher needed to do and guide technologically so that learners could find the right place and initiate interactions in desired ways.

*"I needed support with technological devices and applications, the structure of the day and practices. How to open accounts for each person, how people can access different places, creating a blog, front-loading the daily planning. Especially at the beginning, it was necessary to plan the days meticulously for the work to flow. Later on, it became easier: as the learners progressed and no longer needed minute-by-minute guidance, there was more flexibility in the schedule."*

The orientation progressed as later joining teachers thought that they were initially comprehensively introduced to the job, first to the technology in use, and secondly to the methods, routines, teaching situations, and pedagogical choices relevant to online teaching, as well as the considerations in personal work, such as working hours and personal resilience. Plenty of common material was available, but finding, organizing, and compiling suitable material was initially perceived as quite laborious.

The use of technical devices and applications related to online teaching was mostly a new venture, just as instructing learners to use necessary applications and devices in teaching. Initially, a significant amount of time was devoted to addressing both their own and the learners' IT issues. Some experienced teachers (10-20 years in the field) from a younger generation were notably more sceptical about the success of online teaching and didn't need orientation primarily in pedagogy but rather in regional differences and technology-mediated teaching.

For learners, weaknesses in the online setting were noted to be the more laborious construction of teacher-learner interaction and trust. Building trust is fundamental to successful online training. As the number of courses increased, the resources for group initiations and in-person orientations were reduced, leading to diminished

opportunities to build trust at the beginning of courses. Meeting online requires scheduling and calling, and even small interactions via chat may seem more laborious than casual chats in a classroom, especially if the teacher-learner relationship hasn't developed.

As the number of learners rapidly increased in the initial years, teachers became overloaded with continual changes and increased workload, leading some to change jobs. Although the work mainly involved collaborative efforts, with each having a close colleague, there have been some individual projects handled by one experienced teacher, which burdened them and prompted a change of workplace.

Teachers acknowledged that the workload accumulation weakened creativity and enthusiasm for work. Therefore, they hoped for an increase in teacher and managerial resources. Rapid and continual changes reduce teachers' psychological safety when there is insufficient stability. Pre-planning teaching days is often mentioned as a design weakness and a factor increasing the workload. Having to display the next day or week's schedule and tasks on the website in an ever-changing training environment and in varied, differentiation-requiring groups resulted in evening and weekend work for teachers.

Responses indicated that dominant personalities sometimes took up too much space in the community. Occasionally, one person's distress can burden the entire community. Online teaching enables quick access to work even when one should be off work due to a doctor's order. Employers should invest in mental well-being rather than externalizing the burden of work to the individual.

The online environment would be safer if employees had more opportunities to influence their own workload balance. Flexibility is the strength of the online learning design, but the feeling of permanent transience should be addressed. Agility often leads to chaos and a sense of insecurity, requiring astuteness of management. Leaders need to consider situations where employees might suddenly be relocated or new learners join a group with only a few hours' notice.

Teachers' risk-taking capacity was tested by the changing regional locations of training, requiring them to always learn about the employment and study opportunities in new areas, as well as other services learners might utilize. Tolerance to uncertainty was emphasized during the pandemic when inexperienced classroom teachers abruptly transitioned online and became part of the community. Pedagogically skilled and experienced online teachers instructed groups of hundreds and guided teachers new to online teaching to continue their work. This resulted in all training smoothly shifting online within a week. However, for some online teachers, their motivation was undermined by scepticism from colleagues about whether this work could be done entirely online.

Experienced online teachers do not agree with the assertion that everyone became online teachers overnight due to the pandemic. According to them, organizations might not necessarily be up to date with advanced online teaching. For instance, due to instant messaging culture, a teacher might be more present to learners than in a school building. A culture of collaboration is highly emphasized because interactivity is a prerequisite for learning, and a lot of effort is required online to achieve that.

Teachers spoke rather little about cybersecurity. It was mostly mentioned concerning having confidential conversations if a learner's camera is off, and they are unaware of whom is present on the other side. On the other hand, the rush to go online during the pandemic led to strangers being present in teachers' chat, not communicating, raising questions about who falls into each division.

### **Collaborative resources**

*Online teachers' coffee shop: "The chat was active all the time, quick answers to questions"*

The dialogue in the coffee shop chat was likened to a teacher's lounge, but it was noted to be more informal and devoid of hierarchy compared with a traditional school building. The coffee shop fosters a sense of belonging and sociability, providing the experience of working with other people. Sociability is at the individual's discretion, as one can easily participate in discussions or withdraw to the background. Those who engage more get to know each other better. Remaining inactive might keep one less acquainted with others. If one doesn't communicate with others, they easily become an outsider. There is a strong sense of unity within the community. Dialogue is continuous, with several topics being discussed simultaneously.

*"An empathetic reception when sharing personal life matters. Social situations related to the training are often brought up in chat, especially if peer support or advice is needed; online, negative situations are different in comparison with in-person classes, so addressing them together is important."*

Continuous chat conversation is described as solution-focused and communal: each person takes responsibility not only for their own group and work but also for the success and achievements of the entire community. In a traditional teacher's lounge, one happens to be present, but in the online coffee shop, one is present all the time, and conversations are visible afterwards even if one is absent. Respondents considered the work of an integration trainer personally and societally meaningful because it can genuinely impact another person's life, employment, and well-being in a new country.

All respondents stated a preference for working with a colleague or in a team, most preferably with a suitable partner, as larger teams easily become chaotic and inefficient. Working in pairs facilitates efficient idea development and saves time in planning and material creation. The most effective setup was pairing a senior and experienced teacher with a less experienced one, allowing for new perspectives to be brought into the work. Even those who usually prefer working alone mentioned the importance of having a partner to exchange ideas. The crucial factor was the ability to engage in discussions about learners with someone who is familiar with them. Challenges related to learners' employment are often complex, and because learners have different personalities, they relate differently to different teachers.

Orientation directed attention toward collaborative resources. All respondents mentioned receiving help from the entire teacher community right from the start, mostly and commonly in the coffee shop chat where all teachers are present. Support was also obtained from their own work partner or a smaller team with whom learners were shared. Gradually, they learned whom to ask about different matters. Task distribution was managed so that work pairs mostly comprised a younger-older or experienced-new teacher, enabling mentoring among colleagues. Additionally, the later-established IT support chat and hired instructors in the learners' native languages assisted with questions. Most mentioned receiving prompt guidance, answers to questions, encouragement, and trust in their work from their team leader. Online teachers mention the need for support always existing but evolving in its forms.

The coffee shop chat became a space where most of the collaborative development and activity occurred. Experiences, practices, news, and successes are shared there. Many freely share things even outside work hours. Teachers work with their own personality, which is also reflected in the chat. A younger teacher mentioned that even though they got to know colleagues through chat for a few months initially, people were in real life similar to the image that had been conveyed. For new employees, the chat is introduced as a place where other teachers are present and one can ask or talk about anything. Team leaders participate in the chat to start discussions, bring energy, and enthusiasm.

Emotions in the coffee shop chat are conveyed genuinely and immediately through emojis, which is usually absent in a classroom setting. As text alone can be "cold," celebratory, dancing, laughing, and singing emojis, as well as GIFs and memes, are used. Emojis were primarily described as essential tools for expressing emotions and self-expression although there were discussions about the possible meanings of emojis not known to everyone. Achievements are celebrated and a large part of the team actively participates in shared celebrations. Celebrated things include successful learning situations or learner employments, course beginnings, and endings.

*“Visual reactions reinforce emotions, fun, humour, deeper situational context, and enrich expression that would otherwise be lacking in textual form. The same applies to learners expressing emotions: breaking the ice, learners became enthusiastic and could develop mini-cultures around the use of emojis. They also expressed the personality or ways of constructing.”*

As drawbacks in the coffee shop chat, it was mentioned that questions might get lost in the flow, or no one is chatting when one wants to. Expressing emotions might sometimes feel forced, and the jumping heart and sun emojis can be irritating on a bad day. On the other hand, one easily finds solitude and peace if desired. Occasionally, negativity is brought in when one has a bad day. Unpleasant matters are also shared, but some respondents mentioned that often it is better to discuss negative things either by calling someone and having a private conversation or in a collectively organized meeting.

Even though teachers can largely define their own schedules, there seems to be a need to standardize practices. Common schedules are seen to facilitate work. Collective sharing and reciprocity are perceived to enhance professionalism.

The original designers and teachers who acted as team leaders have led the social development of the online community. This included e.g. greetings in the coffee shop chat at the beginning and end of the day, good wishes, weekend wishes, and initiating discussions on common practices, new information, and informal conversations.

Moreover, conveying affects—when a leader sets an example of reacting emotionally—makes it easier for others to adopt similar behaviours. Face-to-face meetings a few times a year are significant boosters for team spirit.

From the experiences during the pandemic, it was learned that a trust-based online community does not scale up for a larger group. In a chat with 10-20 people, there is still room for different voices and personalities, but if there are dozens or hundreds of people in the same chat, it serves more than an information channel, discussing very general matters usually communicated top-down. Expressing emotions, colourful personalities, and personal discussions within a close-knit community no longer fit into this forum as before. Teachers suggest creating smaller channels for smaller groups to converse, but they also questioned whether it is meaningful to artificially separate team members into different groups.

### Entrepreneurial Mindset

The entrepreneurial risk-taking traits of teachers were assessed by comparing responses with the features defined in The Entrepreneurship Competence Framework (Bacigalupo et al. 2016). Several traits related to an entrepreneurial mindset and actions can be identified from teachers' interviews, crucial for the vitality of the community.

	RESOURCES			INTO ACTION			IDEAS & OPPORTUNITIES		
<b>EntreComp</b>	Self-awareness and self-efficacy	Mobilising resources and others	Motivation and perseverance	Planning and management	Working with others, Learning through experience	Coping with ambiguity, uncertainty & risk	Creativity	Ethical & sustainable thinking	Spotting opportunities, Visions

Table 1. The entrepreneurial features according to EntreComp that the interviewed online teachers possess. When the individual's and community's resources intersect with the environmental demands, an entrepreneurial mindset becomes a force that drives teachers to work together, encouraging each other, seizing opportunities, identifying them, taking risks, and reforming practices.

The teacher community is more innovative and open-minded than traditional ones usually are. Collaboration is built on trust and immediate interaction, as it is so self-driven and devoid of pretence. Within the community, individuals can be themselves, speak freely, and receive reciprocal responses. Moreover, the teacher community forms closer groups regionally as well as based on interests and social needs.

*"Online teaching has opened up another pedagogical way of thinking: you end up following didactics and pedagogy more closely and keeping yourself updated. Living in the online teaching world every day, getting the latest information from the internet and sharing it in chats, visiting a classroom feels like, 'aha, things are still being done here in a complicated and inefficient way when there are better methods available."*

Teachers were asked what they share online and the extent of sharing. Upon analysing the responses, it is noted that sharing pertains not only to teaching materials but also to practices, emotions, information, personal matters, including informal ones. The culture of sharing is community-led, as all teachers considered sharing matters as self-evident and the work environment encourages it.

The responses mentioned the coffee shop chat's random, informal, and voluntary nature. Revitalizing chat conversations builds users' identities and unique modes of expression. The chat sparked ideas for further development collectively and initiated a culture of experimentation, the experiences of which were shared. The informal and relaxed chat is fragile and vulnerable to changes. Vitality and creativity flourished when discussions were somewhat uncontrolled yet gradually adhered to established etiquettes, collaboratively created by its users. Such an environment was an excellent breeding ground for creativity and innovative thinking.

Technology evolves and continuous learning is necessary. Online pedagogical skills also include improvisation with technology, being able to modify and transfer teaching quickly between systems. Quality online teaching requires precise structure, but at the same time, one must be ready to improvise continually. One teacher mentioned that working online sometimes feels like a performing artist's job. Emphasizing performance can help teachers fail more liberally, which also alleviates learners' stress. Learners from different cultures often want to build a hierarchy

and see the teacher as a role model. Teachers' own behaviour influences how interaction and hierarchy are built. Authoritarian situations in teaching aren't effective.

Collaboration, for instance, helps teachers identify methods that engage and involve learners studying remotely from other course participants. Some teachers were very aware of how physical activity declines if one spends a year studying on the computer. For this reason, the design encouraged teachers to consider alternative ways to organize teaching so that learners (and teachers themselves) can move around. The immediate environment becomes familiar to learners when, for instance, they describe things related to the course theme in their home town or backyard and send pictures via text chat to the group. This way, learners, teachers, and course participants get to explore various new places and observe the Finnish language and culture in their living environment.

Although the role and image of online teaching evolved during the pandemic, attitudes towards it changed, it was noted that the immediate and collaborative culture of the coffee shop chat doesn't transfer to new teachers who enter online teaching from classroom teaching due to emergencies. The experience of classroom teachers transitioning online felt distorted in the collaborative online community, suddenly filled with people lacking the social and other etiquettes previously found in a safe shared space.

Despite online work being perceived as very taxing, it has a certain appeal that equivalent face-to-face work might not offer. When, asked what keeps them working online, teachers mentioned freedom, community, continuous personal development, and the development of new working methods and training. Although work sometimes spills into personal time, the blending of work hours with home and family life, as well as the safety and comfort created by the home environment, were seen as pleasant. Team leaders were mentioned as "daring to act outside the hierarchy, breaking out of roles and adapting to the community." Instead of traditional social hierarchies, team leaders are colleagues and resource discussions are approached from the teachers' needs. Some teachers wouldn't take a better-paid job if it meant losing the freedoms facilitated by online teaching.

