The Predictive of Social Networks-Based Learning in Physical Education and Sports Teachers: The Big Five Personality

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ABSTRACT
Aim: In this research, it was aimed to investigate whether the big five personality traits are predictive of using social networks. **Method:** The research, which was designed with the correlational survey model, had a total of 203 ($\overline{X}_{age}$=21.36±2.88), 101 females ($\overline{X}_{age}$=21.40±3.06), 102 males ($\overline{X}_{age}$=21.32±2.70) that was selected by easy sampling and aged between 18 and 39, who studied at Sakarya Applied Sciences and Bartın Universities, and sports sciences faculties. In the research, the data were collected by using the "Personal Information Form", "The Social Networks-Based Learning Perception Scale" and the "Five Factor Personality Inventory". Descriptive statistics, Pearson correlation and Regression analyzes were used in the analysis of the data. **Findings:** According to the research findings, positive and significant relationships were found between the big five personality traits of extraversion, openness to experience, agreeableness and conscientiousness and social networks-based learning in physical education and sports teacher candidates. It was also found that agreeableness significantly explained social networks-based learning. **Conclusion:** As a result; It has been revealed that only agreeableness from the big five personality traits is predictive in social networks-based learning.
Keywords: Physical education and sports teacher candidate, social networks-based learning, big five personalities.

INTRODUCTION
Today, the use of social networking sites, a tool used to access information, has shifted the curiosity of scientists in this direction. So much so that the psychological structures arising from the use of social networking sites have found a place among the topics worth researching.

Social networking sites are a web-based system that allows people to develop a profile within the sociological structure they are in, communicate with others, and meet other people in the link list (Sundararaj & Rejeesh, 2021). Social networks, which have continued to develop in recent years (Tsai, Chang, Chang & Chang, 2017) and become an increasingly popular source of information for most people (Serenko, Turel, & Bohonis, 2021; Gvili, Kol & Levy, 2020), are widely used in today's conditions. It is used for learning purposes and it is seen that this situation is very important in terms of informal learning (Yokuş & Yelken, 2019). The learning potential of social networks is based on the strong diffusion of learning to global dimensions indirectly rather than the transfer of knowledge (Bandura, 1986). As a matter of fact, it reminds us that the importance of social networks, which is a popular platform, should not be ignored, as people from different cultures from all over the world communicate with each other and share their knowledge and emotions (Pornsakulvanich, 2017). Namely, it has been demonstrated by research that the use of these networks improves interactive and collaborative learning (Al-rahmi & Othman, 2013) and makes the learning process more fun and active (Eid & Al-Jabri, 2016).

People use social networks for education (Hamid, Waycott, Kurnia & Chang, 2015), learning and teaching (Gupta & Bashir, 2018), entertainment and spending time (Dogruer Menevi & Eyyam, 2011; Hunt, Atkin & Krishnan, 2012), motivation (Bulut & Doğan, 2017), providing social support (Ross, Orr, Sisic, Arseneault, Simmering & Orr, 2009), self-expression and seeking information (Aladwani, 2014), various purposes (Cheung, Chiu & Lee, 2011). In addition, some studies in the literature have suggested that the use of social technologies supports constructivist approaches to learning, and that they have the potential to socialize online learning environments more than traditional learning environments (McLoughlin & Lee, 2008; Schroeder, Minocha, & Schneider, 2010). As a matter of fact, the current Covid-19 epidemic has made online learning environments compulsory in the learning process (Hergüner and others, 2020; Hergüner and others, 2021).

