Kastamonu Education Journal, 2022, Vol. 30, No:2, 473-483
doi: 10.24106/kefdergi.891655

| Research Article / Araştırma Makalesi |

The Relationship Between Preschool Teachers' Computer and Internet Use and Online Learning Motivation

Okul Öncesi Öğretmenlerinin Bilgisayar ve İnternet Kullanımı ile Çevrimiçi Öğrenme Motivasyonları Arasındaki İlişki

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Keywords

1. Preschool education
2. Preschool teacher
3. İnternet
4. Online learning
5. Motivation

Anahtar Kelimeler

1. Okul öncesi eğitim
2. Okul öncesi öğretmeni
3. İnternet
4. Çevrimiçi öğrenme
5. Motivasyon

Received/Başvuru Tarihi
05.03.2021

Accepted / Kabul Tarihi
14.06.2021

Abstract

Purpose: The increasing use of technology in the world and the search for new education methods have made learning processes independent of time and space such as distance education and online learning. Moreover, health concerns have made online learning environments more popular during the pandemic process.

Design/Methodology/Approach: In this study, the relationship between pre-school teachers' computer and internet use and online learning motivation was examined. For this purpose, the relational scanning model, one of the quantitative research methods, was used in the study. The sample of the study consists of 160 preschool teachers. Computer and Internet Usage Scale and Online Learning Motivation Scales were used to collect data in the study. t- test, one-way variance (ANOVA), Pearson correlation and, simple linear regression analysis was used for data analysis.

Findings: It has been revealed that the online learning motivations of preschool teachers do not differ significantly according to gender, time spent on the internet and, the number of media tools used to access the internet. Besides, it has been observed that the online learning motivation of pre-school teachers who have just started the profession is higher than experienced teachers.

Highlights: It was revealed that as the self-efficacy of pre-school teachers using computers and the internet increased, their online learning motivation also increased.

Öz

Çalışmanın amacı: Dünyada artan teknoloji kullanımı ve yeni eğitim yöntemleri arayışı, öğrenme süreçlerini uzaktan eğitim ve çevrimiçi öğrenme gibi zamandan ve mekândan bağımsız hale getirmiştir. Dahası, sağlık sorunları, pandemi sürecinde çevrimiçi öğrenme ortamlarını daha popüler hale getirdi. Bu nedenle bu araştırmada okul öncesi öğretmenlerinin bilgisayar ve internet kullanımı ile çevrimiçi öğrenme motivasyonu arasındaki ilişki incelenmiştir.

Materyal ve Yöntem: Araştırmada nicel araştırma yöntemlerinden ilişkisel tarama modeli kullanılmıştır. Araştırmanın örneklemi 160 okul öncesi öğretmeninden oluşmaktadır. Araştırmada veri toplamak için Bilgisayar ve İnternet Kullanım Ölçeği ve Çevrimiçi Öğrenme Motivasyon Ölçekleri kullanılmıştır. Veri analizinde ttesti, tek yönlü varyans (ANOVA), Pearson korelasyon ve basit doğrusal regresyon analizi kullanılmıştır.

Bulgular: Okul öncesi öğretmenlerinin çevrimiçi öğrenme motivasyonlarının cinsiyete, internette geçirilen süreye ve internete erişim için kullanılan medya araçlarının sayısına göre anlamlı bir farklılık göstermediği ortaya çıkmıştır. Ayrıca mesleğe yeni başlayan okul öncesi öğretmenlerinin çevrimiçi öğrenme motivasyonlarının deneyimli öğretmenlere göre daha yüksek olduğu görülmüştür.

Önemli Vurgular: Bilgisayar ve internet kullanan okul öncesi öğretmenlerinin öz yeterlikleri arttıkça çevrimiçi öğrenme motivasyonlarının da arttığı ortaya çıkmıştır.

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Citation/Alıntı: Kardeş, S., & Kahraman-Vangölü, S. (2022). The relationship between preschool teachers' computer and internet use and online learning motivation. *Kastamonu Education Journal, 30*(2), 473-483. doi: 10.24106/kefdergi.891655

INTRODUCTION

In the research conducted on the increasing prevalence of the internet and computer use in the world, it was concluded that nearly 4,8 billion people use the internet among the world population. It is also seen that widely used internet and computer technologies are used for a more qualified and innovative education (Santiago, Navaridas & Andía, 2016). Therefore, digital learning replaces traditional education on a daily basis (Szymkowiak, Melović, Dabić, Jeganathan & Kundi, 2021). When we look at internet and computer statistics in Turkey, According to the Turkish Statistical Institute (TSI), 79% of the Turkish population aged 16-74 are Internet users. Considering the availability of information technology products in households, it was stated that 16.7% households had a desktop computer, 36.1% had a portable computer (laptop, netbook), and 22.0% had a tablet computer.