In new projects, experienced teachers needed to specifically request support, which could lead to the feelings of inadequacy. Additionally, the right kind of support wasn't always available. Some teachers who changed jobs got tired of too little job rotation and lack of variation; others wanted to see learners more in person. Also, new job offers, lack of career paths, and opportunities to implement innovative ideas, salary, or value conflicts have influenced some in leaving their jobs. The working conditions and, to some extent, poor terms of employment burden some employees, as does loneliness and somewhat uncertain job continuity. The flexibility in work hours played a pivotal role in staff retention.

Regarding working hours, the interviewees had very different views. Some saw the freedom to define their work hours as a strength of the job, while others considered it a professional skill, and some wished for rules and management support in defining working hours. The both acceptance and criticism of different working methods were observed. Online design was described as "the untamed territory" of working hours because learners send messages at any time, some teachers are always available and respond immediately, others the next day during office hours, others after a long time. Learners might have severe questions, potentially related to domestic violence/shelter issues, which the following teacher does not want to leave unanswered, even if it is evening or the weekend. Some learners may call at odd hours. Most teachers mentioned that they need to take care of not letting work become burdensome. Due to the freedom in working hours, there is the temptation to work more than the stipulated hours, salary, or necessity. Additionally, various small development projects are carried out during personal time, even when not required.

## Discussion

Creating inclusive online integration training requires teachers to put in special effort in how to get different learners to learn, how much and what kind of interaction is needed, and how learners network in their living environment as well as with other learners. We argue that high-quality online education demands entrepreneurial skills from teachers to plan resource utilization and activities, generate new ideas and learning opportunities, and integrate them. However, this is not possible without resources allocated for collaborative work (Akinyemi et al., 2019).

The first question was: What is required for teachers' collaboration in online training promoting the integration of adult immigrants?

The instructional design was crafted to support entrepreneurial behaviour among (including non-entrepreneurial background) teachers. Evolving technologies offer new opportunities and responsibilities (Archambault et al. 2010). Design features that supported the social impact of the educational artefact, which encouraged teachers to

act entrepreneurially and collaboratively, included the coffee shop chat as an interaction channel enabling formal and informal co-development and assessment; continuous and unexpected chat streams; sharing and shareability supporting the development of TPACK (Yeh et al., 2021); shared materials saving everyone time; teacher rotation (competency-based learning, shared competency targets) preventing boredom and loss of innovativeness and encouraging teachers to do their best, as well as direct collaboration with the living environment and businesses.

User-friendly learning design enables learners in sparsely populated areas to form friendships and a learning community online when selected applications are easily accessible to them without hard-to-reach learning designs. On the other hand, considering data security needs to be tailored to the tools used separately. Areas to be developed include easy access and user-friendly design that allows, for example, work training companies access to the online environment.

Secondly, from the teachers' perspective, the design empowered them to act entrepreneurially: taking risks, being curious about things, and constantly reflecting on their work (cf. Ho & Bryant, 2020). Consequently, teachers' technological-pedagogical self-efficacy continuously increased, as did collective TPACK knowledge. The mentor-mentee structure embedded in the design promoted natural peer learning and collaboration. Building interaction and trust in online design requires substantial resources (Prestridge, 2016), but it also led to a flourishing community. At its best, learners, teachers, and support staff formed an entrepreneurial community.

Teachers benefit from humble leadership (Ho & Bryant, 2020), which prompts them to act innovatively when it is possible in terms of organizational resourcing. Adapting innovative ideas to learner groups increases teachers' job satisfaction when learners achieve better learning performances. A trustworthy and consistent relationship with colleagues and team leaders gradually forms through collective actions (Ho & Bryant, 2020). For leadership, the most critical aspect in the vitality of the teacher community is the freedom and full trust to create a collaborative online team, revealing teachers' capabilities for assuming responsibility, co-development, and peer mentoring (Prestridge, 2016), while setting boundaries for themselves regarding working hours and work-related matters.

Thirdly, the design is ambitiously planned for an ideal teacher who can endure endless changes and new things and is constantly an empathetic interactor. The development of the design should pay attention to teachers' diversity, endurance, and fair distribution of resources.

The realization of teachers' psychological safety in the design emerged as a significant issue. The sense of safety and collective trust legitimized social practices (Farny et al., 2018). Increasing competition was mainly based on differences in employment contracts, but when the workload increased excessively and problems arose in organizing work and time management, the competitive atmosphere intensified, and psychological safety deteriorated.

Individuals' influence on their work is limited. On an individual level, co-teaching with a work partner, support from team leader, and moderate stability in learner groups affect work. At the organizational level, new training purchases that consistently bring in more learners to the organization have an impact on work. Thoughtful leadership is essential during changes in work roles to prevent teachers from becoming overwhelmed by the workload. At the societal level, social and inter-organizational factors affect work, over which nothing can be done internally in the organization, such as political decision-making, infectious diseases, wars, and other factors accelerating global mobility, as well as the general economic situation.

The second question was: How entrepreneurial features contribute to the social structure of online teachers?

Firstly, teachers are courageous in expressing both successes and failures. Each failure provide new valuable insights (Taleb 2012). As learning culture evolves to support risk-taking, the fear of risks and failure decreases, making teachers feel safe to experiment (Jones et al. 2023). Teachers share ideas and constantly try new things. They preferred modelling innovative teaching practices, appreciated their colleagues' contributions, and listened to their concerns (Ho & Bryant 2020). Teachers have advanced skills in maintaining technology-mediated connections with colleagues, learners, and an outward-facing attitude in communication, information seeking, and collaboration with authorities, employers, and businesses.

Secondly, interviews revealed that teachers mostly tolerate continual change quite well because they can prioritize and focus on essential tasks. This may be due to job satisfaction, as entrepreneurially behaving teachers experience breakthroughs in their professional development and produce cross-subject and cross-topic practices and innovations (Ho & Bryant 2020). Trusting and harmonious relationships develop among teachers, motivating them to seek common understanding.

Thirdly, as responsible individuals, teachers generally exhibit conscientiousness, which was also reflected in discussions about professional boundaries. Strength lies in defining appropriate accessibility limits within the profession. The all-encompassing entrepreneurial attitude must be regulated in work settings.

Continuous critical research is needed in the future to gain insights into how teachers can be best supported in entrepreneurial skills, task prioritization, innovative work approaches, and facilitation of smooth integration. Entrepreneurially acting teachers contribute to solving the challenges of integration and encounter in society, as an entrepreneurial teacher community influence's learner to engage more actively as citizens and participants in society. This is supported by studies (e.g., Peltonen 2014; Ho 2020), indicating that learners adopt entrepreneurial behaviours from teachers and thus engage more actively and committed in society.

Limitations of the manuscript were partly due to unanswered questions. Privacy and accessibility would have been important topics to address during the interview. Additionally, a more thorough discussion could have taken place regarding collaboration between learners and teachers, as well as between teachers, learners, and businesses. The interviews specifically focused on inter-teacher cooperation.

### **Future challenges and recommendations**

Key factors for the future are the sustainability, antifragility, and development of the teacher community. This definition is based on the teacher's ability to act in a constantly changing school environment (Taleb 2012; Jones et al. 2023).

**Sustain:** in a teacher community aiming for an entrepreneurial mindset, the learning design and leadership culture should align the work culture practices for teachers, such as practices and resources for collegial interaction. TPACK skills develop through interaction, hence collaborative efforts need strategic development and management. Additionally, an entrepreneurial community is fostered by designing technological aspects to be flexible and adaptable to regional and national societal and economic changes. It should facilitate connections with various stakeholders. The design should guide dynamic teaching with user-friendliness, interaction-supported offerings, and light adaptability. Online orientation continues beyond the initial stage. In orientation programs, emphasis should be placed on fostering a sense of belonging to the online community (Prestridge 2018), as teachers feel engaged when actively co-developing and sharing thoughts within the learning teacher community. Leadership for teachers emphasizes guidance and continuous interaction.

**Antifragility:** loneliness and social isolation pose risks online. It is essential to openly discuss this threat so that teachers are aware of their own social well-being, their activity, and their and others' psychological safety.

Online teachers are highly adaptable. Working online is very demanding because guiding learners and building interaction requires significant resources. Therefore, teachers' self-regulation skills should be strengthened, along with the ability to prioritize and focus on essential aspects. It is also essential to define who leads the interaction, whether it is strategically sound, and what impacts it has on teachers' actions.

Excessive changes in community dynamics can make it fragile. A teacher community functioned well for many years until the COVID-19 era brought in numerous teachers, rapidly expanding the community and making it somewhat impersonal. This increased psychological insecurity and discomfort.

**Develop:** data security was underrepresented in interviews. More discussion and common rules regarding GDPR and copyrights are needed. With adult immigrants, it is crucial to ensure they understand their individual data security requirements. The design of integration training has been based on channels familiar to learners, ensuring maximum accessibility even for those lacking strong digital skills. Security was considered, but as the teacher team expanded, discussions on safe online work were insufficient. Combining secure and accessible solutions is a massive challenge in online learning and impacts resourcing, such as device and application procurements and managing user data. Open discussion about security risks and accessibility improves online communities' understanding of what is possible, what limitations exist, and how to choose simultaneously accessible and secure solutions.

Integration training should commence with early and consistent engagement with local or nationally significant businesses in the learner's vicinity. Whenever feasible, the training should be customized to align with local employment requirements. This ensures the early identification and utilization of skill aspirations and connections to employers. Working across regions allows for specialization in different professions for teachers, as typically, there aren't enough learners in the same field in one area.

Collaboration needs to strengthen with other educational institutions and other teacher and entrepreneurial communities. Creative learning in online training communities requires both dynamism and harmony to maintain learning peace, community safety, and quality. Allowing diversity in teachers' and learners' work methods are important online; for instance, the flexibility of scheduling work hours. It would be beneficial to further study the dynamics of teacher communities and understand how communities endure entrepreneurial and risk-taking teaching, and where a balance of community members inclined towards safety is needed. Furthermore, there should be a concerted effort to thoroughly explore and leverage the full potential of artificial intelligence in alleviating workloads, particularly in administrative tasks and fostering empathetic interactions.

### Conclusions

Educational services that promote integration have increasingly moved online, with the societal aim of helping individuals learn the language, navigate society, and either find employment or pursue studies that facilitate employment. For this reason, learning design should strengthen entrepreneurial skills, as adapting to a new home country becomes easier when adopting an entrepreneurial attitude and mindset. If the design and leadership style of the educational service provider encourage teachers to engage in entrepreneurial collaboration, these attitudes easily begin to trickle down to learners as well. Educational design should consider the diverse profiles of both educators and students: not everyone will become successful entrepreneurial talents, even if they put in a lot of effort. Attention must be directed toward ensuring that each individual can fully utilize their own potential within the constraints of their personal life circumstances.

A collaborative teacher community doesn't emerge in a vacuum. It requires strategy, a plan to integrate teachers into an online community, communal practices, openness using and sharing the teaching materials, and consideration of schedules and the individual needs of teaching groups in the design so that teachers always collaborate with at least one other teacher. The community also needs to be of a manageable size to enable mentally and technologically secure operations and high-quality interactions.

As our research shows, virtual communities can be innovative, but it takes a lot of effort for interaction, trust, and a sense of community to develop among teachers. Learners adopt and co-create this interaction style with the support of the teacher community, ideally consciously and with the community's backing. Visionary leadership that fosters independently operating teams supported by appropriate middle management allows for the inclusion of diverse voices in the online community. From these voices emerge ideas and innovations if the top leadership recognizes and utilizes them in the company's future endeavours.

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## Appendices

### Appendix 1.

#### Questions:

1. How long have you been working as an online teacher?
2. What subject or field do you teach?
3. What is your educational background?
4. How much total work experience do you have in teaching or guidance roles?
5. What are the pros and cons, advantages, and disadvantages of online education compared to traditional classroom teaching?
6. How did you end up as an integration trainer online?
7. What kind of orientation did you have or how did the first weeks as an online instructor go?
  - a. General orientation to the house rules
  - b. Online teaching according to the model implemented at provider
8. What assistance and support did you need during the first weeks and months?
9. From whom did you receive support during the first months in the online community?
10. From whom have you received support later as routines have started to flow?
11. How and how much do you communicate with other online instructors in the community?
12. Do you work more with a partner or team, or alone? Why?
13. How would you describe the teachers "Coffee shop" chat?

14. Describe the working dynamic at online community?
  - a. Among the online team members
  - b. Among the teachers (online and others)
  - c. With management
  - d. In relation to learners
15. What aspects of your teaching or guidance do you share with other online instructors?
16. How are good things or successes collectively addressed in the online team?
17. How are bad things or unpleasant aspects collectively addressed in the online team?
18. Online instructors have differences. What do you consider to be good and bad qualities for an online educator?
19. What keeps you at work in the online community? What motivates you?
20. Why did you leave?
21. How would you improve the online community? (What are the key elements? What is excessive? What is missing?)

**Appendix 2. Quotations**

To be noted: many quotes are applicable to multiple sections.