Even though research on behaviors and individual differences towards using social networks has increased in recent years (Al-Dwaikat, Aldalaykeh & Rababa, 2020; Krämer & Winter, 2008), the role of personality traits in directing these behaviors has been a matter of curiosity. Personality, which is accepted as one of the most important topics in psychology research (Li Li, Hao, Guan & Zhu, 2014; Özer & Benet-Martinez, 2006), is defined as "consistent behavioral patterns and intrapersonal processes originating from the individual" (Burger, 2016), expressed and based on social networks. It has been a subject worth investigating because it can be an important predictor in understanding learning. Therefore, another subject examined in this research is the five-factor personality model, which is also known in the literature as the big five (McCrae & Costa, 1989; Goldberg, 1993; McCrae & Costa, 1997). It is a comprehensive and widely accepted personality model that has wide application in different fields and cultures due to its big five empirical validity (Oliveira, Cherubini & Oliver, 2013; McCrae & John, 1992). The model is widely used; extraversion, neuroticism, agreeableness, conscientiousness, and openness to experience (McCrae & Costa, 1989). Extraversion is defined as active, energetic, enthusiastic (McCrae & John, 1992), being sociable and talkative (Barrick & Mount, 1991). Because extraverts are sociable, they not only engage in social activities in social networks (Liu, & Campbell, 2017), but are central in many social networks (Feiler & Kleinbaum, 2015). High scores in neuroticism include a tendency to experience negative effects such as anxiety, anger, and depression, emotional instability, and other cognitive and behavioral symptoms (McCrae & Costa, 1989). In many circumstances, conversation and social connection using social networks has been seen as a tool to alleviate neuroticism (Liu, & Campbell, 2017). Agreeableness refers to the tendencies to be friendly, sympathetic, humble and compassionate (Oliveira, Cherubini & Oliver, 2013). Agreeable individuals are more likely to express positive emotions to posts on social networks (Schwartz and others, 2013) and post pictures that express positive mood (Liu, Preotiuc-Pietro, Samani, Moghaddam & Ungar, 2016). Conscientiousness characterizes well-organized and goal-oriented people (Halko & Kientz, 2010). Individuals with high conscientiousness are organized, determined and successful by making a plan before starting work (Burger, 2016). Individuals with high conscientiousness are more cautious about managing their profiles in social networks (Amichai-Hamburger & Vinitzky, 2010). In addition, these people tend to express less appreciation on social media and participate less in group activities (Kosinski, Bachrach, Kohli, Stillwell & Graepel, 2014). Openness to experience is characterized by intelligence, imagination, curiosity, and productivity (Barrick & Mount, 1991; McCrae & John, 1992). People who have openness to experience tend to have large networks (Quercia, Lambiotte, Stillwell, Kosinski & Crowcroft, 2012) and to like more content on social media (Bachrach, Kosinski, Graepel, Kohli & Stillwell, 2012). As personality is expected to affect relationships between people (Eysenck, 1994), it is also expected to prevent the use of social networks. In this respect, it is aimed to investigate whether the big five personality traits are predictive in using social networks.

METHOD
Research Model
In this research, the "correlational survey model" was used which is one of the quantitative approaches. According to Karasar (2018, p. 114), this model is expressed as *"research models aiming to determine the existence and/or degree of covariance between two or more variables"*.

Population and Sample of the Research
The population of the research consists of teacher candidates studying in the Department of Physical Education and Sports Teaching at Sakarya Applied Sciences and Bartın Universities. The sample of the research has a total of 203 ($\overline{X}_{age}$=21.36±2.88) Education and Sports Teacher candidate, 101 females ($\overline{X}_{age}$=21.40±3.06), 102 males ($\overline{X}_{age}$=21.32±2.70) that was selected by easy sampling and aged between 18 and 39.

Table 1. Descriptive statistics of teacher candidates

Gender	n	%
Female	101	49,8
Male	102	50,2
University	**n**	**%**
Sakarya Applied Sciences University	108	53,2
Bartın University	95	46,8
Total	**203**	**100,0**

According to Table 1, 49.8% of the participants were female (n=101); 50.2% (n=102) it consists of male. When the distribution by universities is examined, it is seen that 53.2% (n=108) of the sample is from Sakarya University of Applied Sciences; It was determined that 46.8% (n=95) were from Bartın University.

Data Collection Tools
In the research, the data were collected by using the "Personal Information Form", "The Social Networks-Based Learning Perception Scale" and the "Five Factor Personality Inventory". The details of the psychometric properties of the measurement tools are explained below.

Personal Information Form
The "Personal Information Form" created by the researchers was used to determine the information such as gender, age and university of education of physical education and sports teachers.

Social Networks-Based Learning Perception Scale
"Social Networks-Based Learning Perception Scale" developed by Yokuş and Yanper Yelken (2019) was used to measure physical education and sports teachers' perceptions of learning based on social networks. The measurement tool is in a 7-point Likert type with 20 items. The lowest 20 and the highest 140 points are obtained from the measurement tool. As a result of the reliability analysis, the Cronbach Alpha internal consistency coefficient of the scale was found to be .90 (Yokuş & Yanper Yelken, 2019). In this research, the Cronbach Alpha internal consistency coefficient of the scale was determined as .96.

Five Factor Personality Inventory
The "Five Factor Personality Inventory" developed by John, Donahue and Kentle (1991) and adapted into Turkish by Evinç (2004) was used to determine the personality traits of physical education and sports teachers. The measurement tool is 44 items, 5-point Likert type. The measurement tool includes the big five personality traits of extraversion, neuroticism, openness to experience, agreeableness and conscientiousness. The Cronbach Alpha reliability coefficients of the measurement tool were found to be .74 for extraversion, .75 for neuroticism, .74 for openness to experience, .51 for agreeableness, and .66 for conscientiousness, respectively (Evinç, 2004). As a result of the current research, the Cronbach Alpha internal consistency coefficient of the measurement tool was; .81 for extraversion, .71 for neuroticism, .77 for openness to experience, .72 for agreeableness, and .72 for conscientiousness.