Web 1.0 was the first generation of the World Wide Web that allowed us only to access information, in the early times (Lawrence & Giles, 2000). The Internet has been developed over time and with Web 2.0, which is defined as the second generation, it has become possible for users to interact, shop, and share their thoughts by opening a blog (Cormode & Krishnamurthy, 2008). It was also an alternative online education platform as it allowed users to interact and share content (Rollett, Lux, Strohmaier, Dosinger & Tochtermann, 2007). People use computers and the Internet to access information (Naci & Tatli, 2020), communicate (Kisanga & Ireson 2016), plan and shop (Majid & Firend, 2017), and study and make education engaging, easy, and fun (Constantinides & Fountain, 2008). Moreover, digital devices and the Internet motivate people to learn (Mumtaz, 2000). The increasing number of Internet users with various purposes has brought many issues, such as equality, access to information, technical support, benefits in education, and possible risks (Christensen & Knezek, 2009; Greenhow, Robelia & Hughes, 2009; Kisanga & Ireson, 2016; Tareen & Haand, 2020).

Considering the researches, it is seen that internet-based technologies are developing rapidly and are widely used in the education process (DeGennaro, 2008; Vaala & Bleakley, 2015; Sandholtz, 1997). For example, teachers use the Internet as a resource of professional development (Agyei & Voogt 2010; Ibieta, Hinostroza, Labbé & Claro, 2017). Therefore, technology use for teacher training is becoming increasingly important (Lawless & Pellegrino, 2007). Computer and Internet use in the classroom increases students' academic performance (Hinostroza, Labbé, Brun & Matamala, 2011) and promotes visual and deep (Fullan, 2014) and social learning (McKnight, O'Malley, Ruzic, Horsley, Franey & Bassett, 2016; Scardamalia & Bereiter, 2006). The Internet also provides great convenience for information access and content sharing (Appana, 2008, Correa, Pavez & Contreras, 2020; Saraçoğlu, Uça & Candar, 2012). Thus, it provides teachers with alternative educational techniques and allows them to modify curricula and prepare materials (Hinostroza, Ibieta, Claro & Labbé, 2015; UNESCO, 2011). Since they must be the pioneers of change and innovation in the education process (Hargreaves & Fullan, 2012), teachers are expected to use computers and the internet to enrich their teaching activities as well as to use computers and the internet effectively (Meneses, Fàbregues, Rodríguez-Gómez & Ion, 2012; Strawhacker, Lee & Bers, 2018). Teachers cannot make use of computers and the Internet as much as they are supposed to because of poor access to technology, insufficient infrastructure, inadequate training in technology usage, and lack of technological skills (Bingimlas, 2009; Hew & Brush, 2007; Dong, 2018; Njiku, Maniraho & Mutarutinya, 2019; Mumtaz, 2000; Otterborn, Schönborn & Hultén, 2019). In some cases, even if sufficient technological infrastructure is provided, it is seen that technology is not used effectively in education due to teachers' negative attitudes towards technology (Bozkurt & Johnston-Wilder, 2011). However, teacher's online learning practices have shown positive effects on children's academic performance (Mou & Kao, 2020).

The integration of technology into education has also affected preschoolers' learning environment (Edwards, 2016). Today, the use of technology has become a necessity to offer new learning opportunities to children (Bingimlas, 2009). It is known that preschool children use digital tools extensively in their daily life (Couse & Chen, 2010; Mertala, 2017; Neuman, 2015; Ofcom, 2019). Therefore, we should consider the characteristics of early childhood and integrate technology into preschool education (Bajovic, 2018). The use of information and communication technologies in early childhood education and programs contributes to children's learning processes (Masoumi, 2015). Game-based learning might be a more useful approach to teaching for preschoolers (Beck & Wade, 2006). Nacher, Garcia-Sanjuan, and Jaen (2016) revealing that game technologies are appropriate tools for the development of children's capacities, However, there are also concerns about technology posing risks to preschoolers' interaction and socioemotional development (Mertala, 2017; Genç, 2014). In addition, it has been revealed that preschool teachers support the use of technology in children's education (Aubrey & Dahl, 2014). we should integrate technological tools and computer-aided education into preschool education (Donohue & Schomburg, 2017). Therefore, recently, various programs have been implemented for teachers and students to develop their digital skills and use digital materials in the education process (Del Carmen Ramírez-Rueda, Cózar-Gutiérrez, Colmenero & González-Calero, 2021).