**Individual resources**

"With the right devices and methods, you can do the same things as in the classroom. Online learning opportunities equalise, services are accessible to everyone. Learners can participate in education regardless of their place of residence, and online learning suits almost everyone well if the right group is found."

"Minor colds, etc., did not prevent participation. The ICT skills of learners improved significantly during the training because ICT teaching was constantly integrated into language teaching, confidence in using technology increased, the anxiety about computers disappeared as chats and blogs became familiar."

"If the learner has a noisy and disturbing environment at home, for example, the family is in the same space and interrupts studying, there can be lack of confidential conversations. From the teacher's perspective: sometimes you long for space where learners do group work in the same space; some social aspect is lost when not in the same space. Group work is not as strong, and group dynamics are more difficult to follow. Front-loading: heavy when the whole day is scripted and pre-planned."

"Control of own work, sense of self-efficacy, I needed support in dealing with uncertainty because there was no echo chamber in the same way from other people, and people interpret things more negatively through the screen than intended. The opportunity for empathetic interaction is more challenging and leaves out a lot. All technical systems and applications were new; all gadgets had to be learned, and what to cut out had to be decided."

"If you are a lively person, it is good to be calmer online since there is no body language and gestures online, and you cannot point things out by hand. Instructions must be very easy, clear, speech slow and clear; if you are uncertain about technology and it shows to learners, it is very frustrating when the teacher should be able to guide the learners in using the software. You do not have to master technology in advance, but you must be interested so that solutions can be quickly sought in problem situations, for example, in a situation where someone cannot access the class online one day."

"Listening, interaction, a certain softness (online is tough, not forgiving for teachers, but not for learners either), the teacher is easier to judge online, just like the learner. You can be serious and professional, but laughing and humour are needed with learners and in creating community, to be able to build trust over the internet with learners, so that they dare to share things and make mistakes. A technically very inept teacher who can interact is forgiven much more than a teacher who is technically skilled but delivers their own teaching."

"You have to read the learners very carefully because reactions are not as easily visible; you should not love your own voice, you should not transfer information from top down, no lecturing, you should not fear trying new things or failing, you must give responsibility and space to learners, let learners ideate and hope, should be able to discuss and collaborate, should not fear technology but need not be very good with them, learn by testing and doing. Take into account different learners."

"Devices were brought, and the staff guidance site was shown. For online teaching, I would have needed more orientation. I followed some classes. I missed more hand-holding guidance, for example, where the material banks were and where the learning objectives were. No one had the responsibility for orientation; I would have needed to work closely with someone for that."

"The workload tired me; I wanted to do something other than teaching so that I wouldn't be tied to daily teaching hours. The lengths of workdays became insane; perhaps I was too ambitious myself, so work consumed me. Detaching was challenging. Separating work and free time was difficult. Every day, making the schedule and learning content visible and thinking about differentiation and individualised teaching beforehand was really laborious."

"Independence is nice but dull and lonely. I taught myself to exhaustion. I strongly believe in job rotation; teaching online every day becomes exhausting. I wanted to start thinking about the structures behind everything and missed different perspectives on integration. I thought it was because of the lack of in-person contacts and being at home for too long. I realised at the beginning of the pandemic that in other workplaces, there were no routines

	<p>for interacting online, that this place is much further along in that regard than many others. The job description was too lonely, and it changed so much that there was never a breather; the workload kept increasing. It wasn't the online platform that tired me, but the workload.</p>
<p>Antifragility&lt;&gt; resilience</p>	<p>Incredibly interesting when initial doubts were about how one could learn online. My thoughts changed so radically regarding online teaching. I thought online would be boring, that interaction wouldn't work, that you couldn't learn to speak. But there were better opportunities for natural interaction when situations arose that needed to be dealt with, like technical problems: learners had to explain issues and practical challenges, so communication skills naturally improved in everyday situations that the online environment presented."</p> <p>"If the course lasts for a whole year (with a 5-day summer break), there's no room for vacation days for the learners. Daily sitting at the computer weakens physical health and can decrease study motivation due to the lack of breaks."</p> <p>"Can one speak freely if the learner doesn't use the camera, as they don't know who's on the other side?"</p> <p>"If there are too many people in the chat, one doesn't know to whom their own matters are reaching."</p> <p>"Work truly propels people forward: learning a language, finding a job or a place to study, learning to function in society, seeing personal development. Friendly colleagues, interesting learners, being able to trust the supervisor that there's enough work."</p> <p>"Work-related discrepancies grow like a snowball. If one starts, many join in, and if there haven't been face-to-face interactions, irony, sarcasm, etc., go unnoticed, and things are taken very seriously. Chat isn't good for handling negative and unpleasant things. It's preferable to address such matters in meetings with cameras on."</p> <p>"Technical adjustments can take a lot of time; building a community and social interaction can sometimes be harder but not for everyone."</p> <p>"The intensity of online learning is tiring. It's harder to assist learners when not in the same room. Technical problems are challenging when language skills and ICT skills are weak; understanding the instructions can be difficult. As a teacher, I missed having the work community nearby; facial expressions, looks, touch, and casual chatting were missing. However, there was no feeling of being distant from the learners."</p> <p>"I was sceptical about online learning. I needed a lot of help with small digital things: where to find things and how the technologies work. Once I established verbal contact with the learners, I didn't need help with pedagogy. Though pedagogically, everyone learned a lot just by observing what others did. Much more than in classroom teaching."</p> <p>"I needed support with technological devices and applications. The structure of the day and practices. Which credentials needed to be opened for whom, how people access different places, creating a blog, front-loading the day's structure. Especially in the beginning, the days had to be planned meticulously to get the hang of it. Later, it became easier: as the learners progressed, and they no longer needed guidance down to the minute, there was flexibility in the schedule."</p> <p>"Before the pandemic, one could be at peace in a small group online; with the pandemic, people who didn't know how to behave disturbed it, complained about everything, claimed that certain things couldn't be done online. There's no understanding at any point, and there's no interest in being the babysitter of classroom teachers. It feels like when they were forced online, the attitude was negative, and the focus was on complaining about not being in the classroom."</p>

	<p>"Work became fragmented because it's so easy and quick online. Work piled up for the same workers, but the number of workers didn't increase, causing a loss of control over one's work. The feeling of permanence decreases when it's easy for teachers to move from one project to another. Managing the chaotic whole felt stressful. Online allows for flexible combining of different groups, leading to a sense of temporariness, but when the temporariness becomes permanent, the stress is constant. There have been discussions within the online team about entrepreneurial work. It started to feel like one gets the downsides of entrepreneurship, its uncertainty, but not the freedom that comes with entrepreneurship: the continuity of work was always uncertain, although the positive aspect was the freedom in one's work and strong trust from the supervisor and minimal control."</p> <p>"Permanent employment strengthens the sense of belonging, community, and commitment. The coffee room is important. Training material should be more accessible for everyone. Due to system changes, some of the material gets lost or is unavailable. Face-to-face meetings are needed."</p> <p>"Digital competence, being able to transfer and improvise in problem situations with technology, ease: learners don't have to be in constant chat with the teacher; mastery of methods and learning culture. It's not so serious if a device doesn't work one day.</p> <p>"Material and resources were abundant, but assembling it was challenging and difficult. Often, online, there's an ambitious plan, well-structured and carefully thought out in terms of what needs to be included within a day, whereas in face-to-face teaching, such a detailed structure isn't created. Striving for efficiency and perfection was tiring. Perhaps there should have been more room for flexibility, procedural tasks, and empowering learners, so that everything doesn't come pre-established. Smaller teams where ideas can be developed and perspectives gained for more learner-centered teaching."</p>
<p>Collaborative resources</p>	<p>An empathetic reception when sharing personal aspects of one's life. Matters related to training and social situations are often brought up in the chat, especially when seeking peer support or advice. In the online setting, negative situations are different from in-person classrooms, so discussing them together is important."</p> <p>"Despite long distances, one can establish connections and a sense of belonging, offering a rich peer experience when people from sparsely populated areas or small towns meet and share similar situations. Friendships are formed online too."</p> <p>"A whole range of emotions in a few messages. Multiple conversations happening concurrently, discussing successes, worries at work, personal life, along with casual conversations. One never knows what will be discussed; sometimes, the chat is filled with hearts and thumbs-ups, other times, there are tears and stress - all emotions on display. Playfulness in the chat adds flavor to work. Surprisingly vibrant place."</p> <p>"The chat room becomes one's life. Personal updates, emotional reactions, private life, work-related matters - a lively and unique space fostering a sense of community, where everyone decides their level of engagement. There are phases of more or less activity depending on workload. Laughter and tears. If someone with a negative attitude is visible in the community, negativity spreads quickly. Excessive positivity seems forced: on a bad day, seeing suns and hearts annoys. For online teachers, the break room is essential, a place to vent. There's always help for every issue, and it works quite democratically."</p> <p>"The break room chat builds a common view that online education works, leading to progress in people's lives, successful teaching, and advancement for learners in their own paths."</p> <p>"We embarked on something new, wanted to prove as a team that we could make this work, the freedom to choose where to teach."</p>

	<p>"Through co-teaching with an experienced teacher, I received guidance and a model. Later, roles switched, and I got the chance to guide others. Someone always knew something, and each person brought their own style to the team. Quick responses to questions every time."</p> <p>"Through live meetings, I've gotten to know colleagues better, making it easier to ask specific questions and feel confident in asking."</p> <p>"The virtual break room worked incredibly well; people were active, with a low threshold for asking questions and receiving help. An invaluable resource in the beginning. Later, when routines started flowing, support was needed in different areas, and the break room continued to serve as support along with the immediate supervisor."</p> <p>"During the pandemic, emotions escalated, leading to conflicts that might not have happened if discussions occurred face-to-face, seeing the person entirely, not just through a camera, voice, or text. It demands more reflection on one's and others' communication: 'What did that person mean by that?' With classroom teachers, the only joint chat during the pandemic was more factual and supportive when needed; not as immediate as the online teachers' chat."</p> <p>"I definitely prefer working with a colleague or team rather than alone. Working alone online is very lonely. Communication with learners is different from sharing work-related matters with another teacher. It's important for another teacher to know the learners in a group because it helps in understanding learner learning and connection. Learners might behave differently with different teachers, giving a more comprehensive view. Online teachers tend to take it personally if a learner doesn't attend class, even though there could be various reasons. It's easier to judge a person if the only contact is online."</p> <p>"I would definitely rather work with a colleague or team to check my thoughts and not remain stagnant. Professional reflection can't happen through learners because it's biased towards personal success and failure, but colleagues offer direct and equally valuable feedback."</p> <p>"A lot of time went into finding materials, listening to others' webinar recordings to understand what others are doing, what themes and functions the subject relates to. What to teach in different situations (e.g., running errands), how grammar, vocabulary, and situations connect. Not many questions about technical issues as basic skills had been learned."</p> <p>"Sharing successes and what went well or didn't, what works online and what doesn't, work methods, pedagogy, methods, and effective techniques for different groups."</p> <p>"In the chat, materials, ideas to use, and share, models, schedules, operational methods are exchanged. I'm happy to share if someone asks. I share when I feel it could save someone else's energy."</p> <p>"Everyone can do as they wish, but practices are gladly shared. For instance, the daily routine is quite similar for everyone, with slight variations, even though teachers have the freedom to teach as they prefer. New teachers often try new things. Helpful tips for everyday life and information about new technical settings and updates, good new applications with possible existing material, information packages for course starts and different phases, guidance for updating and organizing material banks, various working methods - everything can be shared as it's not seen as a competition."</p> <p>"Generally, things are shared within the community, especially if someone asks. Things might not be shared if no one asks. There are pedagogically skillful teachers online who show positive humility in their work, not coming with an attitude that their method is the only correct one. There have been some, but they've had to admit that there are other good methods. The community fosters an expertise where collaboration and sharing are seen as</p>
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	<p>beneficial for both the sharer and the recipient. Getting to know colleagues is essential to understand what to ask from whom."</p> <p>"For a new colleague starting online, experiences, information, and materials are shared willingly. Materials created by one teacher, adapted by another, and further developed by another are shared with others. Sharing is easy and practical, as it's about sharing files or links, not boxes of paper. Sharing can't be measured by how much one has shared and received."</p> <p>"For a larger group, the community doesn't function well. Older online communities don't live as dynamically online. Interaction is more traditional."</p> <p>"Everyone writes whatever they like. All conversations go to everyone, and responses might not always come. Some things get lost in the conversation."</p> <p>"Visual reactions intensify emotions, fun, humour, deeper situational relevance, and add colour to expression that might otherwise remain inadequate in text form. The same works for expressing emotions with learners: breaking the ice, learners got excited and could build mini-cultures around using emojis. They also expressed personality or a way to construct it."</p> <p>"Not everyone is very active; some write when there's something to say. The loudest group writes about various things every day: work matters, teaching materials, how they taught a specific topic, work contracts, dog pictures, weekend activities, geographic locations, and sights during work trips. The chat is a relaxed place, like having coffee with colleagues, but since we're working in the same place, work-related conversations inevitably happen. It's not time or location-bound; you can chat casually even during free time. If I start stressing about messages, I log out outside work hours."</p> <p>"The chat community doesn't work if everyone jumps in. I'd reserve it for casual conversations. Meetings every other week. Regular meetings (cameras on) to discuss updates; for example, when new employees join. Educational workshops, standardising practices, such as assessments."</p> <p>"People would meet in person more often, at least twice a year, preferably three times. More time to meet colleagues, be together, develop, and talk."</p> <p>"Cross-project communal events should be developed. Casual chats and meetings. How to integrate newcomers? The community has been consciously built, but should there be etiquette/rules as the community grows? At work, there might be quite a few people feeling lonely when chatting even during their free time. Or are colleagues just that nice? A community of like-minded individuals?"</p>
<p>Entrepreneurial mindset</p>	<p>"Teachers need to be flexible, eager to experiment, curious, not wanting to do things the same way they've always been done. Technology is evolving constantly; it needs to be mastered, fostering a renewing attitude, tolerating multichannel communication, with burnout as a risk: being able to set boundaries for their work hours, understanding their task isn't to save the entire world."</p> <p>"Learners don't need to be in constant chat with the teacher; the teacher needs to master various methods and online learning culture to engage learners."</p> <p>"I would strengthen communication, increase teacher and managerial resources to facilitate information flow, open work planning (who is where on any given day), utilizing teachers' skills elsewhere, even though teaching is the primary role, but there should be other opportunities."</p> <p>"It's a developing field; methods and technical solutions are evolving constantly. Many different aids have emerged, which can be tried and developed."</p>