Data Collection
Due to the coronavirus epidemic that continues to affect all over the world and in our country, education and training in universities continues online. For this reason, the online environment was used while collecting data. The research questions were prepared by transferring them to the Google Form, written instructions were given to the teacher candidates about why the research was conducted and its content at the beginning of the form, and a voluntary participation consent form was added. Data were collected online from candidate teachers who read the information about the research and agreed to participate in the research.

Data Analysis
The collected data were coded and transferred to the SPSS program to be ready for analysis. Here, the calculations of the measurement tools were made and it was checked whether the data met the normality assumptions by looking at the skewness and kurtosis values. It was determined that the obtained values were in the range of $-1>,…,<+1$. Tabachnick and Fidell (2013) stated that these values are suitable for normality conditions. Descriptive statistics, Pearson correlation and Regression analyzes were used in the analysis of the data.

FINDINGS

Table 2. The correlation results between the personality traits scores of physical education and sports teacher candidates and their learning scores based on social networks

		Extraversion	Neuroticism	Openness to Experience	Agreeableness	Conscientiousness
Social Networks-Based Learning	r	,21	-,09	,20	,28	,15
	p	,00**	,21	,00**	,00**	,03*

According to the results of the Pearson correlation analysis in Table 2, positive low-level significant correlations were found between the scores of extraversion, openness to experience, agreeableness, and conscientiousness of the physical education and sports teacher candidates and their learning scores based on social networks ($p<.05$).

Table 3. The effect of personality traits of physical education and sports teacher candidates on learning based on social networks

Variable	B	Std. Error	β	t	p
Stable	37,99	20,03	---	1,90	,06
Extraversion	3,04	2,86	,10	1,06	,29
Neuroticism	1,31	2,71	,04	,49	,63
Openness to Experience	3,25	3,22	,08	1,01	,31
Agreeableness	8,96	3,26	,22	2,75	,01
Conscientiousness	-,14	3,49	,00	-,04	,97

R= ,31 R^2_{adj}=,07
$F_{(5,197)}$ = 4,12   p= ,00

According to the multiple linear regression analysis in Table 3, it is seen that the regression model is statistically significant. When the t-test results regarding the significance of the regression coefficients were analyzed, it was determined that agreeableness ($β= .22$; $t= 2.75$; $p=.01$) had a significant effect on learning based on social networks.

DISCUSSION and CONCLUSION

In this research, it was aimed to reveal whether there is a relationship between social network-based learning and personality traits such as extraversion, neuroticism, openness to experience, agreeableness and conscientiousness, which are big five personality traits. In this context, positive and significant relationships were found between extraversion, openness to experience, agreeableness and conscientiousness, and learning based on social networks. In addition, it was revealed that agreeableness significantly predicted learning based on social networks.

Social network, which means "individuals (more rarely, partnerships and roles) connected to each other by one or more social relations, thus forming a social bond" (Marshall, 1999), has changed the communication and media tools in the last two decade with the inclusion of concepts such as interaction, cooperation, social relations and information exchange (Cheung & Lee, 2010), it has started to be discussed within the framework of "a set of practices that increase group interaction, common areas reserved for cooperation and social relations and provide information exchange in a web-based environment" (Bartlett-Bragg, 2006, p.3). The difference in the learning styles of today's students, who grew up using digital media tools such as the Internet, computers and mobile phones (Prensky, 2001) has been brought to a level that has never been encountered in the past, and together with their personality traits (Moore, 2000; Rushton, Morgan, Richard, 2007) have had significant effects on learning. This radical change in learning environments not only affected the educational processes in different branches, but also had an impact on the learning of teacher candidates in relation to their different personality traits (Kelly & Johnson, 2005; Bassili, 2006). ignificant differences were observed between the learning styles of people with extraverted-introverted, sensory-intuitive, thinking-feeling and judgmental-perceiving personality traits (Myers & Myers, 1997) with the rapid change in technology. Ajjan and Harsthone (2008) found that the tools that create social networks increase the learning level of students, improve the interaction of students with both the school and other

students, improve students' satisfaction with the lessons and improve their writing skills, and facilitate their adaptation to the lessons. Considering that teacher candidates are still students, some of the students are not willing to learn new things (Tunca, Alkın Şahin, Aydın, 2015), although some of the students are in need of new learning and constantly demand it in their life (Ergün & Cömert-Özata, 2016) is undeniable. Based on this information, it can be predicted that social networks provide learning opportunities for students who are not open to new learning, even if it is not formal, and will provide great convenience to students who need new learning.