Online learning, which is one of the greatest innovations of computer and Internet use (Masoumi, 2020), refers to a process in which Internet technology and digital devices (TV, smartphone, tablet, etc.) promote learning (Clark & Mayer, 2016). Online learning platforms move away from the traditional learning structure and diversify education with games, simulations, and instructional videos and animations (Mayer, 2017). They provide students with the opportunity to learn and interact simultaneously or at different times (Jolliffe, Ritter & Stevens, 2012; Wang, 2008). Many educational institutions capitalize on

them because they are cost-effective platforms that facilitate the transmission of information and allow teachers to provide educational services anywhere and anytime (Gilbert, 2015) and students to learn at their own pace through online materials (Panigrahi, Srivastava & Sharma, 2018). School closures and suspension of face-to-face education due to the COVID-19 pandemic have made online learning platforms and distance education more popular (Sandars et al., 2020). Therefore, there has been a growing body of research on online learning and computer and Internet use.

Motivation is essential for high-quality education (Szymkowiak, Melović, Dabić, Jeganathan & Kundi, 2021). Motivation plays a vital role in learning and in the effective management of the learning process. Also, motivation deeply affects us where, what and when we learn (Schunk & Usher, 2012). And one of the biggest problems in online learning is motivational difficulties that students and teachers will experience with regard to online learning (Ryan & Deci, 2020). The desire to be involved in online learning, the development of technological skills, technological infrastructure, attitude and awareness towards technology will also affect online learning motivation. For all online motivational problems, educators should take precautions and positive attitudes towards online learning (Karataş ve Arpacı, 2021; Kim, 2020).

Literature Review on Online Learning Motivation

Research on online learning addresses preservice teachers' readiness levels (Alsancak Sırıkkaya & Yurdagül, 2016; Lei, 2009), academics' views on distance education (Gürer, Tekinarslan & Yavuzalp, 2016), and teacher qualification in online learning platforms (Kim, Xie & Cheng, 2017). Research on computer and Internet use focuses on using technology in early childhood and media habits of preschool teachers (Meneses, Fàbregues, Rodríguez-Gómez & Ion, 2012; Öner, 2020; Tekin & Işıkoğlu Erdoğan, 2020), teachers' beliefs in technology use in the classroom (Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur & Sendurur, 2012; Kim, Kim, Lee, Spector & DeMeester, 2013), factors affecting the use of digital technology in early childhood (Blackwell, Lauricella & Wartella, 2014), the effect of social media on children, adolescents, and families (O'Keeffe & Clarke-Pearson, 2011), teachers' attitudes towards computer and Internet use (Hernández- Ramos, Martínez-Abad, Peñalvo, García-Herrera & Rodríguez-Conde, 2014; Prestridge, 2012), and primary school teachers' attitudes towards computers and the Internet (Bahar, Uludağ & Kaplan, 2009). However, there is no published research on the relationship between preschool teachers' computer and Internet use and online learning motivation. Therefore, we aimed to determine the factors affecting (1) preschool teachers' competence in using computers and the Internet and (2) their motivation to participate in online learning. We also investigated whether there was a correlation between computer and Internet use and online learning motivation. To that end, we sought answers to the following questions:

- Do gender, the type of digital device, and the time spend online each day affect preschool teachers' online learningmotivation?
- Does preschool teachers' self-efficacy in computer and Internet use significantly predict their online learning motivation?
- Is there a correlation between preschool teachers' computer and Internet use and online learning motivation?

METHOD

Research Design

This descriptive study adopted a quantitative correlational survey model to determine the degree of the relationship between variables (Fraenkel & Wallen, 2006). Quantitative research yields results based on deductive measurements and analysis (Watson 2015). A correlational survey model is used to determine the existence and the level of the relationship between two or more variables (Karasar, 2014). This study aimed to describe a situation as it is, with no intervention.

Participants

The study was approved by the Chair of the Social and Humanities Ethics Committee of Van Yüzüncü Yıl University (date: 17.02.2021, issue: 2021/02-01). The number of teachers in preschool education institutions of Turkey is 98.825 (Ministry of National Education, 2020). Preschool teachers take technology courses in undergraduate education but there is not any education about information technologies and technology labs in preschool education institutions.

