THE ROLE OF E-LEARNING READINESS ON SELF-REGULATION IN OPEN AND DISTANCE LEARNING

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ABSTRACT

In recent years, the proliferation of online and distance education has dramatically changed the landscape of education. With the growing demand for flexible and accessible learning opportunities, learners are increasingly turning to online and distance education programs to pursue their academic, personal, and professional goals. However, this modality of learning also presents unique challenges for learners, particularly when it comes to e-learning readiness and self-regulated learning. To explore these factors within the context of the online distance learning environment, this study used a cross-sectional quantitative research method to examine the differences in self-regulated learning skills of open and distance learners in terms of e-learning readiness in the Open Education System of Anadolu University. For the purpose of the study, an online survey was used to collect data. The participants of the study comprised 466 online distance learners. Results indicated that learners with high e-learning readiness levels had higher self-regulated learning skills compared to those with low levels. It was also determined that self-regulated learning skills did not differ in terms of the gender of the learners while they differed in terms of the time the learners spent on the learning management system.

Keywords: Online education, distance education, open and distance learning, self-regulation, e-learning readiness, online learning readiness.

INTRODUCTION

The idea behind open access to education is to liberate learners from location and time restrictions and provide equal and flexible learning opportunities. Playing an important role in meeting this need, online distance learning environments enable learners to gain certain knowledge and skills through internet-based synchronous or asynchronous applications by using information and communication technologies (ICT). Within this context, learners in online distance learning environments gain flexibility in where and when they learn and have more control over when and how they complete course-related activities (Moore & Kearsley, 2012). However, this flexibility requires learners to have different qualifications such as technology usage, time management, and effective interaction with other learners, content, and instructors (Joosten & Cusatis, 2020). Besides, learners are expected to have certain competencies in the learning process. These competencies basically include self-learning, having intrinsic motivation, being able to set one's own learning goals, and acting persistently to put these goals to work (Berigel & Cetin, 2019; Schunk & Greene, 2018). In the context of online and distance learning, self-regulation skills include all these competencies and are crucial for learners to effectively manage their time, stay focused, and engage in meaningful learning. Taking this into account, it becomes increasingly important for learners to be prepared for online learning, and it is also critical that online distance learners possess self-regulated learning skills. The effectiveness of online and distance learning depends largely on the readiness of learners. E-learning readiness, also known as online learning readiness, is

a topic that is regularly discussed in various educational fields, particularly in online distance education (Firat & Bozkurt, 2020; Hung et al., 2010; Torun, 2020). Thus, learners' readiness for online learning is accepted as a determining factor that plays a vital role in taking online courses and being successful in these courses (Wei & Chou, 2020). In addition, readiness is considered as a significant skill for the learning process, as it creates significant changes in the behavior of learners, especially in the learning process (Wei & Chou, 2020). Besides, among the definitions given for the concept, the learners' self-confidence in using the internet, and related computer technologies while fulfilling their individual tasks, and the learners' ability to take responsibility for learning in online learning environments are especially emphasized (Ilgaz & Gulbahar, 2015). Similarly, there is a definition that highlights learners' ability to use technological tools and equipment as well as their access to technological tools in terms of their digital literacy (Hung et al., 2010; Ucar, 2022).

E-learning readiness encompasses a range of factors, including technical skills, digital literacy, motivation, and attitudes toward online distance learning. This readiness can significantly impact the success of online learning, and it is, therefore, crucial to assess and enhance e-learning readiness to ensure optimal learning outcomes (Bovermann et al., 2018; Hung et al., 2010; Torun, 2020). For this reason, it is necessary for distance education researchers to understand learners' e-learning readiness, in order for online learning to increase the academic success of learners. Besides, in the literature, it is underlined that educational institutions, especially within the higher education context, should analyze and understand the needs and concerns of learners and take their readiness for online learning into account before switching to online learning processes (Ilgaz & Gulbahar, 2015; Wei & Chou, 2020).

Becoming successful in open and distance learning depends on the learner's ability to take control of the learning process. This ability is broadly conceptualized as self-regulated learning (Zimmerman, 2002). In the literature, self-regulated learning skills have been comprehensively scrutinized to determine the factors affecting learner success (Alqurashi, 2019; Cakir et al., 2019). During the learning path, the learning objectives determined by the learners themselves serve as a standard in regulating and monitoring the learning process. In other words, learners try to benefit from the learning environment and materials offered to them according to their learning objectives in line with their own needs. Learners are supposed to employ certain strategies to be successful in online distance learning environments which include setting goals for reaching information, making self-assessments for putting goals into practice, planning the progress steps as a result of the evaluations, and following a road map. These strategies become more possible with self-regulated learning skills (Alqurashi, 2019).