In recent years, it is seen that candidate teachers have created social media groups specific to their branches through social media groups, and they have improved their professional knowledge in this way as well as increasing their personal development by collaborating. Greenhow (2007) revealed that these unions of candidate teachers for the same field, which require solidarity or cooperation, increase the interaction between teachers, students and others, and this situation gives them an advantage. Wilkins (2009) discussed this interpretation a little further and suggested that social learning is the learning form of the future and that instead of replacing formal learning systems in the future, formal systems will "socialize" by incorporating social elements. Kalra and Manani (2013) revealed that students with different personalities who organize and manage their time efficiently and use social networks at the same time do not harm their academic performance in the face of this situation, and even they are productive for their studies. Ross and others (2009) found that among all these personality types, those with extroverted personalities used Facebook more, and in this way, they preferred to have more "Facebook friends" and belong to more Facebook groups. Although there are studies (Kirschner & Karpinski, 2010; Junco, 2012; Andreassen, Torsheim & Pallesen, 2014) revealing a negative relationship between the level of use of social networks such as Facebook and academic achievement, integrating social networks into the learning process is a blended learning approach, it helps to increase the quality of learning outcomes by setting an example (Karaman, Ekici & Akgun, 2011). Based on the fact that learning can be improved by using effective learning strategies, the quality of learning can be increased through social networks as well as through social media. In particular, candidate teachers with extroverted personality traits (Akdeniz, 2013, p.154; Zarafshani, Cano, Sharafi, Rajabi & Sulaimani, 2011); active, full of energy and social, but also more sensitive to the people and events around him (Tatlılıoğlu, 2014). These features can be evaluated as providing an advantage in their more active participation in the teaching process. Similar studies have also shown that extraversion is a strong predictor of social network use (Tan & Yang, 2012). People with a high rate of extraversion use social media more (Bowden-Green, Hinds & Joinson, 2020) and have more friends on social media (Amichai-Hamburger & Vinitzky, 2010) compared to people with a low rate of extraversion, as a result, people with a dominant extrovert personality trait tend to increase their social activities. It has been determined that they continue online as well (Çayırlı, 2017). From this point of view, as a result of the research, the positive relationship between extraversion and learning based on social networks can be explained as a normal situation. Correa, Hinsley, and Zuniga (2010)'s study, which determined the positive relationship between social media use and extraversion, supports this result.

Individuals with personality traits that are open to experience are generally characters who have different ways of thinking and can produce original products in science-art studies. With these characteristics, it can be said that individuals with this personality structure consist of individuals with high imagination, curiosity and high intelligence capacity (Erdheim, Wang & Zickar, 2006). Aslan and Yalçın (2013), on the other hand, found that openness to experience personality traits do not have predictive features on attitudes towards teaching due to intercultural differences. Bitlisli, Dinç, Çetinceli & Kaygısız (2013) emphasized the importance of using versatile teaching techniques by referring to the personality differences of the students in the training and information sharing studies for the new educator candidates with a dominant personality trait open to experience. The research conducted by Işık and Kaptangil (2018) also reveals that those with a dominant personality trait openness to experience are very social in daily life and are not overly dependent on social networks because they adopt to perform their duties through face-to-face interviews. At this point, it is seen that the candidate teachers with a dominant personality trait that is open to experience differ from the candidate teachers with other personality structures with a certain cross-section, and it is seen that they tend to get new experiences physically by going out of their habits. This information can be interpreted as individuals who are open to experience use social networks more controlled, thus putting them in an advantageous position in providing academic benefits.

Another personality trait on which the findings obtained within the scope of the research are concentrated is agreeableness, and this trait is evaluated within the genetic factors (Robinson, Emde, & Corley, 2001). Chamorro-Premuzic (2007) defined agreeableness as having a prosocial behavior tendency. Therefore, agreeableness represents the more humane aspect of humanity (Digman, 1990). Agreeableness (Viswesvaran & Ones, 2003) features related to pleasantness, sweetness; It is related to courtesy, flexibility, trust, good manners, cooperation, forgiveness, empathy and has been shown to be among the important predictors of attitude towards teaching. According to studies (Somer, 1998), it is also stated that agreeableness has a strong relationship with the moral values of individuals. This research reveals that the increase in physical education teacher candidates'

agreeableness levels also relatively increases their learning based on social networks. This result shows that the agreeable candidate teachers' characteristics such as cooperation, kindness, patience and empathy come to the fore in social networks with the effect of genetic factors. Agreeable individuals make the process in social networks more beneficial to them. At the same time (Friborg, Barlaug, Martinussen, Rosenvinge & Hjemdal, 2005), it is reported that those with agreeableness personality traits are reliable, cooperative, empathetic and warm, and they have a wider social network of supportive issues that will help individuals overcome psychosocial stressors when they encounter them.