Due to the pandemic, data were collected online from the teachers. The participants were also selected based on purposeful sampling. The criteria used were willingness to participate and at the time of the study employment in public preschools. After the invitation to participate in the study, the sample consisted of 160 preschool teachers (145 women and 15 men). 85 participants were 20-30 years of age, 61 were 31-40 years of age, and 14 were ≥ 41 years of age. Fifty-nine participants had 1-5 years of work

experience, 51 had 6-10 years of work experience, 33 had 11-15 years of work experience, and 17 had 16 ≥ years of work experience. 11 participants spent one hour or less online, 83 spent 1-3 hours online, and 66 spent three hours or more online. 40 participants had only one digital device, 57 had two digital devices, and 63 had three or more digital devices. Table 1 shows the participants' demographic characteristics.

Table 1. Distribution of demographic characteristics

Demographic Characteristics	Variable	f	%
Gender	Woman	145	90.6
	Man	15	9.4
	Total	160	100
Age (years)	20-30	85	53.1
	31-40	61	38.1
	≥41	14	8.8
	Total	160	100
Work experience (year)	1-5	59	36.9
	6-10	51	31.9
	11-15	33	20.6
	≥ 16	17	10.6
	Total	160	100
Time spent online per day(hour)	≤ 1	11	6.9
	1-3	83	51.9
	≥ 3	66	41.3
	Total	160	100
Number of digital devices	1	40	25.0
	2	57	35.6
	≥ 3	63	39.4
	Total	160	100

Instruments

The personal information form was developed by the researchers to determine the participants' demographic characteristics, which were the independent variables. The form elicited information on gender, age, work experience, the number of digital devices, and the average time spent online each day.

The Scale of Online Learning Motivation (SOLM) This scale developed by Chen and Jang (2010) in English was adapted to Turkish by Özbaşı, Cevahir, and Muzaffer (2018). The SOLM consists of 28 items scored on a seven-point Likert-type scale. First, the SOLM was translated from English into Turkish and then checked by five experts for compatibility in both languages. Second, two pilot tests were conducted on undergraduate English teaching students (n=70) and undergraduate students with online learning backgrounds (n=437). A Pearson product-moment correlation was used to determine the relationship between the original scale and the Turkish version. The results yielded correlation coefficients of 0.43 to 0.68, suggesting that the two scales measured the same construct and focused participants on similar situations. Reliability was determined using Cronbach's alpha correlation coefficient for the total scale and its subscales. The results pointed to a Cronbach's alpha of 0.60 to 0.94. In this study, the scale had a Cronbach's alpha of 0.88.

The Computer and Internet Self-Efficacy Scale (CISES) This scale developed by Şad and Demir (2015) has two subscales: computer use self-efficacy (eight items) and Internet use self-efficacy (eight items). The items are scored on an 11-point Likert-type scale ("0= I am absolutely sure that I cannot do it" to "10= I am absolutely sure that I can do it"), with the total score ranging from 0 to 160. Şad and Demir (2015) conducted exploratory and confirmatory factor analyses. The former revealed that a two-factor (subscale) structure accounted for 74.02% of the total variance, while the latter confirmed that the two-factor structure had acceptable goodness of fit indices. The "computer use self-efficacy" and "Internet use self-efficacy" subscales had an AVE (average variance extracted) of 69% and 67%, respectively. The researchers reported that the "computer use self-efficacy" and "Internet use self-efficacy" subscales had a Cronbach's alpha of 0.943 and 0.9333, respectively. In this study, CISES had a Cronbach's alpha of 0.89.

Data Collection and Analysis

The study was approved by the Chair of the Social and Humanities Ethics Committee of Van Yüzüncü Yıl University. Afterward, data were collected online using a Google Form. Before data collection, all participants were informed about the research purpose and procedure and told that the participation was voluntary and that data would only be used for scientific purposes and would in no way be shared with third parties. The data were analyzed using the Statistical Package for Social Sciences (SPSS). Number and percentage were used for descriptive analysis. Independent-samples t-test, two-way ANOVA, Pearson correlation, and simple

linear regression analysis were used for statistical analysis.

RESULTS

The findings obtained in the research are presented in this section. In the research, The descriptive data were used for normality testing (Table 2).