	<p>"At the beginning, a lot of work had to be self-created because there weren't established practices in the field, and there weren't clear answers on how things should be done. It was about understanding what falls into the daily work routine, what needs personal planning, and everything had to be done."</p> <p>"We started from scratch, work involved planning, doing, and learning together. Understanding the online realm was about doing, the designer provided a lot of briefs. Because there was so much information initially, and no personal experience with the online environment and apps, many things were understood gradually after years of work. Continuous learning happens by asking questions and doing."</p> <p>"At the start, I needed help with lesson planning, finding materials, constructing lessons, defining learning objectives, apart from tracking lessons, understanding what goes on behind the scenes while planning work. In the general chat, a question could get lost, so one had to think about who to ask for help on different matters."</p> <p>"Leadership should actively develop and illustrate the path of an online teacher because during the pandemic, there was a prevailing notion that everyone is an online teacher, but in reality, this doesn't work unless teaching and the teacher's identity online are systematically reinforced. Senior management appears in everyday life mostly echoing strategies but not implemented."</p> <p>"Don't fear technology, even if you don't know how to use it. It's a tool like a chalkboard in a classroom. There needs to be curiosity about tools and readiness/attitude towards how things can be done online. More important than using programs is being able to use those tools for teaching and communicating with people online."</p> <p>"Being able to respond quickly to various things, produce material swiftly, and be patient with all kinds of people. You need to get over the initial uncertainty: make your choices, build your job profile, handle learners' difficult situations. You can't be too boring, especially when teaching dull topics."</p> <p>"Cheerfulness, entertainment, a teacher is like an actor-host-radio announcer: constantly producing written, visual content, chatting, speaking, hosting, reacting to messages and events, responding immediately to questions, always present. Cheerful mistakes also lighten the learners' stress. Skills in visual presentation, simplifying content, quick information retrieval, managing fragmented work, message overflow, and multiple programs simultaneously. Good self-direction and skills in independent work and time management. Empathy towards learners, fair treatment, encouragement, patience, and clarity. Bad aspects are inflexibility and rigidity in learning new things."</p>
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## The Effect of Promotional Activities Applied in E-Commerce on Consumer Behavior

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### ABSTRACT

The main purpose of this study is to examine the effect of promotional activities applied in e-commerce on the consumer behavior of individuals living and shopping in the Turkish Republic of Northern Cyprus. The study was conducted using quantitative research method based on Söker's (2022) scale form. The population of the study consists of all individuals residing and shopping in the Turkish Republic of Northern Cyprus, while the sample consists of 336 consumers. The reliability of the collected data was evaluated in the analyzes carried out using SPSS 28.00 program. According to the results of the research, there is a general perception among the respondents that promotional sales strategies are effective on consumers. In particular, promotions such as second item free have the potential to influence respondents' purchasing decisions. The distribution of discount coupons and the use of fair/exhibition booths on digital platforms are other types of promotions that are viewed positively. However, some respondents expressed reservations towards certain promotional strategies. For example, 15.2% had a negative attitude towards discount coupons, while 33.3% believed that promotional products are generally not preferred. These results suggest that the impact of promotional strategies is not the same for everyone and that businesses need to understand their target audience well. In conclusion, promotional selling strategies are generally perceived positively, but some consumers have reservations about such strategies. These findings emphasize the need for businesses to carefully plan their promotional strategies and understand their target audiences.

**Keywords:** E-commerce, Promotion, Consumer, Consumer behavior.

### 1. INTRODUCTION

#### 1.1. Problem Status

Today, with rapidly developing digital technologies, e-commerce platforms significantly affect consumers' shopping habits. Understanding the effects of promotional activities implemented in e-commerce on consumers' behavior is of strategic importance for businesses. E-commerce, along with the strong influence of the internet, has brought about a significant transformation in the retail industry (Bayrak, 2023).

Electronic commerce, or simply e-commerce, is a trading model in which transactions are carried out online via electronic platforms. Unlike physical shopping in traditional stores, e-commerce facilitates the purchase of products and services via the internet (Kucukyilmazlar, 2006). E-commerce offers consumers access to various products and services without any geographical limitations. It enables businesses to have a presence on digital platforms and market and sell their products and services online (Elibol and Kesici, 2004).

E-commerce platforms make the online shopping experience more attractive by using various promotional strategies to attract customers and increase sales. Promotion is one of the marketing strategies applied to promote a product or service, increase its sales or strengthen customer loyalty (Tatman, 2023). Promotions are usually valid for a certain period of time and aim to encourage consumers to shop by offering certain advantages or incentives (Bingöl, 2023).

Consumers are individuals or organizations that purchase, use, consume, and generally pay for goods or services. The concept of consumer, from an economic perspective, generally includes individuals or households and emphasizes their ability and behavior to purchase goods or services according to their particular needs and preferences. Consumers are generally individuals who purchase, use and consume goods and services in an economic system (Bagis and Barut, 2023). Factors such as consumer behavior, shopping preferences, spending habits and purchasing decision processes are examined in detail in the fields of marketing and economics. Consumer demands and preferences are an important reference point for businesses to market, develop and offer their products and services to consumers appropriately (Güngör, 2023).

Reduced their dependence on traditional stores and started to prefer digital platforms to access, compare and purchase products and services (Kurtoğlu and Karaman, 2023). As a part of this digital transformation, e-commerce businesses are strengthening their strategies to attract and retain consumers by using various promotional activities. Promotional activities applied in e-commerce are offered in a wide range from discount campaigns to free shipping

opportunities, from loyalty programs to special day discounts (Veral, 2023) . These promotions aim to increase brand loyalty and encourage sales by influencing consumers' shopping decisions (Boran, 2023) . How promotions affect consumers' purchasing decision processes should be examined in a wide range of factors, including price sensitivity, shopping frequency, brand preferences and consumer satisfaction. Additionally, the effects of these studies on groups with different demographic characteristics among consumers should also be evaluated.

### 1.2. Purpose and Importance of the Research

The main purpose of this study is to systematically evaluate the effects of promotional activities applied in e-commerce on consumer behavior. Understanding how promotions affect consumers' purchasing decisions, brand preferences and online shopping habits will contribute to businesses creating more effective marketing strategies. Evaluating the effects of promotions implemented in e-commerce on consumer behavior will help businesses understand the return on investments made in such promotions. When it is determined which types of promotions are more effective, businesses can use their budgets more efficiently. Therefore, this study will provide valuable insights to businesses, contributing to them gaining competitive advantage and increasing customer satisfaction.

### 1.3. Hypotheses

The hypotheses of this research are given below:

H<sub>1</sub>: There is a relationship between statements about promotional activities applied in e-commerce and gender.

H<sub>2</sub>: There is a relationship between statements about promotional activities implemented in e-commerce and marital status.

H<sub>3</sub>: There is a relationship between statements about promotional activities applied in e-commerce and the age variable.

H<sub>4</sub>: There is a relationship between statements about promotional activities applied in e-commerce and education level.

H<sub>5</sub>: There is a relationship between statements about promotional activities applied in e-commerce and income level.

H<sub>6</sub>: There is a relationship between statements about promotional activities applied in e-commerce and shopping frequency.

### 1.4. Limitations

Research;

- research participants,
- Scale questions used in the research,
- It is limited to the sources used in the research.

### 1.5. Definitions

**Electronic commerce:** It is a trading model in which transactions are carried out online via electronic platforms (Bingöl, 2023).

**Promotion:** It is one of the marketing strategies applied to promote a product or service, increase its sales or strengthen customer loyalty (Tatman, 2023).

**Consumer:** Individuals or organizations that purchase, use, consume, and generally pay for goods or services (Bagis and Barut, 2023).

**Consumer behavior:** It is an area examined in order to understand the processes of purchasing, using and obtaining goods and services by individuals, groups or organizations (Güngör, 2023).

## 2. THEORETICAL FRAMEWORK

### 2.1. E-Commerce Concept and Scope

E-commerce is a business model that is becoming increasingly important today and represents a digitalized version of traditional commerce. This concept refers to the buying and selling of goods and services over the internet and enables businesses to offer their products and services to consumers more effectively. E-commerce includes a number of different business models and has a wide scope (Tatman, 2023). First of all, the most basic form of e-commerce is online stores and retail. Companies offer their products to customers through virtual stores, thus providing access to a wide customer base without being bound by geographical limitations. Electronic marketplaces further increase this diversity, bringing together products from different sellers and offering consumers a wide range of products. E-commerce also includes digital download and subscription services. Online sales of digital products such as e-books, music, software provide quick and easy access to consumers. Subscription models are important in terms of providing regular income. Service-based e-commerce goes beyond traditional commerce and includes a variety of services such as consulting, training and software development. Mobile commerce covers shopping via smartphones and tablets, thus offering consumers the opportunity to shop even on the go (Bahçeci, 2022).

B2B e-commerce refers to the trade of products and services between businesses. This type of trading includes wholesale, supply chain management and business partnerships. Social commerce, on the other hand, includes trading activities through social media platforms and provides companies with the opportunity to interact directly with customers and promote products through social media. The success of e-commerce also focuses on security and payment systems. Measures such as SSL encryption, secure payment transactions and protection of customer information are important to gain consumers' trust. The concept of e-commerce has become an expanding field day by day and has enabled businesses to gain a competitive advantage in the digital world. With the advancement of technology, the scope of e-commerce is constantly evolving and new business models are emerging. This is an important development in terms of both offering better shopping experiences to consumers and enabling businesses to operate more effectively (Turan and Polat, 2009).

When we look at the historical process of e-commerce, the historical process of the concept of e-commerce has evolved rapidly with the digitalization of modern commerce. With its roots in the Electronic Data Interchange (EDI) protocol in the 1970s and 1980s, e-commerce was the first step in allowing businesses to exchange documents electronically. However, practices during this period were generally limited to large companies. By the early 1990s, e-commerce spread to wider audiences as the internet was used for commerce. The first online shopping sites such as Amazon and eBay emerged, allowing consumers to purchase products and services over the internet. Technological developments such as SSL encryption, which guarantees secure shopping, have made significant contributions to the growth of online commerce (Yilmaz and Bayram, 2020).

By the 2000s, e-commerce platforms emerged and began offering businesses a variety of options for setting up and managing their online stores. During the same period, the rise of mobile commerce has given consumers the flexibility to shop via smartphones. The 2010s saw the contribution of social media to interactive commerce. Sales have increased through Facebook, Instagram and other platforms, while artificial intelligence and big data analytics have increased customer satisfaction by supporting personalized shopping experiences. In the 2020s, e-commerce adapted to innovative technologies such as crypto currencies, digital wallets and NFTs. This period is a revolution in which commerce becomes more digital and technological innovations constantly transform the shopping experience. E-commerce is the abbreviation for electronic commerce and refers to the buying and selling of goods or services electronically. Unlike traditional commerce, e-commerce transactions occur over the internet. The concept of e-commerce includes a wide range of services and business models (Çalışır and Aksoy, 2019).

## **2.2. Definition of Promotion**

Promotion is a term that refers to marketing activities carried out to increase the promotion of a product, service or brand, stimulate sales or attract customers (Kul, 2019). These activities are usually carried out through various campaigns, discounts, gifts, special events or other benefits. Promotions are used to make businesses' products or services more attractive and competitive, to increase customer loyalty and to attract new customers (Çelik, 2023).

## **2.3. Consumer behavior**

Consumer behavior is a discipline that examines the behavior of individuals in purchasing, using and evaluating products and services. This field draws from disciplines such as psychology, sociology, economics, and marketing to understand and explain the various factors that influence consumers' purchasing decisions. Understanding consumer behavior is of critical importance for businesses to develop their marketing strategies and better respond to customer needs. The main factors affecting consumer behavior include personal characteristics, cultural influences, social environment, psychological states and marketing communication. These factors that shape consumers' purchasing decisions help marketers better define their target audiences and create more effective strategies to market their products (Kotler and Armstrong, 2011).