Another personality trait discussed in the research is conscientiousness. Sasson (2003) reporeted that conscientiousness is "to have, to postpone laziness, to overcome indecision and weakness; taking the necessary action under all circumstances, even if it is unpleasant and requires effort" and people with high conscientiousness are more concentrated in the learning process. The researches made on self discipline; draws attention to its positive effect on perseverance (Vainio and Daukantaitė, 2016; Akbağ and Ümmet, 2017; Kannangara and others, 2018). At the same time, studies have shown that conscientiousness has significant positive effects on academic achievement (Tangney, Baumeister & Boone, 2004; Zhao & Kuo, 2015; Zimmerman & Kitsantas, 2014). In addition, Gong and others, (2009) found that conscientiousness has positive effects on learning. In this study, it was determined that conscientiousness had a positive effect on learning through social networks. The high level of perseverance and concentration of conscientious candidate teachers shows that they also use these skills effectively in social networks.

As a result; In the light of the findings of this study, positive and significant relationships were found between the big five personality traits of extraversion, openness to experience, agreeableness and conscientiousness, and learning based on social networks in physical education and sports teacher candidates. In addition, it was determined that agreeableness was predictive of learning based on social networks.

The social networks that people prefer, the frequency of using them and the way they interact are related to their personality traits. In this context, if the administrators of professional or amateur social networks for learning-teaching purposes plan and share their content by taking into account different personality traits, more people will be able to benefit from these contents. Based on this information, increasing the sharing of physical education and sports teacher candidates in social networks that will support their field, professional and general culture information can provide them with an opportunity for both professional and personal development. In addition, trainings for physical education and sports teacher candidates to use social networks efficiently may allow them to benefit more from these platforms.

REFERENCES
Akbağ, M. & Ümmet, D. (2017) Predictive role of grit and basic psychological needs satisfaction on subjective well-being for young adults. *Journal of Education and Practice*, 8(26), 127-135.
Akdeniz, C. (2013). *Kişilik profillerine göre öğretmenlerin öğrenme stratejisi tercihleri ve öğretim stratejilerini kullanma durumları (Eskişehir ili örneği).* (Doktora Tezi). Anadolu Üniversitesi, Eğitim Bilimleri Enstitüsü. Eskişehir.
Aladwani, A. M. (2014). Gravitating towards Facebook (GoToFB): What it is? and How can it be measured?. *Computers in Human Behavior*, *33*, 270-278.
Al-Dwaikat, T. N., Aldalaykeh, M., & Rababa, M. (2020). The relationship between social networking sites usage and psychological distress among undergraduate students during COVID-19 lockdown. *Heliyon*, *6*(12), e05695.
Al-Rahmi, W., & Othman, M. (2013). The impact of social media use on academic performance among university students: A pilot study. *Journal of İnformation Systems Research and innovation*, *4*(12), 1-10.
Amichai-Hamburger, Y., & Vinitzky, G. (2010). Social network use and personality. *Computers in Human Behavior*, *26*(6), 1289-1295.
Andreassen, C. S., Torsheim, T., & Pallesen, S. (2014). Use of online social network sites for personal purposes at work: does it impair self-reported performance?. *Comprehensive Psychology*, *3*, 01-21.
Aslan, S., & Yalçın, M. (2013). Öğretmenliğe ilişkin tutumun beş faktör kişilik tipleriyle yordanması. *Milli Eğitim Dergisi*, *43*(197), 169-179.
Bachrach, Y., Kosinski, M., Graepel, T., Kohli, P., & Stillwell, D. (2012, June). Personality and patterns of Facebook usage. In *Proceedings of the 4th annual ACM web science conference* (pp. 24-32).
Bandura, A. (1986). Social foundations of thought and action. *Englewood Cliffs, NJ*, *1986*(23-28).
Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*, *44*(1), 1-26.

Bartlett-Bragg, A. (2006). Reflections on pedagogy: Reframing practice to foster informal learning with social software, Faculty of Education University of Technology, Sydney

Bassili, J. N. (2006). Promotion and prevention orientations in the choice to attend lectures or watch them online. *Journal of Computer Assisted Learning*, *22*(6), 444-455.

Bitlisli, F., Dinç, M., Çetinceli, E., & Kaygısız, Ü. (2013). Beş faktör kişilik özellikleri ile akademik güdülenme ilişkisi: Süleyman Demirel Üniversitesi Isparta meslek yüksekokulu öğrencilerine yönelik bir araştırma. *Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, *18*(2), 459-480.

Bowden-Green, T., Hinds, J., & Joinson, A. (2020). How is extraversion related to social media use? A literature review. *Personality and Individual Differences*, *164*, 110040.

Bulut, Z. A., & Doğan, O. (2017). The ABCD typology: Profile and motivations of Turkish social network sites users. *Computers in Human Behavior*, *67*, 73-83.