Table 2. Normality assumption test

Scales	Kurtosis	Skewness
SOLM	1.151	-.795
CISES	-.308	-.431

The acceptable range of skewness and kurtosis for a normal distribution is +2 to -2, suggesting that parametric tests should be used for analysis (Tabachnick & Fidell, 2013; George % Mallery, 2010). Participants' SOLM scores had a kurtosis and skewness of 1.151 and -.795, respectively. Their CISES scores had a kurtosis and skewness of -.308 and -.431, respectively. The results indicated that the data were normally distributed. Therefore, an independent samples t-test was used to determine the effect of gender on online learning motivation, while one-way analysis of variance (ANOVA) was used to determine the effect of work experience, age, time spent online each day, and the number of digital devices on online learning motivation. A Scheffe's test was used to make posthoc comparisons to determine the source of significant differences. Pearson correlation analysis was used to determine the relationship between online learning motivation and Internet use self-efficacy. Simple linear regression analysis was used to determine whether Internet use self-efficacy predicted online learning motivation.

Table 3. Descriptive statistics for online learning motivation and computer and internet use self-efficacy

Scale	N	Max.	Min.	X	ss
SOLM	160	193	52	146.26	23.04
CISES	160	160	65	121.24	21.77

Participants had a mean SOLM and CISES score of 146.26 and 121.24, respectively (Table 3).

Table 4. Effect of gender on online learning motivation

Scale	Gender	N	X	df	t	p
SOLM	Woman	145	147.36	23.102		
	Man	15	135.60	20.181	1.897	0.06

*p<0.5

An independent samples t-test was used to determine whether gender affected participants' online learning motivation. Male and female participants had a mean SOLM score of 135.60 and 147.36, respectively, showing no significant difference. The result indicated that gender did not affect online learning motivation (t_{158}=1.897, p>.05).

Table 5. Effect of work experience, number of digital devices, and time spent online on online learning motivation

Independent variables	Source of Variance	Sum of squares	Sd	Mean square	F	p
Work experience	Between-group	5306.274	3	1768.758	3.487	.017
	Within-group	79128.219	156	507.232		
	Total	84434.494	159			
Number of digital devices	Between-group	563.891	2	281.945	.528	.591
	Within-group	83870.603	157	534.208		
	Total	84434.494	159			
Time spent online	Between-group	325.163	2	162.581	.303	.739
	Within-group	84109.331	157	535.728		
	Total	84434.494	159			

*p<0.5

A one-way analysis of variance (ANOVA) was performed to look into the effect of work experience, number of digital devices, and time spent online on online learning motivation. The results showed significant differences. A Scheffe's test was used to make posthoc comparisons to determine the source of the differences. The results showed

that participants with five years or less work experience (x=152.39) had a significantly higher mean SOLM score than those with 16 years or more work experience (x=133.53).

According to the results, the number of digital devices *(F=.529; p>.05)* and the time spent online each day *(F=.739; p>.05)* had no effect on participants' online learning motivation.

Table 6. Correlation between online learning motivation and internet use self-efficacy

	SOLM	CISES
SOLM	1	
CISES	.196*	1

*p<0.5 SOLM: Online learning motivation, CISES: Computer and Internet use self-efficacy

Pearson correlation analysis was used to determine the relationship between online learning motivation and computer and Internet use self-efficacy. The results showed that participants' SOLM and CISES scores were positively correlated (r=.196, p<0.5), suggesting that the higher the computer and Internet use self-efficacy, the higher the online learning motivation.

Simple linear regression analysis was used to determine whether computer and Internet use self-efficacy predicted online learning motivation.

Table 7. Model of online learning motivation and computer and internet use self-efficacy

		R	R^2	F	p
SOLM	CISES	.196	.038	6.283	.013

*p<0.05 SOLM: Online learning motivation, CISES: Computer and Internet use self-efficacy

The model showed that CISES accounted for 3% of the total variance of SOLM, suggesting that the model was significant (F= 6.283, p=.013).

Table 8. Simple linear regression analysis for online learning motivation and computer and internet use self-efficacy

Variable	B	Standard error	β	t	p
Constant	121.157	10.172		11.911	.000
CISES	.207	.083	.196	2.507	.013

*p<0.05

The results showed a significant relationship between computer and Internet use self-efficacy and online learning motivation (R=.19, R^2=.03, p=.01), with computer and Internet use self-efficacy explaining 3% of the total variance of online learning motivation.