In self-regulated learning, attention is drawn to the interaction between the individual characteristics of the learners and the qualities of a learning environment. Moreover, self-regulated learning involves using various cognitive, metacognitive, and motivational strategies to set goals, monitor progress, and adjust learning strategies as needed. Furthermore, it is underlined that learners with high academic achievement have higher self-regulated learning skills compared to learners with low academic achievement (Sitzmann & Ely, 2011). In addition, studies on self-regulated learning have yielded many supportive findings showing the relationship between self-regulated learning skills and academic achievement (Richardson et al., 2012; Sitzmann & Ely, 2011; Puzziferro, 2008). For example, Puzziferro (2008) determined that learners who had effective time management, which was a part of self-regulated learning skills, had higher academic performance. In the meta-analysis study conducted by Sitzmann and Ely (2011) in which the variables affecting academic achievement were determined, the variables of the learning goal, continuity, effort, and self-efficacy were emphasized. Finally, a study conducted by Richardson et al. (2012) showed that setting goals and directing personal effort toward these goals greatly determined average academic achievement. Briefly, self-regulated learning skills facilitate individuals' inability to adapt to different environments with various conditions. In fact, learners with these skills can regulate their learning when they are involved in a different learning environment while acting according to their own learning styles and pace. Consequently, learners can make the best use of the learning opportunity offered to them (Zimmerman, 2002).

The related studies conducted in online and distance education have focused on self-regulation learning to find out its impact on the success of learners. However, less attention has been focused on how self-regulation learning skills are affected by the e-learning readiness of online and distance learners. Therefore, this research targets to bridge this gap. Overall, this paper aims to contribute to the growing body of literature on e-learning readiness and self-regulated learning and provide insights into the strategies that can be employed to enhance the effectiveness of online and distance learning.

PURPOSE OF THE STUDY

In light of the review of the literature, the current research aims to examine self-regulated learning skills of learners in terms of e-learning readiness using Anadolum eKampus platform in the context of the 2021-2022 academic year summer term at Anadolu University Open Education System. The study is important in that it provides a general assessment of learners' e-learning readiness and examines self-regulated learning skills in terms of demographic characteristics of learners. Taking the purpose of the study into account, the study sought answers to the following research questions:

- How are learners clustered in terms of e-learning readiness?
- Do self-regulated learning skills differ significantly in terms of learners' e-learning readiness?
- Do self-regulated learning skills differ significantly in terms of learners' demographic characteristics?

METHOD

For the purposes of the study, a cross-sectional survey design based on the quantitative research method was used. The cross-sectional survey design directly reveals the current attitudes, beliefs, opinions, and practices related to a population or sub-samples taken from the population through various methods (Creswell & Guetterman, 2021, p. 430). Using this research design, the e-learning readiness and self-regulated learning skills in terms of demographic characteristics of learners using the Anadolum eKampus platform were examined. The following subheadings delineate each factor of the research design in more detail: the participants, data collection tools, and data analysis.

Participants

The participants of the study were 466 learners who use the Anadolum eKampus platform in the 2021-2022 academic year summer school term at Anadolu University Open Education System. A total of 300.966 learners enrolled in the summer school. These learners were provided with an online questionnaire via the Anadolum eKampus platform and the learners who entered the platform were asked to fill in the questionnaire voluntarily. Summer school lasted seven weeks and the data were collected throughout the summer school period.

Data Collection Tools

In the study, the online learning readiness scale (OLRS), online self-regulation questionnaire (OSRQ), and a questionnaire to collect the demographics of the participants were used to gather the data. The data collection tools are presented in three parts. In the first part, the ORLS developed by Hung et al. (2010) and adapted into Turkish by Ilhan and Cetin (2013) was used. The scale was measured in a 5-point Likert-type format consisting of five sub-factors and a total of 18 items. In the second part, OSRQ developed by Cho and Cho (2017) and adapted into Turkish by Cakir et al. (2019) was used (Tugtekin, 2022). While the scale was measured in a 5-point Likert-type format, it consisted of three sub-factors and a total of 30 items. Both scales were adapted in accordance with the purpose of the research and were used in the study after content validation was checked by two experts in the field of distance education. In the third part of the questionnaire, demographic questions were included. The survey was created online through Google Surveys and was available on the Anadolum eKampus platform. The participants were informed about the data collection tools through the learning management system.