Another important aspect of consumer behavior is the stages in the purchasing process. These stages generally include needs identification, information search, evaluation, purchase, and subsequent use and evaluation. Each stage includes different factors that affect the consumer's decision process. By understanding consumer behavior, marketers can make their products more attractive, optimize advertising and marketing communications strategies, and increase customer loyalty. Therefore, research in the field of consumer behavior is important for businesses to gain competitive advantage and adapt to constantly changing market conditions. Modern marketing thought has been built by emphasizing the importance of consumer behavior and therefore consumer behavior has been extensively covered in marketing literature. Many explanations have been made to describe consumer behavior, and this subject has played a critical role in determining and implementing marketing strategies. Consumer behavior is expressed as a set of processes related to an individual's decision to buy or not buy which products or services, from whom, how, where and when (Yeniçeri, Yaraş and Eyup, 2012).

According to another definition, consumer behavior includes the behaviors exhibited by individuals in the process of purchasing, using and evaluating products or services in order to meet their own needs. In this context, the factors that influence consumers' purchasing decisions, the process they follow when making these decisions, and their interactions with products or services constitute an important focal point for marketing strategies. Understanding consumer behavior can help businesses define their target audience more effectively, optimize marketing communications strategies, and increase customer satisfaction. Therefore, marketing professionals and researchers can develop strategies to gain competitive advantage by examining consumer behavior in detail (Öztürk, 2016).

### 3. METHOD

#### 3.1. Research Method

This study was conducted with quantitative research method. In this context, the relational scanning technique was adopted. Relational scanning technique is a research technique generally used to examine the relationships, connections and interactions between a group of individuals or objects. This method generally aims to understand complex and multidimensional systems. Relational scanning is a research method used to understand the components of a concept, event or system and the interactions between these components (Karasar, 2008).

#### 3.2. Population and Sample

The population of the study consists of all individuals residing and consuming in the Turkish Republic of Northern Cyprus (TRNC). In this sense, no restrictions were made. The sample of the research was selected by random sampling. The randomized sampling method increases the likelihood that the sample is representative of the general population due to random selection. This increases the generalizability of the statistical results obtained. Randomized sampling allows the researcher to control the effects of randomness on the sample by providing a representation within the population where each individual has an equal chance of being selected. This method aims to obtain more reliable and valid results by minimizing the impact of the research on external factors (Karasar, 2008). In this context, 359 female employees were included in the study. Those who received complete feedback from the scale forms distributed via Google Forms were taken into account. In total, 500 scale forms were distributed between 09.10.2023 and 11.11.2023 and 350 forms were received. However, 336 complete forms were included in the research.

#### 3.3. Data Collection Tools

The scale form used by Söker (2022) in his study was used in the study. In the study, a 5-point liquid scale consisting of 29 items was used: strongly disagree, disagree, no opinion, agree and strongly agree. The distribution of demographic information and participation levels in the statements was examined using frequency analysis. Using one-way analysis of variance and t test, it was investigated whether the level of agreement with the statements in independent groups differed significantly according to demographic data. If a significant difference emerged as a result of one-way analysis of variance, the TUKEY test was used to determine which groups this difference belonged to. The analysis was performed at a 95% confidence level and SPSS 20.0 program was used. The scale does not have a sub-dimension, so difference analysis in the study was carried out with expressions.

Table 1. Reliability Analysis

Cronbach's Alpha	Article
0.705	29

Cronbach's Alpha value of the scale was determined as 0.705. This shows that the scale used in the study is reliable.

#### 3.4. Analysis of Data

In the research conducted through the SPSS 28.00 program, the reliability level of the collected data was evaluated.

### 4. Findings of the Study

#### 4.1. Demographic features

Table 2. Demographic Information

		N	%
Gender	Woman	182	54.2
	Male	154	45.8
marital status	Single	224	66.7
	Married	112	33.3

Age	22-30 years old	112	33.3
	31-40 years old	87	25.9
	41-50 years old	77	22.9
	51 and over	60	17.9
Education status	Middle/High School	108	32.1
	Associate's Degree/Bachelor's Degree	164	48.8
	Master's/Ph.D.	64	19.0
Income rate	High	61	18.2
	Middle	124	36.9
	Low	151	44.9
Shopping frequency	1 time per month	141	42.0
	1 day a week	134	39.9
	3 days in a week	61	18.2
<b>Total</b>		<b>336</b>	<b>100.00</b>

54.2% of the research participants are women and 45.8% are men; 66.7% are single, 33.3% are married; 33.3% are 22-30 years old, 25.9% are 31-40 years old; 22.9% are aged 41-50 and 17.9% are aged 51 and over; 48.8% associate/bachelor's degree; 32.1% are secondary school/high school graduates and 19% are graduate/doctoral graduates. 44.9% of participants were low income; 36.9% are middle income and 18.2% are high income; 42% once a month; 39.9% stated that they shop 1 day a week and 18.2% 3 days a week.

#### 4.2. Distribution of Answers to Statements About Shopping Habits

The response distributions of the participants to the statements about their shopping habits were examined by frequency analysis and are given in the table.

Table 3. Distribution of Answers to Statements About Shopping Habits

		N	%
expression1	I strongly disagree	52	15.5
	I do not agree	46	13.7
	No idea	25	7.4
	I agree	132	39.3
	Absolutely I agree	81	24.1
expression2	I strongly disagree	51	15.2
	I do not agree	52	15.5
	No idea	19	5.7
	I agree	138	41.1
	Absolutely I agree	76	22.6
expression3	I strongly disagree	44	13.1
	I do not agree	38	11.3
	No idea	34	10.1
	I agree	137	40.8
	Absolutely I agree	83	24.7
expression4	I strongly disagree	45	13.4
	I do not agree	45	13.4
	No idea	16	4.8
	I agree	137	40.8
	Absolutely I agree	93	27.7
expression5	I strongly disagree	45	13.4

	I do not agree	36	10.7
	No idea	20	6.0
	I agree	132	39.3
	Absolutely I agree	103	30.7
expression6	I strongly disagree	44	13.1
	I do not agree	38	11.3
	No idea	15	4.5
	I agree	120	35.7
	Absolutely I agree	119	35.4
expression7	I strongly disagree	35	10.4
	I do not agree	46	13.7
	No idea	11th	3.3
	I agree	130	38.7
	Absolutely I agree	114	33.9
expression8	I strongly disagree	52	15.5
	I do not agree	36	10.7
	No idea	21	6.3
	I agree	127	37.8
	Absolutely I agree	one hundred	29.8
expression9	I strongly disagree	36	10.7
	I do not agree	32	9.5
	No idea	11th	3.3
	I agree	122	36.3
	Absolutely I agree	135	40.2
expression10	I strongly disagree	34	10.1
	I do not agree	44	13.1
	No idea	13	3.9
	I agree	122	36.3
	Absolutely I agree	123	36.6
expression11	I strongly disagree	52	15.5
	I do not agree	40	11.9
	No idea	17	5.1
	I agree	108	32.1
	Absolutely I agree	119	35.4
emoticon12	I strongly disagree	48	14.3
	I do not agree	40	11.9
	No idea	18	5.4
	I agree	116	34.5
	Absolutely I agree	114	33.9
emoticon13	I strongly disagree	48	14.3
	I do not agree	30	8.9
	No idea	12	3.6
	I agree	110	32.7
	Absolutely I agree	136	40.5
emoticon14	I strongly disagree	48	14.3

	I do not agree	44	13.1
	No idea	10	3.0
	I agree	120	35.7
	Absolutely I agree	114	33.9
emoticon15	I strongly disagree	38	11.3
	I do not agree	38	11.3
	No idea	25	7.4
	I agree	141	42.0
	Absolutely I agree	94	28.0
emoticon16	I strongly disagree	54	16.1
	I do not agree	62	18.5
	No idea	9	2.7
	I agree	125	37.2
	Absolutely I agree	86	25.6
emoticon17	I strongly disagree	55	16.4
	I do not agree	65	19.3
	No idea	9	2.7
	I agree	121	36.0
	Absolutely I agree	86	25.6
emoticon18	I strongly disagree	42	12.5
	I do not agree	61	18.2
	No idea	13	3.9
	I agree	137	40.8
	Absolutely I agree	83	24.7
emoticon19	I strongly disagree	45	13.4
	I do not agree	70	20.8
	No idea	17	5.1
	I agree	129	38.4
	Absolutely I agree	75	22.3
expression20	I strongly disagree	45	13.4
	I do not agree	61	18.2
	No idea	12	3.6
	I agree	131	39.0
	Absolutely I agree	87	25.9
expression21	I strongly disagree	42	12.5
	I do not agree	54	16.1
	No idea	167	49.7
	I agree	44	13.1
	Absolutely I agree	29	8.6
expression22	I strongly disagree	43	12.8
	I do not agree	69	20.5
	No idea	11th	3.3
	I agree	128	38.1
	Absolutely I agree	85	25.3

expression23	I strongly disagree	39	11.6
	I do not agree	64	19.0
	No idea	9	2.7
	I agree	112	33.3
	Absolutely I agree	112	33.3
expression24	I strongly disagree	41	12.2
	I do not agree	64	19.0
	No idea	10	3.0
	I agree	97	28.9
	Absolutely I agree	124	36.9
expression25	I strongly disagree	36	10.7
	I do not agree	74	22.0
	No idea	7	2.1
	I agree	99	29.5
	Absolutely I agree	120	35.7
expression26	I strongly disagree	30	8.9
	I do not agree	86	25.6
	No idea	15	4.5
	I agree	112	33.3
	Absolutely I agree	93	27.7
expression27	I strongly disagree	31	9.2
	I do not agree	86	25.6
	No idea	13	3.9
	I agree	107	31.8
	Absolutely I agree	99	29.5
expression28	I strongly disagree	42	12.5
	I do not agree	65	19.3
	No idea	18	5.4
	I agree	131	39.0
	Absolutely I agree	80	23.8
expression29	I strongly disagree	31	9.2
	I do not agree	71	21.1
	No idea	13	3.9
	I agree	123	36.6
	Absolutely I agree	98	29.2

39.3% of the participants agree with the statement "When I buy a product, the fact that the second product is free affects my purchase"; 24.1% strongly agree; 15.5% strongly disagree; 13.7% said they disagree and 7.4% said they had no idea. Based on these statistics, it can be said that many respondents think that this type of promotion can influence their purchasing decisions. However, it is still necessary to take into account that everyone has different opinions on this issue and some participants consider such promotions to be ineffective.

of the participants (sum of Agree and Strongly Agree rates) prefer companies that distribute discount coupons. This indicates that the majority of respondents evaluate such promotions positively. 15.2% of Strongly Disagree respondents clearly express their negative attitude towards discount coupons. The 15.5% of respondents who disagree also expressed a negativity towards discount coupons, but this group seems to prefer not to be more clearly opposed. I have no opinion. 5.7% of the participants could not determine a clear attitude or make an evaluation



towards the statement of the survey on this subject. This group may perhaps need more information or experience regarding the impact of such promotions.

The majority of the respondents, 65.5% (sum of Agree and Strongly Agree rates), stated that the stands opened at fairs and exhibitions make it easier to purchase products on digital platforms. Participants who said they strongly agree with 24.7% showed a very strong positive attitude on this issue. Although 13.1% of the participants who said they strongly disagree expressed an opposing opinion on this issue, this rate is lower than other groups.

The majority of respondents, 68.5% (sum of Agree and Strongly Agree rates), believe that promotional products are more attractive than non-promotional products. 27.7% of the participants who said they strongly agree expressed a positive opinion about the attractiveness of promotional products. The participants, with 13.4% disagreeing and 13.4% strongly disagreeing, expressed a negative opinion on this issue. However, these rates are lower than the agree and strongly agree rates, indicating that overall the majority of respondents responded positively to this statement.

The majority of the participants, 70% (the sum of the agree and strongly agree rates), stated that the "promotional" expressions used by the companies had a positive effect. Participants, 30.7% of whom said they strongly agreed, expressed the positive effects of promotional statements more strongly. 13.4% of the participants, who stated that they strongly disagree, expressed a negative opinion towards the promotional statements.

The majority of the participants, 71.1% (sum of agree and strongly agree rates), believed that the subsequent usability of product packaging could positively affect their purchasing decisions. Participants, 35.4% of whom said they strongly agree, expressed a very strong positive opinion on this issue and stated that the reusability of packaging could significantly affect their purchasing decisions. Although 13.1% of the participants who answered strongly disagree expressed a negative opinion on this issue, this rate is lower than other groups.

The majority of the survey participants, 72.6% (the sum of the agree and strongly agree rates), stated that collecting coupons to win a free product is a positive action. 33.9% of the respondents who said they strongly agree expressed a very strong positive opinion on this issue and believe that accumulating coupons is an effective strategy to earn free products. The rate of those who say they strongly disagree is 10.4%.

think that giving gifts along with the products can positively affect their purchasing decisions. The participants, 29.8% of whom said they strongly agree, expressed a very strong positive opinion on this issue and believed that giving gifts along with the products significantly affected their purchasing decisions. Although the 15.5% of the participants who stated that they strongly disagree expressed a negative opinion on this issue, this rate is lower than other groups.

The majority of the participants, 76.5% (the sum of the agree and strongly agree rates), believe that they would enjoy using the products given as promotions. The participants, 40.2% of whom said they strongly agree, expressed a very strong positive opinion on this issue and firmly believed that they would enjoy using promotional products. 10.7% of the participants, who stated that they strongly disagree, expressed a negative opinion on this issue. Disagree and no opinion rates are lower, but these groups still tend to express some ambivalence or a distinctly negative view.