Burger, J. M. (2016). *Kişilik: Psikoloji biliminin insan doğasına dair söyledikleri*. (6. Baskı). (Çev. Ed. Erguvan-Sarıoğlu, İ.D.) İstanbul: Kaknüs Yayınları.

Chamorro-Premuzic, T. (2007). Personality and individual differences. Oxford: WileyBlackwell.

Cheung, C. M., & Lee, M. K. (2010). A theoretical model of intentional social action in online social networks. *Decision Support Systems*, *49*(1), 24-30.

Cheung, C. M., Chiu, P. Y., & Lee, M. K. (2011). Online social networks: Why do students use facebook?. *Computers in Human Behavior*, *27*(4), 1337-1343.

Correa, T., Hinsley, A. W., & De Zuniga, H. G. (2010). Who interacts on the Web?: The intersection of users' personality and social media use. *Computers in Human Behavior*, *26*(2), 247-253.

Çayırlı, E. (2017). *Sosyal medya kullanım özelliklerinin kişilik yapılanmaları, yaşam doyumu ve depresyon açısından incelenmesi.* Yüksek Lisans Tezi. Işık Üniversitesi, Sosyal Bilimler Enstitüsü. İstanbul.

Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology*, 41(1), 417-440.

Dogruer, N., Menevi, I., & Eyyam, R. (2011). What is the motivation for using Facebook?. *Procedia-Social and Behavioral Sciences*, *15*, 2642-2646.

Eid, M. I., & Al-Jabri, I. M. (2016). Social networking, knowledge sharing, and student learning: The case of university students. *Computers & Education*, *99*, 14-27.

Erdheim, J., Wang, M., & Zickar, M. J. (2006). Linking the Big Five personality constructs to organizational commitment. *Personality and individual differences*, *41*(5), 959-970.

Ergün, S. ve Cömert-Özata, S. (2016). Okul öncesi öğretmenliği bölümüne devam eden öğrencilerin yaşam boyu öğrenme eğilimleri. *International Journal of Human Science*, 13 (1), 1851-1861.

Evinç, G. Ş. (2004). *Maternal personality characteristics, affective state, and psychopathology in relation to children's attention deficit and hyperactivity disorder and comormid symptoms.* Unpublished Master Thesis. Orta Doğu Teknik Üniversitesi, Sosyal Bilimler Enstitüsü. Ankara.

Eysenck. H.J. (1994). Personality: biological foundations P.A. Vernon (Ed.), The neuropsychology of individual differences, Academice Press, San Diego (1994), pp. 151-207.

Feiler, D. C., & Kleinbaum, A. M. (2015). Popularity, similarity, and the network extraversion bias. *Psychological Science*, *26*(5), 593-603.

Friborg, O., Barlaug, D., Martinussen, M., Rosenvinge, J. H., & Hjemdal, O. (2005). Resilience in relation to personality and intelligence. *International Journal of Methods in Psychiatric Research*, *14*(1), 29-42.

Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist*, *48*(1), 26.

Gong, Y., Rai, D., Beck, J. E. & Heffernan, N. T. (2009). Does self-discipline impact students' knowledge and learning?. International Working Group on Educational Data Mining. 61-70.

Greenhow, C. (2007). "Öğretmen eğitiminin Web 2.0 hakkında bilmesi gerekenler: 21. yüzyılda yeni öğretmenler hazırlamak ". In *Society for Information Technology and Teacher Education International Conference.* Düzenleyen: Crawford, C. 1989 – 1992. San Antonio, Teksas : AACE.

Gupta, S., & Bashir, L. (2018). Social networking usage questionnaire: development and validation in an Indian higher education context. *Turkish Online Journal of Distance Education*, *19*(4), 214-227.

Gvili, Y., Kol, O., & Levy, S. (2020). The value (s) of information on social network sites: The role of user personality traits. *European Review of Applied Psychology*, *70*(2), 100511.

Halko, S., & Kientz, J. A. (2010, June). Personality and persuasive technology: an exploratory study on health-promoting mobile applications. In *International conference on persuasive technology* (pp. 150-161). Springer, Berlin, Heidelberg.

Hamid, S., Waycott, J., Kurnia, S., & Chang, S. (2015). Understanding students' perceptions of the benefits of online social networking use for teaching and learning. *The Internet and Higher Education*, *26*, 1-9.

Hergüner, G., Son, S. B., Hergüner Son, S., & Donmez, A. (2020). The effect of online learning attitudes of university students on their online learning readiness. *Turkish Online Journal of Educational Technology-TOJET*, *19*(4), 102-110.

Hergüner, G., Yaman, Ç., Çaglak Sarı, S., Yaman, M. S., & Dönmez, A. (2021). The effect of online learning attitudes of sports sciences students on their learning readiness to learn online in the era of the new coronavirus pandemic (COVID-19). *Turkish Online Journal of Educational Technology-TOJET*, *20*(1), 68-77.