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

In the study, it was revealed that the online learning motivations of preschool teachers did not differ significantly according to gender. Yukselturk and Bulut (2009) also reported that gender did not affect students' online learning motivation. Similarly, Hinojo-Lucena, et al., (2019) didn't find gender as an influencing factor in digital competence. On the other hand, Young and McSporra (2001) argued that gender affected students' motivation to use online materials. Although there are studies stating thatwomen are disadvantaged in male-dominated society in the online learning process, there are also studies showing that women have a better learning experience (Gunn, McSporran, Macleod & French, 2003; Price, 2006; Rovai & Baker, 2005). In addition, it has been observed that the online learning motivation of the pre-school teachers who have just started the profession is higher than the experienced teachers. Ibieta, Hinostroza, Labbé, and Claro (2017) also found that teachers who were new to the profession were better at using technological tools than experienced ones. The inadequacy of experienced teachers in ICT may be due to the fact that they did not receive ICT training during their undergraduate education. Unlike this research, Hinojo-Lucena etal. (2019) found that more years of teaching experience leads to achieving a higher digital competence level. Moreover, young teachers are more successful in using technology in professional development, communication with students and providing pedagogical support. However, in the last years, many researchers are alerting about the risks arising from excessive and disproportionate use of ICT by the young (Dishkova & Papancheva, 2019). The number of digital devices and the average time spent online each day

had no effect on preschool teachers' online learning motivation. However, Teachers' spending time on theInternet, especially for their professional development, is expected to affect the use of technology in classroom practices (Sandholtz, 2001).

It was revealed that as the self-efficacy of pre-school teachers using computer and internet increased, their online learning motivation also increased. Teachers who are motivated to use technology are more likely to integrate it into their lectures (Blackwell, Lauricella & Wartella, 2014). In addition, a relationship was found between teachers' experiences of using computers and their beliefs about using technology in the classroom (Chiu, Liang & Tsai, 2016). As Wake and Whittingham (2013) puts it, teachers who can use technology and integrate it into the teaching process contribute to their students' learning. Technology provides teachers with teaching materials (McKnight, O'Malley, Ruzic, Horsley, Franey & Bassett, 2016) In addition, the use of digital tools provides alternative ways to achieve learning goals (Otterborn, Schönborn & Hultén, 2019). Also, integrating technology into education brings teachers closer to a student-centered constructivist perspective (Tondeur, Van Braak, Ertmer & Ottenbreit-Leftwich, (2017). Further, traditional methods of education are not suitable for educating the new generation who prefer to use modern technology to support and direct their learning (Szymkowiak, Melović, Dabić, Jeganathan & Kundi, 2021). Therefore, it should be ensured that teachers develop a positive attitude towards increasing their knowledge about digital devices, supporting their skills in using digital devices and adapting digital technology to the learning process (Hernández-Ramos et al., 2014; Spiteri, Chang Rundgren, 2020). Casillas Martín, Cabezas González, and García Peñalvo (2020) argue that preschool teachers are ill-competent to use digital devices for academic and professional development. However, they are keen to integrate digital devices into education (McKnight, O'Malley, Ruzic, Horsley, Franey & Bassett, 2016; Otterborn, Schönborn & Hultén, 2019). Therefore, teachers should have a scope for creativity and innovation rather than just downloading and using ready-made plans, presentations, and resources (Ibieta, Hinostroza, Labbé & Claro, 2017; Miranda & Russell, 2012). To that end, schools should provide technology-based programs and curricula for technologically incompetent teachers (Afshari, Bakar, Luan, Samah & Fooi, 2009; Hyndman, 2018). Because in technology-oriented online learning environments, preschool teachers have important role in supporting children's development and skills (Mou & Kao, 2020).

In conclusion, the higher the computer and Internet use self-efficacy, the higher the online learning motivation among preschool teachers. Therefore, preschool teachers should be provided with technology-based training programs and activities to make sure that they translate their online learning motivation into their lectures. Schools should offer technology-supported education to students to improve their academic performance and help them enjoy the experience of learning. Moreover, the pandemic has shown us that technology plays a crucial role in classroom, learning environments outside the classroom and distance education.

As a suggestion, training on computer and internet use for preschool teachers can be increased. Well-organised courses can increase teachers' motivation and develop their technology skills. Conferences and seminars on computer and internet use can be given to preschool teachers.

Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, author-ship, and/or publication of this article.

Statements of publication ethics

We hereby declare that the study has no unethical issues and that research and publication ethics have been observed carefully.

Researchers' contribution rate

The study was conducted and reported with equal collaboration of the researchers.

Ethics Committee Approval Information

It was decided that this study complied with the ethical rules of Education and Humanities due to the meeting dated 17.02.2021 by Van Yüzüncü Yıl University Ethics Committee from the Social and Humanities

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