The majority of survey participants, 72.9% (sum of agree and strongly agree rates), believed that trying products for free would make their purchasing decisions easier. 36.6% of the participants who said they strongly agree expressed a very strong positive opinion on this issue and firmly believed that trying the products for free would make their purchasing decisions easier. The participants, 10.1% of whom said they strongly disagree, expressed a negative opinion on this issue.

At a rate of 67.5% (sum of agree and strongly agree rates), participants prefer the non-promotional product of a brand they know, rather than the promotional product of a brand they do not know. 35.4% of the participants, who said they strongly agree, expressed a very strong positive opinion on this issue and strongly agreed to prefer non-promotional products of well-known brands. Although 15.5% of the participants who said they strongly disagree expressed a negative opinion on this issue, this rate is lower than other groups.

68.4% of the participants answered that they agree and strongly agree that raffles held by companies encourage them to buy. The 33.9% respondents who said they strongly agree expressed a very strong positive opinion on this issue and strongly agreed that sweepstakes encourage purchases. Although 14.3% of the participants who answered strongly disagree expressed a negative opinion on this issue, this rate is lower than other groups.

The majority of the respondents, 73.2% (sum of Agree and Strongly Agree rates), believe that they tend to buy 4 products in campaigns such as "buy 4, pay 3", even if they do not need them. This shows that participants generally have a perception that such campaigns are effective and influence their shopping behavior. The 40.5% respondents who said they strongly agree expressed a very strong positive opinion on this issue and strongly agreed that they tend to purchase in such campaigns. 14.3% of the participants who said they strongly disagree expressed a negative opinion on this issue. Disagree and no opinion rates are lower, but these groups still tend to express some ambivalence or a distinctly negative view.

The majority of the participants, at a rate of 69.6% (the sum of the agree and strongly agree rates), believed that membership cards and accumulated points affected their purchasing decisions. 33.9% of the participants, who strongly agree, expressed a positive opinion on this issue. Although 14.3% of the Strongly Disagree participants expressed a negative opinion on this issue, this rate is lower than other groups.

The majority of the survey participants, 70% (the sum of the agree and strongly agree rates), believe that promotional products are sold at a higher price than the normal sales price. The 28.0% respondents who said they strongly agree expressed a very strong positive opinion on this issue and firmly believed that promotional products were sold at a higher price than the normal sales price. 11.3% of those who said they strongly disagree and disagree expressed a negative opinion on this issue.

The majority of the participants believed that promotional products with brand logos affected their purchasing decisions, at a rate of 62.8% (sum of agree and strongly agree rates). This shows that participants generally have a perception that brand logos are effective on promotional products. The 25.6% respondents who said they strongly agree expressed a positive opinion on this issue and firmly believe that brand logos are an important factor in influencing purchasing decisions of promotional products. Although 16.1% of the participants who said they strongly disagree expressed a negative opinion on this issue, this rate is lower than other groups.

stated that free delivery of the sold product influenced their purchasing decisions. 25.6% of the participants, who said they strongly agree, expressed a positive opinion on this issue and firmly believe that free delivery of the product sold is an important factor in their purchasing decisions. 16.4% of the participants, who said they strongly disagree, expressed a negative opinion on this issue.

The majority of the participants, 65.5% (sum of agree and strongly agree rates), believed that they were encouraged to participate in various competitions related to the product they would purchase. 24.7% of the participants, who said they strongly agree, expressed a very strong positive opinion on this issue and believed that they were definitely encouraged to participate in the competitions. 12.5% of the participants who said they strongly disagree expressed a negative opinion on this issue.

Most of the participants, 60.7% (sum of agree and strongly agree rates), believe that seeing the promotion of the product they have used before will influence their purchasing decisions. 22.3% of the participants, who stated that they strongly agree, expressed a positive opinion on this issue. 13.4% of the participants who said they strongly disagree expressed a negative opinion on this issue.

Overall, 65.0% of the respondents (the sum of the agree and strongly agree rates) reported that the pens, notepads or calendars given by companies as gifts influenced their purchasing decisions. 25.9% of the participants, who said they strongly agree, expressed a positive opinion on this issue and firmly believe that such gifts are an important factor in their purchasing decisions. 13.4% of the participants who said they strongly disagree expressed a negative opinion on this issue. This shows that overall, the majority of survey respondents believe such gifts are effective. Disagree and No Opinion rates are lower, but these groups still tend to express some ambivalence or a significant negative view.

The majority of the survey participants, 21.7% (the sum of the agree and strongly agree rates), believed that the surprise gifts included in the product packaging affected their purchasing decisions. 49.7% of the participants who said they have no idea seem to be unable to express a clear opinion or make an evaluation on this issue. Although 8.6% of the participants who said they strongly agree expressed a positive opinion on this issue, this rate is lower than other groups. Although the 28.6% rate of those who agree and strongly agree represents a positive opinion, these rates are lower than the rate of no opinion.

Overall, 63.4% of the respondents (the sum of the agree and strongly agree rates) stated that they often buy things they did not plan. Participants, with 25.3% who said they strongly agree, expressed a positive opinion on this issue and firmly believe that buying things that they often do not plan is a common behavior. Although 12.8% of the

participants who said they strongly disagree expressed a negative opinion on this issue, this rate is lower than other groups. Disagree and no opinion rates are lower, but these groups still tend to express some ambivalence or a distinctly negative view.

The majority of the participants, at a rate of 66.6% (the sum of the agree and strongly agree rates), stated that the products given as promotions were not preferred and had slow sales. The participants, who said 33.3% agree and strongly agree, expressed a very strong positive opinion on this issue and firmly believe that promotional products are generally not preferred and have slow sales. Although 11.6% of the participants who stated that they strongly disagree expressed a negative opinion on this issue, this rate is lower than other groups.

Most of the respondents, 65.8% (sum of Agree and Strongly Agree rates), stated that the presence of the word "promotion" on the product packaging, label or poster affected their shopping decisions. 36.9% of the participants, who said they strongly agree, expressed a very positive opinion on this issue and firmly believe that the presence of the word "promotion" on the product packaging or label has a significant impact. 12.2% of the participants who said they strongly disagree expressed a negative opinion on this issue. Disagree and no opinion rates are lower, but these groups still tend to express some ambivalence or a distinctly negative view.

Most of the respondents, 65.2% (sum of Agree and Strongly Agree rates), believe that "buy 1, get 1 free" campaigns encourage more purchasing decisions. 35.7% of the participants, who said they strongly agree, expressed a positive opinion on this issue. Although 10.7% of the participants who said they strongly disagree expressed a negative opinion on this issue, this rate is lower than other groups.

The majority of respondents, 61% (sum of Agree and Strongly Agree rates), believe that complementary products given free of charge (for example, powdered milk with coffee) have a positive impact on consumers. 27.7% of the participants, who said they strongly agree, expressed a very strong positive opinion on this issue and firmly believe that the complementary products provided free of charge have a positive effect. Although 8.9% of the participants who said they strongly disagree expressed a negative opinion on this issue, this rate is lower than other groups.

The majority of the respondents, 61.3% (the sum of the agree and strongly agree rates), believe that filling the determined quota by shopping less in order to participate in the sweepstakes can be used as a strategy. The participants, who said they strongly agree at a rate of 29.5%, expressed a positive opinion on this issue; Although 9.2% of the participants who stated that they strongly disagree expressed a negative opinion on this issue, this rate is lower than other groups.

The majority of the participants, 62.8% (sum of Agree and Strongly Agree rates), stated that they tend to avoid using products that are known to be promotional. 23.8% of the participants, who said they strongly agree, expressed a very strong positive opinion on this issue and firmly believe that they tend to avoid using promotional products. 12.5% of the participants who said they strongly disagree also expressed a negative opinion.

The majority of the survey participants, 65.8% (sum of agree and strongly agree rates), stated that they tend to shop by following promotional activities and waiting for promotional periods to shop. The rate of participants who say they strongly agree is 29.2%, and the rate of participants who say they strongly disagree is 9.2%. This shows that, in general, the majority of the participants believe that following and waiting for promotional periods is important on their shopping habits.

## CONCLUSION AND RECOMMENDATIONS

There is a perception among survey respondents that promotional sales strategies are generally effective on consumers. Promotions, such as offering the second product for free, have the potential to influence participants' purchasing decisions. Distributing discount coupons and facilitating shopping on digital platforms by fair/exhibition stands are other types of promotions that the majority evaluate positively. The majority of participants believe that promotional products are more attractive than non-promotional ones. In addition, there is a general opinion that strategies such as promotional expressions, reusable product packaging, collecting coupons to win free products and raffles have positive effects on consumers. However, some participants expressed negative opinions towards these promotional strategies. For example, while the rate of those who have a negative attitude towards discount coupons is 15.2%, the rate of those who believe that promotional products are generally not preferred products is 33.3%. This shows that the impact of promotional strategies is not the same on everyone. As a result, it appears that promotional sales strategies generally have a positive perception, but some consumers have reservations about such strategies. This shows that businesses need to have a good understanding of their target audience and plan their promotional strategies carefully.

Some suggestions that can be made based on the results of the research:

- Since the majority of respondents evaluate discount coupons positively, such promotions can influence shopping decisions. Companies can increase their sales by offering special discount coupons to their customers.
- Since opening stands on digital platforms is thought to facilitate the product purchasing process, companies can offer customers a more effective shopping experience by participating in online fairs and exhibition organizations.
- Customers stated that reusable product packaging and trying free products positively affected their purchasing decisions. Companies can focus on eco-friendly packaging and increase their loyal customer base by offering trial products to customers.
- Since many participants believe that sweepstakes and campaigns encourage purchases, companies can focus on such events and increase customer participation.
- Since the proportion of participants who think that promotional products with brand logos affect their shopping decisions is high, companies can increase customer loyalty by focusing on brand promotion.
- Since the percentage of customers who believe that promotional products are sold at a higher price than the normal selling price is quite high, companies can increase their sales by using such strategies.
- The fact that many participants stated that they purchased products they did not plan on provides companies with the opportunity to guide customers by creating predetermined shopping lists and waiting strategies.
- Since it shows that the majority of customers tend to follow promotional periods and shop by waiting, companies can increase customer loyalty by offering special discounts and promotions for certain periods.

These recommendations can help companies improve their marketing strategies based on the data obtained in the survey. However, since each company's target audience is different, recommendations should be translated into strategies targeting specific customer segments.

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## The Relationship Between Private School Administrators' Leadership Styles, Teachers' Informal Communication Levels and Teacher Job Performance

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### ABSTRACT

The aim of this study is to determine the relationship between the leadership styles of private school administrators, teachers' informal communication levels and teacher Job performance. The population of the study consists of 951 teachers working in private schools (primary and secondary schools) in Nicosia, Kyrenia and Famagusta district of the TRNC. The sample of the study consists of 426 people who continue their teaching profession in the 2023-2024 academic year, which is determined by random sampling method. The data collection tool consists of four parts. In the first part, there are questions containing the general knowledge of the teachers. In the second part, the 24-item "Informal Communication Scale" developed by Uğurlu (2014) was used. In the third part, the School Principals Leadership Styles Scale (OMLSS) developed by Akan et al. (2014) was used. The "Teacher Job Performance Scale" used in the fourth section is a measurement tool developed by Limon and Sezgin-Nartgün in 2020. In the study, the data were analyzed with the 28.00 SPSS program.

According to the results of the research, it is clearly seen that the leadership styles adopted by school administrators and the level of communication between teachers affect the Job performance of teachers. It has been determined that transformational leadership style has a positive and significant effect on Job performance. On the other hand, it was observed that liberating and sustaining leadership styles exhibited a negative and significant relationship with Job performance. In addition, it has been determined that communication style also plays an important role. The positive relationships between the contextual performance dimension and the friendship and entertainment dimensions show that teachers exhibit a communication style that positively affects Job performance. Overall, leadership styles and communication style were found to be determining factors on teachers' Job performance. According to the results of the regression analysis, which evaluates the effect of school administrators' leadership styles on teachers' informal communication levels and Job performance, there are significant relationships between the relevant factors. A positive and significant relationship was determined between the teacher Job performance scale and the informal communication scale. This situation shows that a strong and effective level of informal communication plays a role in increasing the Job performance and productivity of teachers.

**Keywords:** Leadership Styles, Informal Communication, Job Performance.

### 1. INTRODUCTION

#### 1.1. Problem

Leadership; historically, it has been an important concept that brings people together and shapes the process of achieving common goals. When faced with difficulties, humanity has sought specific direction and guidance. At this point, the emergence of leaders and their abilities are focused on their ability to bring communities together and direct them towards common goals (Özkalp & Kirel, 2001). Leadership refers to the process of bringing together, mobilizing or directing a particular person and/or group of people. Leadership is the process of directing a group of people towards predetermined goals and guiding this group (Eren, 1998). To understand leadership, as emphasized (Çalık, 2003). It is important to understand that the leader is a figure who overcomes the difficulties encountered and ensures the continuity of the organization. The leader plays a strategic role not only to achieve certain goals, but also for the sustainability and success of the organization (Piwowar-Sulej and Iqbal, 2023).