Hunt, D., Atkin, D., & Krishnan, A. (2012). The influence of computer-mediated communication apprehension on motives for Facebook use. *Journal of Broadcasting & Electronic Media*, *56*(2), 187-202.

Işık, M., & Kaptangil, İ. (2018). Akıllı telefon bağımlılığının sosyal medya kullanımı ve beş faktör kişilik özelliği ile ilişkisi: Üniversite öğrencileri üzerinden bir araştırma. *Itobiad: Journal of the Human & Social Science Researches*, *7*(2).

John, O. P., Donahue, E. M. ve Kentle, R. L. (1991). The big five inventory: Versions 4a and 54, institute of personality and social research. *University of California, Berkeley, CA*.

Junco, R. (2012). Too much face and not enough books: The relationship between multiple indices of Facebook use and academic performance. *Computers in Human Behavior*, *28*(1), 187-198.

Kalra, R. K., & Manani, P. (2013). Effect of social networking sites on academic achievement among introverts and extroverts. *Asian Journal of Social Sciences & Humanities*, *2*(3), 401-406.

Kannangara, C. S., Allen, R. E., Waugh, G., Nahar, N., Khan, S. Z. N., Rogerson, S., & Carson, J. (2018). All that glitters is not grit: Three studies of grit in university students. *Frontiers in Psychology*, *9*, 1539.

Karaman, K., Ekici, M., & Akgun, E. (2011, June). Examining effects of different levels of blended learning activities on student achievement and retention of learning. In *International Conference on New Horizons in Education*.

Karasar, N. (2018). *Bilimsel araştırma yöntemleri: Kavramlar, ilkeler ve teknikler.* (32.Baskı). Ankara: Nobel Yayın Dağıtım.

Kelly, W. E., & Johnson, J. L. (2005). Time use efficiency and the Five-Factor model of personality. *Education*, *125*(3).

Kirschner, P. A., & Karpinski, A. C. (2010). Facebook and academic performance. *Computers in Human Behavior*, *26*(6), 1237-1245.

Kosinski, M., Bachrach, Y., Kohli, P., Stillwell, D., & Graepel, T. (2014). Manifestations of user personality in website choice and behaviour on online social networks. *Machine Learning*, *95*(3), 357-380.

Krämer, N. C., & Winter, S. (2008). Impression management 2.0: The relationship of self-esteem, extraversion, self-efficacy, and self-presentation within social networking sites. *Journal of Media Psychology*, *20*(3), 106-116.

Li, L., Li, A., Hao, B., Guan, Z., & Zhu, T. (2014). Predicting active users' personality based on micro-blogging behaviors. *PloS one*, *9*(1), e84997.

Liu, D., & Campbell, W. K. (2017). The Big Five personality traits, Big Two metatraits and social media: A meta-analysis. *Journal of Research in Personality*, *70*, 229-240.

Liu, L., Preotiuc-Pietro, D., Samani, Z. R., Moghaddam, M. E., & Ungar, L. (2016, March). Analyzing personality through social media profile picture choice. In *Proceedings of the International AAAI Conference on Web and Social Media* (Vol. 10, No. 1).

Marshall, G. (1999). *Sosyoloji sözlüğü*. (Çev.: Akınhay, O. ve Kömürcü, D.) İstanbul: Bilim ve Sanat Yayınları.

McCrae, R. R., & Costa Jr, P. T. (1997). Personality trait structure as a human universal. *American Psychologist*, *52*(5), 509.

McCrae, R. R., & Costa, P. T. (1989). The structure of interpersonal traits: Wiggins's circumplex and the five-factor model. *Journal of personality and social psychology*, *56*(4), 586.

McCrae, R. R., & John, O. P. (1992). An introduction to the five-factor model and its applications. *Journal of Personality*, *60*(2), 175-215.

McLoughlin, C., & Lee, M. J. (2008). The three p's of pedagogy for the networked society: Personalization, participation, and productivity. *International Journal of Teaching and Learning in Higher Education*, *20*(1), 10-27.

Moore, K. D. (2000). *Öğretim becerileri*. (Çev. N. Kaya). Ankara: Nobel Yayın ve Dağıtım.

Oliveira, R. D., Cherubini, M., & Oliver, N. (2013). Influence of personality on satisfaction with mobile phone services. *ACM Transactions on Computer-Human Interaction (TOCHI)*, *20*(2), 1-23.

Özer, D. J., & Benet-Martinez, V. (2006). Personality and the prediction of consequential outcomes. *Annu. Rev. Psychol.*, *57*, 401-421.

Pornsakulvanich, V. (2017). Personality, attitudes, social influences, and social networking site usage predicting online social support. *Computers in Human Behavior*, *76*, 255-262.