The leadership style exhibited by the school principal is an important factor that shapes the process of bringing people together, directing them and ensuring they achieve common goals (Yalçın & Başar, 2022). The school principal should bring together teachers and other school personnel and direct them to act towards common

goals. If the principal adopts a leadership style that is predictive, open to changes, and values the ideas and opinions of his employees, loyalty within the school may increase. Acting with a modern leadership approach, school principals motivate teachers, care about individual differences, and encourage teachers' participation in decision-making processes, which positively affects the overall performance and success in the school (Dağlı & Ağalday, 2018).

There may be an important relationship between the leadership styles of private school administrators and the communication levels of teachers. This relationship can affect the general atmosphere of the school, cooperation between teachers, and student-teacher relationships (Öncü et al., 2023). Teachers' levels of informal communication have a significant impact on a school's social dynamics, collaboration, and teacher-student relationships. Informal communication refers to forms of communication that are informal and involve every day and personal matters. This type of communication can create a sense of community in the school environment and provide a suitable environment for collaboration (Şakir & Çelikten, 2023). This shows that teachers' performance will be positively affected.

Teacher Job performance is a concept that evaluates how effective a teacher is in relation to his duties, how he affects students' academic achievement, and how he contributes to the educational process in general. Job performance is generally evaluated through a number of factors such as teacher's student achievements, classroom management skills, student relations, professional development and contribution to educational programs (Büyükgöze & Özdemir, 2017).

Based on this information, the problem statement of this study was determined as "the relationship between the leadership styles of private school administrators, teachers' informal communication levels and teacher Job performance".

## 1.2. Purpose and Importance

The purpose of this research is to determine the relationship between the leadership styles of private school administrators, teachers' informal communication levels and teacher Job performance. This study focuses on determining the relationships between the leadership styles of private school administrators, teachers' informal communication levels and teacher Job performance. Understanding these dynamic relationships between leadership, communication and Job performance in private schools is of great importance for the effective management and development of educational environments. This research is conducted to understand the factors affecting teachers' Job performance, to examine the interaction between leadership styles and informal communication levels, and to determine the prominent success strategies in this context. The results of this study can contribute to more effective management of educational institutions and increased student achievement by providing valuable insights for private school administrators, teachers and education policy makers.

## 1.3. Hypotheses

The research hypotheses are given below:

H<sub>1</sub>: There is a relationship between the leadership styles of school administrators and the informal communication levels of teachers.

H<sub>2</sub>: There is a relationship between the leadership styles of school administrators and teacher Job performance.

H<sub>3</sub>: There is a relationship between teachers' informal communication levels and teacher Job performance.

H<sub>4</sub>: Leadership styles of school administrators have an effect on teachers' informal communication levels and teacher Job performance.

## 1.4. Definitions

**Leader:** It refers to the person who directs, influences or guides a group or organization (Çetin & Beceren, 2007).

**Leadership:** It is a process that enables a person to achieve certain goals by influencing, directing or guiding a group or organization (Demir et al., 2010).

**Communication:** It is a process used to transfer one person's feelings, thoughts, information or desires to another person (Güngör & Aydın, 2011).

**Informal communication:** It is communication that is informal, has unclear boundaries and usually takes place outside the institutional hierarchy (Bektas & Erdem, 2015).

**Performance:** It is the ability or level of success of a person or thing to perform a certain task, Job or activity (Tunçer, 2013).

**Job Performance:** It is a concept that evaluates how effectively an employee performs a certain Job or task (Yelboğa, 2006).

## 2. CONCEPTUAL FRAMEWORK

### 2.1. Leadership Styles

The concept of leadership may vary at different times, in different groups and in different environments. Therefore, the breadth and validity of the concept of leadership can be interpreted in different ways according to different perspectives. Leadership is considered a fundamental characteristic of human relationships and therefore can be valid in any environment where a group of people exists. A leadership role may be needed in all kinds of organizations and institutions, whether structured or unstructured, within a family, a student community, a political formation, a company, military units or state administrations ( Oğuz, 2011) . For example, in a family, the mother or father may be the leader of the family and play a guiding role for the well-being and unity of the family. In a student community, student leaders represent their fellow students, organizing events and leading the needs of the community. Similarly, in a business or company, senior managers set the company's vision and take the leadership role in achieving company goals by motivating employees. In military units, officers or commanders provide leadership to ensure the safety and effectiveness of their units. In each case, the concept of leadership may manifest differently and the roles and responsibilities of leaders may differ. However, leadership is a universal concept that has a significant impact in every environment where people come together (Akçakoca & Bilgin, 2016).

Leadership styles refer to the approaches leaders adopt when performing their leadership roles. Every leader may have their own unique leadership style and adopt different styles in different leadership situations. Leadership styles are affected by various factors such as the leader's personality traits, experiences, values and organizational goals (Ogul, 2023). The leadership styles used in the study are summarized below:

- **Transformational Leadership:** Transformational leadership focuses on the leader's ability to create profound effects on followers and lead them to change. This leadership style aims to achieve transformation by increasing the motivation of followers and maximizing their potential. Transformational leaders are visionary, inspiring and have the ability to create a powerful impact (Fırat and Yeşil, 2020) .
- **Laissez-faire Leadership:** Laissez-faire leadership aims to motivate the leader's followers by giving them broad autonomy and trust. This leadership style allows team members to discover and develop their potential. Laissez-faire leaders encourage team members' participation in decision-making processes by providing guidance and support (Aktaş & Özgenel, 2020).
- **Sustainability Leadership:** Sustainability leadership aims to provide stability and security by focusing the leader on maintaining the current situation. This leadership style focuses on managing routine work and maintaining operational efficiency. Sustainability leaders play an important role in achieving set goals and maintaining the current situation (Aytaç & Usta, 2023).

### 2.2. Informal Communication

Communication is the basis of relationships between people, and communication is considered an indispensable tool in all areas of life (Bektas & Erdem, 2015). Communication between different classes, professions, communities, societies and groups enables people to interact with each other, exchange information, express their feelings and create meaning. Communication cannot be considered as belonging to only one field of science, because all fields of science must know and use communication methods and methods effectively for the future of their own existence (Tan, Qian & Chen, 2023).

Under uncertain conditions, that is, environments dominated by informal or informal communication, group and individual interaction can often occur more frequently and more effectively. Unlike formal communication channels, informal communication provides a more flexible, friendly and natural environment. This plays an important role in increasing the social relations of groups. Informal communication helps establish sincere relationships and increase trust among employees (Fung & Cheung, 2024). Because in informal communication environments, people feel more comfortable and share their feelings, thoughts and experiences more openly. This leads to stronger bonds between group members and increased cooperation. In addition, informal communication encourages the exchange of information and ideas within the group. A comfortable and open



communication environment between group members enables different perspectives to be shared and new ideas to emerge. This improves the decision-making processes of groups and encourages creativity (Barutçu & Haşiloğlu, 2010).

Informal communication helps distribute information as a form of communication that crosses boundaries within the formal structure. However, the information distributed may not always be desired or positive. This information may sometimes be harmful to the organization or employees. However, the negative results highlight that the informal communication process should be managed and exploited rather than hindered. Therefore, it may be more effective for organizations to manage and control this communication process, rather than completely preventing informal communication. Informal communication can increase the flow of information within the organization and contribute to the development of better relationships between employees. Therefore, it would be more logical to take precautions to deal with negative consequences and use informal communication in favor of the organization (Olszewski, 2004).

### 2.3. Job Performance

Job performance relates to an employee's ability and efficiency to perform their duties at work. This concept is generally defined as the employee's ability to achieve set goals, perform their duties effectively, use their skills and abilities, contribute to the Job and adapt to expectations in the workplace. It is a criterion for measuring how effective and efficient an employee is at work. Good Job performance is associated with the employee's ability to achieve set goals, the ability to perform tasks on time and accurately, a high standard of quality in work, and the ability to make a positive contribution in the workplace (Yelboğa, 2006). It is usually evaluated in performance appraisal processes, and the employee's success is evaluated through specific metrics and performance evaluation tools used to measure performance. Job performance is considered an important indicator to improve the employee's performance at work and support managers' workforce management decisions (Çağatay, 2023).

Job performance is a multidimensional and dynamic concept. It is considered together with process and result aspects. The process aspect evaluates the behaviors that employees perform at work and the contribution of these behaviors to the goals of the organization. It accepts measurable behaviors as performance. The outcome aspect focuses on the consequences of employees' behavior. Process and outcome aspects are related to each other, but do not overlap completely. The goal of the performance process is to achieve high performance results. However, performance outcomes are influenced by other processes besides behavior, such as situational and organizational constraints. The performance of employees may not always be at a constant level (Doymuş et al., 2023). Job performance is a dynamic concept because it is under the influence of various factors. A person's performance may decrease due to temporary factors (such as fatigue) or permanent factors (such as aging), while it may increase due to processes such as learning processes and performance management. Therefore, Job performance is a process that changes and develops over time (Judge et al., 2012). The performance types used in the study are summarized below:

Task Performance refers to an employee's ability to perform assigned Job duties. This reflects how effectively the employee performs his or her main duties at work and how well he or she complies with the standards set by the workplace. Task performance includes the employee's technical skills, knowledge, and functional abilities. For example, the coding skills of a software developer and the customer relationship management abilities of a sales representative can be given as examples of task performance (Geylan & Akça, 2023).

The Contextual Performance Dimension refers to an employee's personal and social behaviors that affect Job performance. This includes factors such as the employee's interaction with others in the workplace, their compliance with social norms in the workplace, and their contribution to the organizational culture. Contextual performance includes behaviors such as contribution to teamwork in the workplace, cooperation, flexibility, and respect for the manager (Korku & Yıldız, 2023).

The Adaptive Performance Dimension refers to how effectively an employee fulfills his or her role at work. This reflects how well the employee behaves in line with workplace expectations and embraces organizational values. Adaptive performance includes factors such as compliance with the rules in the workplace, commitment to organizational mission and values, and contribution to the goals of the workplace (Arslan & Gül, 2023).

Teachers' Job performance is generally based on factors such as student achievement, teaching quality, classroom management skills, student participation, instructional material preparation and presentation. Various methods can be used to evaluate teachers' Job performance. These include techniques such as classroom observations, student achievement data analysis, student and parent feedback, lesson plans, and assessment tools. Effective evaluation of teachers' Job performance can make a positive contribution to the development of the

education system and the success of students. Therefore, it is important to develop supportive policies and programs to increase teachers' Job performance. In this way, it may be possible for teachers to provide education to students more effectively and increase their academic success (Barutçu & Haşiloğlu, 2010).

Evaluating teachers' Job performance can improve the quality of education by focusing on their professional development. In this context, teachers can be supported in the areas they need, strengthen their teaching skills and guide students more effectively. It is important to take a fair and objective approach to evaluating teachers' Job performance. This can ensure that teachers are appreciated by identifying their strengths and that their areas of development are identified and supported. It is also critical that the data used to evaluate teachers' Job performance is reliable and valid, because decisions based on this data can affect the quality of the education system. Effective management and support of teachers' Job performance can increase the success of educational institutions and positively affect the academic success of students (Büyükgöze & Özdemir, 2017).

### **3. METHOD**

#### **3.1. Method of Research**

Quantitative research method was adopted in the research using the general survey model. The general screening model is a research method used to determine certain characteristics or evaluate the conditions of a particular group or population in a study. This model often involves collecting data through surveys or scales. In this model, researchers collect data by sending a pre-prepared survey or scale to members of a specific population or group (Büyükoztürk et al., 2016).

#### **3.2. Population and Sample**

The population of the study consists of 951 teachers working in private schools (primary and secondary schools) in Nicosia, Kyrenia and Famagusta districts of TRNC. The sample of the study was determined by the random sampling method. Random sampling method is a sampling method in which each individual in the population has an equal probability of being selected. In this method, each unit in the population is randomly selected and a sample is created in this way. In this context, the study consists of 426 people who continue their teaching profession in the 2023-2024 academic year.

#### **3.3. Data Collection Tools**

The data collection tool consisted of four parts. In the first part of the scale, there are questions containing general information of teachers (gender, age, marital status, education level, professional seniority and working time).

In the second part, the 24-item "Informal Communication Scale" developed by Uğurlu (2014) was used. The scale consists of the sub-dimensions of friendship, entertainment, influence and knowledge. As a result of the confirmatory factor analysis, when the items related to the sub-factors of the scale were examined, the following situations were observed: The first factor is collected under the name "friendship" and includes items 1, 2, 3, 4, 5, 6, 7, 8. The second factor is collected under the name "fun" and includes items 9, 10, 11, 12, 13. The third factor is collected under the name "influence" and includes items 14, 15, 16, 17. The fourth factor is collected under the name "knowledge" and includes items 18, 19, 20, 21, 22, 23, 24. The Cronbach's alpha internal consistency coefficient of the scale was found to be 0.89, which shows that the internal consistency of the scale is high. Additionally, exploratory factor analysis was applied to the scale and the appropriateness of the sample size was confirmed with Kaiser-Meyer-Olkin and Bartlett statistics (Uğurlu, 2014). These results support that the scale is a reliable and valid tool.