Prensky, M. (2001). The games generations: How learners have changed. *Digital Game-Based Learning*, *1*(1), 1-26.

Quercia, D., Lambiotte, R., Stillwell, D., Kosinski, M., & Crowcroft, J. (2012, February). The personality of popular facebook users. In *Proceedings of the ACM 2012 conference on computer supported cooperative work* (pp. 955-964).

Robinson, J.L., Emde, R.N., & Corley, R.P. (2001). Dispositional cheerfulness: Early genetic and environmental infuluences. In R. N. Emde & J.K. Hewitt (Eds.), Infancy to Early Childhood: Genetic and Environmental Influences on Developmental Cahange (pp.163-177). London: Oxford University Press.

Ross, C., Orr, E. S., Sisic, M., Arseneault, J. M., Simmering, M. G., & Orr, R. R. (2009). Personality and motivations associated with Facebook use. *Computers in human behavior*, *25*(2), 578-586.

Sasson, R. (2003). *Will power and self discipline.* New York: SC Pub

Schroeder, A., Minocha, S., & Schneider, C. (2010). The strengths, weaknesses, opportunities and threats of using social software in higher and further education teaching and learning. *Journal of computer assisted learning*, *26*(3), 159-174.

Schwartz, H. A., Eichstaedt, J. C., Kern, M. L., Dziurzynski, L., Ramones, S. M., Agrawal, M., ... & Ungar, L. H. (2013). Personality, gender, and age in the language of social media: The open-vocabulary approach. *PloS one*, *8*(9), e73791.

Serenko, A., Turel, O., & Bohonis, H. (2021). The impact of social networking sites use on health-related outcomes among UK adolescents. *Computers in Human Behavior Reports*, *3*, 100058.

Somer, O. (1998). Beş faktör kişilik modeli. *Türk Psikoloji Yazıları*, 1 (2), 35-62.

Sundararaj, V., & Rejeesh, M. R. (2021). A detailed behavioral analysis on consumer and customer changing behavior with respect to social networking sites. *Journal of Retailing and Consumer Services*, *58*, 102190.

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics*, 6th edn Boston. Ma: Pearson.

Tan, W. K., & Yang, C. Y. (2012). Personality trait predictors of usage of Internet services. In *Communication presented at the 2012 International Conference on Economics, Business Innovation* (Vol. 38).

Tangney, J. P., Baumeister, R. F. & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality,* 72(2), 272-322.

Tatlılıoğlu, K. (2014). Üniversite öğrencilerinin Beş Faktör Kişilik Kuramı'na göre kişilik özellikleri alt boyutlarının bazı değişkenlere göre incelenmesi. *Tarih Okulu Dergisi (TOD),* 7(17), 939-971.

Tsai, T. H., Chang, H. T., Chang, Y. C., & Chang, Y. S. (2017). Personality disclosure on social network sites: An empirical examination of differences in Facebook usage behavior, profile contents and privacy settings. *Computers in Human Behavior*, *76*, 469-482.

Tunca, N., Alkın Şahin, S., & Aydın, Ö. (2015). Öğretmen adaylarının yaşam boyu öğrenme eğilimleri. *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, 11 (2), 432-446.

Vainio, M. M., & Daukantaitė, D. (2016). Grit and different aspects of well-being: Direct and indirect relationships via sense of coherence and authenticity. *Journal of Happiness Studies*, *17*(5), 2119-2147.

Viswesvaran, C. & Ones, D. S. (2003). Measurement error in "big five factors" personality assessment. B. Thompson (Ed.). Score reliability-contemporary thinking on reliability issues (pp. 245-257). California: Sage Publications.

Wilkins, D. (2009). Learning 2.0 and workplace communities. *Learning Circuits, ASTD, available at: www. astd. org/LC/2009/0209_wilkins. htm (accessed June 5, 2009)*.

Yokuş, G., & Telken, T. Y. (2019). sosyal ağlara dayalı öğrenme algısı (SAD) ölçeğinin geliştirilmesi: Geçerlik ve güvenirlik çalışması. *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, *15*(1), 147-164.

Zarafshani, K., Cano, J., Sharafi, L., Rajabi, S., & Sulaimani, A. (2011). Using the Myers-Briggs Type Indicator (MBTI) in the teaching of entrepreneurial skills at an Iranian University. *NACTA Journal*, *55*(4), 14.

Zhao, R., & Kuo, Y. L. (2015). The role of self-discipline in predicting achievement for 10th graders. *International Journal of Intelligent Technologies and Applied Statistics*, *8*(1), 61-70.

Zimmerman, B. J., & Kitsantas, A. (2014). Comparing students' self-discipline and self-regulation measures and their prediction of academic achievement. *Contemporary Educational Psychology*, *39*(2), 145-155.