In the third part, the School Principals Leadership Styles Scale (OMLSS) developed by Akan et al. (2014) was used. This scale is a measurement tool containing 35 items and consists of three separate dimensions. These dimensions are called transformational leadership, laissez-faire leadership and sustaining leadership. There are 20 items in the transformational leadership dimension (1, 4, 6, 8, 10, 11, 14, 15, 16, 19, 20, 22, 23, 24, 25, 27, 30, 32, 34, 35). There are 8 items in the laissez-faire leadership dimension (2, 9, 12, 13, 17, 26, 31, 33). There are 7 items in the sustaining leadership dimension (3, 5, 7, 18, 21, 28, 29).

The "Teacher Job Performance Scale" used in the fourth section is a measurement tool developed by Limon and Sezgin-Nartgün in 2020. This scale is used to evaluate teachers' perceptions of their Job performance. The scale does not contain reverse-coded items, which helps avoid confusion when responding to participants. The scale is a 5-point Likert style measurement tool and the answer options are "Never (1)", "Rarely (2)", "Sometimes (3)", "Mostly (4)" and "Always (5)". The scale contains 37 items in total and consists of 3 different dimensions. These dimensions allow evaluating teachers' Job performance from different perspectives. The scale is used to systematically measure teachers' perceptions of their Job performance.

In this study The high Cronbach's Alpha value calculated for the Teacher Job Performance Scale was determined as (0.945), the Cronbach's Alpha value calculated for the Leadership Styles Scale was determined as 0.710, and the Cronbach's Alpha value calculated for the Informal Communication Scale was determined as 0.939. These values show that the internal consistency of the scales is high. This indicates that the use of the scale is reliable and that the concepts measured are evaluated consistently.

### 3.4. Analysis of Data

In the study, the data were analyzed with the 28.00 SPSS program. The skewness and kurtosis statistics of the scales are within acceptable ranges, although some are outside the limits. In this case, parametric tests were applied assuming that the data showed normal distribution. Correlation and Regression analyzes were performed in the study. Correlation analysis is a statistical method used to determine the degree and direction of the relationship between two or more variables. This analysis measures the strength of the relationship between variables, while regression analysis is used to examine the effect of one or more independent variables on a dependent variable.

## 4. FINDINGS

**Table 1. Demographic Variables**

		n	%
Gender	Woman	302	70.9
	Male	124	29.1
Age	20-30 years old	168	39.4
	31-40 years old	132	31.0
	41-50 years old	96	22.5
	50 and above	30	7.0
Marital status	Single	183	43.0
	Married	243	57.0
Educational background	Undergraduate	240	56.3
	Graduate	186	43.7
Professional seniority	1-5 Years	207	48.6
	6-10 Years	39	9.2
	11-15 Years	72	16.9
	16-20 Years	66	15.5
	21 Years and Above	42	9.9
Operation time	1-2 Years	210	49.3
	3-5 Years	144	33.8
	6-7 Years	36	8.5
	8-10 Years	36	8.5
	Total	426	100.0

When the demographic profile of the 426 participants in the study is examined, it is seen that the majority of the participants are women (70.9%). When looking at the age distribution, it was determined that 39.4% of the participants were between the ages of 20-30, 31.0% were between the ages of 31-40 and 22.5% were between the ages of 41-50. In terms of marital status, 57.0% of the participants were married, while 43.0% were identified as single. Regarding education level, 56.3% of the participants had undergraduate education, while 43.7% had postgraduate education. Diversity in professional seniority has been observed; While 48.6% of the participants have 1-5 years of seniority, 9.2% have 6-10 years, 16.9% have 11-15 years, 15.5% have 16-20 years and % 9.9 of them were classified as having 21 years or more of seniority. In terms of working time, 49.3% of the participants have a working time of 1-2 years, 33.8% have a working time of 3-5 years, 8.5% have a working time of 6-7 years and 8.5% have a working time of 1-2 years. It has a working period of 8-10 years.

Table 2. Minimum, Maximum, Average and Standard Deviation Values of the Scales

	Min.	Max.	Cover.	Ss.
Task performance	16.00	80.00	74.3521	9.20066
Contextual performance dimension	9.00	45.00	34.8873	5.87289
Adaptive performance dimension	35.00	60.00	53.6761	5.36071
Teacher job performance scale (general)	79.00	185.00	162.9155	16.99114
Transformational leadership	28.00	117.00	86.7418	13.55491
Laissez-faire leadership	8.00	39.00	18.0657	7.36097
Sustainability leadership	7.00	35.00	20.2676	5.79645
Leadership style scale (general)	80.00	168.00	125.0751	14.36348
Friendship	8.00	40.00	28.6056	6.14525
Entertainment	3.00	15.00	11.7042	2.56159
Influence	5.00	25.00	18.3521	4.03665
Information	7.00	34.00	24.5775	5.27278
Informal communication scale ( general)	23.00	108.00	83.2394	16.07201

In terms of task performance, there was a wide range between participants' minimum and maximum scores (16.00 to 80.00). The average score was determined as 74.3521, indicating an overall high task performance. In the contextual performance dimension, although the minimum and maximum score range is narrower (9.00 to 45.00), the average score was determined as 34.8873. This indicates that contextual performance is lower compared to task performance. In the adaptive performance dimension, the score range is narrower (35.00 to 60.00) and the average score was determined as 53.6761. This indicates that adaptive performance is moderate. Finally, for the total performance measure, the minimum and maximum score range is wide (79.00 to 185.00), with the average score determined as 162.9155. This shows that the participants generally showed a high performance.

It is seen that the transformational leadership style generally has the highest average score (86.7418) and the widest score range (28.00 to 117.00). While the average score (18.0657) and score range (8.00 to 39.00) of the Laissez-faire leadership style are lower, the average score (20.2676) and score range (7.00 to 35.00) of the Maintainer leadership style are medium. appears to be at the level. For the Leadership Total, it is observed that the overall leadership performance is high (average: 125.0751) and the scores are distributed in a narrower range on average.

In the friendship dimension, the average score (28.6056) and the score range (8.00 to 40.00) are seen to be at a medium level. The mean scores (11.7042 and 18.3521, respectively) and score ranges (3.00 to 15.00 and 5.00 to 25.00, respectively) are lower for the fun and influence dimensions. In the knowledge dimension, the average score (24.5775) and score range (7.00 to 34.00) are at an average level. For the communication scale, it is seen that the average score is higher (83.2394) and the scores are generally distributed in a wider range (23.00 to 108.00).

Table 3. The Relationship Between School Administrators' Leadership Styles and Teachers' Informal Communication Levels

		Friendship	Entertainment	Influence	Information	Informal communication scale ( general)
Transformational leadership	r	.114 *	.222 **	.288 **	0.080	.178 **
	p.	0.019	0.000	0.000	0.100	0.000
Laissez -faire leadership	r	0.041	-0.071	-0.083	0.032	-0.006
	p.	0.403	0.146	0.087	0.505	0.902
Sustainability leadership	r	.198 **	0.021	-0.037	.149 **	.119 *
	p.	0.000	0.663	0.445	0.002	0.014
Leadership style scale (general)	r	.208 **	.182 **	.215 **	.152 **	.212 **
	p.	0.000	0.000	0.000	0.002	0.000

When the results are examined, it is seen that there are positive and significant relationships between the transformational leadership, maintenance leadership and general leadership style scales and teachers' informal communication levels (\*\*p < 0.01 and \*p < 0.05). This may indicate that these leadership styles of

administrators encourage or influence informal communication among teachers. However, no significant relationship was detected between laissez-faire leadership and informal communication levels ( $p > 0.05$ ). This indicates that there is no connection between this leadership style and the levels of informal communication between teachers. These findings show that school administrators' leadership styles can affect the communication dynamics between teachers and shape the communication culture in the school.

Table 4. The Relationship Between School Administrators' Leadership Styles and Teacher Job Performance

		Task Performance	Contextual Performance Dimension	Adaptive Performance Dimension	Teacher Job Performance Scale (General)
transformational leadership	r	.337 **	.395 **	.254 **	.399 **
	p.	0.000	0.000	0.000	0.000
Laissez-faire leadership	r	-.293 **	-.265 **	-.263 **	-.333 **
	p.	0.000	0.000	0.000	0.000
Sustainability leadership	r	-.124 *	-0.093	-.176 **	-.155 **
	p.	0.010	0.056	0.000	0.001
Leadership Style Scale (General)	r	.117 *	.200 **	0.034	.143 **
	p.	0.016	0.000	0.487	0.003

While transformational leadership showed a positive and significant relationship with task performance, contextual performance dimension, adaptive performance dimension, and overall Job performance scale (\*\* $p < 0.01$ ). This indicates that transformational leadership style can positively affect teachers' Job performance. On the other hand, laissez-faire leadership and sustainer leadership styles showed a negative and significant relationship with Job performance (\*\* $p < 0.01$ ). These results suggest that laissez-faire and maintenanceist leadership styles may negatively affect teachers' Job performance. A positive and significant relationship was also found between the general leadership style scale and Job performance (\*\* $p < 0.01$ ). As a result, it appears that the leadership style adopted by school administrators plays an important role on teachers' Job performance and may affect Job performance.

Table 5. The Relationship Between Teachers' Informal Communication Levels and Teacher Job Performance

		Task Performance	Contextual Performance Dimension	Adaptive Performance Dimension	Teacher Job Performance Scale (General)
Friendship	r	0.085	.193 **	.123 *	.151 **
	p.	0.081	0.000	0.011	0.002
Entertainment	r	.130 **	.167 **	0.085	.154 **
	p.	0.007	0.001	0.081	0.001
Influence	r	.095 *	.144 **	0.071	.124 *
	p.	0.050	0.003	0.142	0.011
Information	r	-0.025	0.046	-0.039	-0.010
	p.	0.609	0.345	0.424	0.839
Informal Communication Scale ( General)	r	0.069	.152 **	0.066	.110 *
	p.	0.157	0.002	0.176	0.023

Positive and significant relationships were found between the contextual performance dimension and the friendship and entertainment dimensions (\*\* $p < 0.01$ ). These results indicate that teachers exhibit a communication style that can positively affect Job performance. Additionally, a significant relationship was detected between the general communication scale and the contextual performance dimension (\* $p < 0.05$ ). There was no statistically significant relationship between other communication dimensions and Job performance ( $p > 0.05$ ). These findings show that communication style plays an important role among the factors that can affect teachers' Job performance.

Table 6. The Effect of School Administrators' Leadership Styles on Teachers' Informal Communication Levels and Teacher Job Performance

	Unstandardized Coefficients		Standardized Coefficients	t	p.
	B.	Std. error	Beta		
Still	93.58	7,107		13,167	0
Teacher Job Performance Scale	0.102	0.04	0.121	2,554	0.011
Informal Communication Scale	0.178	0.042	0.199	4,196	0
F=13, 411	R=.244	R2 : 0.060			

When the results are examined, it is seen that both the teacher Job performance scale and the informal communication scale positively and significantly affect teachers' Job performance. The beta value for the teacher Job performance scale was calculated as 0.121 and the beta value for the informal communication scale was calculated as 0.199. This shows that the level of informal communication affects teacher Job performance more. Moreover, the overall performance of the regression model is also remarkable, although the proportion of variance explained is quite low (6%). These results indicate that school administrators' leadership styles may indirectly affect teachers' Job performance, and especially informal communication levels may play an important role in this effect.

### CONCLUSION AND RECOMMENDATIONS

According to the research results, it is clearly seen that the leadership styles adopted by school administrators and the level of communication between teachers affect teachers' Job performance. Transformational leadership style has been identified as a factor that encourages informal communication among teachers and positively affects Job performance. This leadership style has been observed to have a positive and significant impact on job performance. On the other hand, laissez-faire and sustainer leadership styles showed a negative and significant relationship with Job performance, meaning that these leadership styles may negatively affect teachers' Job performance. It has also been determined that communication style plays an important role. The positive relationships between the contextual performance dimension and the friendship and fun dimensions indicate that teachers exhibit a communication style that positively affects Job performance. In general, leadership styles and communication style emerge as determining factors on teachers' Job performance.

According to the results of regression analysis evaluating the impact of school administrators' leadership styles on teachers' informal communication levels and Job performance, there are significant relationships between the relevant factors. According to the data obtained, a positive and significant relationship was determined between the teacher Job performance scale and the informal communication scale. This shows that a strong and effective level of informal communication plays a role in increasing teachers' Job performance and productivity. Additionally, it was determined that the teacher Job performance scale positively affected teachers' Job performance. The overall performance of the regression model is also notable and appears to be effective in explaining teachers' Job performance. However, the low proportion of explained variance suggests that other factors and variables may also affect Job performance.

Taking into account the research results, some suggestions for school administrators may be:

- Training and development programs that will encourage transformational leadership style should be organized for school administrators. These programs can help administrators improve their leadership skills and create a strong communication culture among teachers.
- School administrators should be given training to develop effective communication skills. These trainings can enable them to establish better communication with teachers and increase their Job performance.
- School administrators should support teachers' development by providing regular feedback. Positive feedback can increase teachers' motivation and positively impact their Job performance.
- School administrators should evaluate their own leadership styles and adopt an appropriate leadership approach for effective collaboration with teachers. This evaluation can help improve the communication culture at school and increase Job performance.

- School administrators should encourage cooperation among teachers and support teamwork. Collaborative environments can strengthen teachers' communication and improve Job performance.

These suggestions can help school administrators improve teachers' Job performance by improving their leadership styles and communication skills. They can also positively affect overall performance at school by increasing teachers' motivation and satisfaction.

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