Data Analysis

Microsoft Excel program was used to combine and clean the data, and SPSS 25 program was utilized to analyze the data. Validity and reliability analysis for the scales used were performed with exploratory factor analysis and Cronbach's α alpha coefficient. In addition, frequency analysis, k-means cluster analysis, independent samples t-test, and one-way analysis of variance (ANOVA) statistics were used to answer the research questions.

FINDINGS

As a result of the pre-check on the collected data, it was seen that repetitive response marking was not done. Subsequently, the univariate normality assumption was checked using the approach suggested by Kim (2013), and on account of the necessary examinations, it was observed that the absolute skewness and kurtosis values of the items of the scales used did not exceed the recommended threshold value ranges (2.0, and 7.0, respectively). Therefore, it was determined that the data did not pose a problem in terms of univariate normality. Then, the approach suggested by Arifin was used to control the multivariate normality assumption and the Mahalanobis distance for the items of the scales used in the study was calculated. Due to the distances obtained, a total of 78 responses exceeding the threshold value ($p<0.001$) were removed from the dataset (Arifin, 2015). With the remaining 388 data, it was seen that the data set provided both univariate and multivariate normality.

When it comes to the demographics of the participants, 54.1% of the participants were female and 45.9% were male. The participants mainly consisted of individuals aged 29 and under (40.6%). On Anadolum eKampus, the participants spent mostly 3-4 hours a day (36.1%). These findings are presented in Table 1.

Table 1. The Demographic Distribution of the Participants

Variable	Group		*n*	%
Gender*	Female		173	54.1
	Male		147	45.9
		Total	320	100.0
Age*	29 and below		130	40.6
	30-39		72	22.5
	40-49		67	20.9
	50 and over		51	15.9
		Total	320	100.0
Daily Time Spent on Anadolum eKampus	Below 1 hour		42	10.8
	1-2 hours		132	34.0
	3-4 hours		140	36.1
	5 hours and over		74	19.1
Total			388	100.0

**There are missing data of 68 participants in these variables.*

The Validity, Reliability, and Descriptive Results of the Scales

Exploratory factor analysis (EFA) was performed to determine how e-learning readiness and OLRS and OSRQ used in the study were distributed according to the factors in the study sample (principal components analysis/varimax). The results obtained are shared in Table 2 and Table 3, respectively.

Table 2. The Validity, Reliability, and Descriptive Results of the OLRS

Item	Mean	SD	FL	VE	EV	CA
OLRS Computer/Internet Self-Efficacy (KMO = 0.713; x^2 = 717,42; p<0.001)						
CSE1	4.04	0.99	0.939			
CSE2	4.30	0.92	0.905	82.22	2.47	0.889
CSE3	3.91	1.05	0.875			
Arithmetic Mean	4.08	0.89	-			
OLRS Self-Directed Learning (KMO = 0.896; x^2 = 1530.60; p<0.001)						
SDL1	4.14	0.90	0.928			
SDL2	4.23	0.94	0.909			
SDL3	3.88	1.01	0.875	77.79	3.89	0.927
SDL4	4.03	0.96	0.855			
SDL5	4.12	0.94	0.839			
Arithmetic Mean	4.08	0.84	-			
OLRS Learner Control (KMO = 0.629; x^2 = 345.06; p<0.001); In an online context,						
LC1	4.11	0.93	0.881			
LC2	4.21	0.88	0.875	67.44	2.02	0.717
LC3	3.19	1.31	0.694			
Arithmetic Mean	3.83	0.85	-			
OLRS Motivation for Learning (KMO = 0.859; x^2 = 1268.9; p<0.001); In an online context,						
MFL1	4.32	0.87	0.926			
MFL2	4.24	0.89	0.923	82.92	3.32	0.931
MFL3	4.19	0.91	0.904			
MFL4	4.22	0.92	0.889			
Arithmetic Mean	4.24	0.81	-			
OLRS Online Communication Self-Efficacy (KMO = 0.742; x^2 = 707.8; p<0.001)						
OCS1	4.18	0.99	0.928			
OCS2	4.05	0.99	0.901	82.87	2.49	0.896
OCS3	4.08	1.02	0.901			
Arithmetic Mean	4.10	0.91	-			

Based on EFA results shared in Table 2, it is seen that the KMO values for the sub-factors of the OLRS range from good to very good, while the results of Barlett's Test of Sphericity are significant in all sub-factors. In addition, while the variances explained for the scales are well above the 40% threshold, the eigenvalues meet the threshold criterion of being at least 1.0. These results provide sufficient evidence for the interpretation of EFA (Hair et al., 2014). Factor loadings range between 0.694 and 0.939 and are above the 0.50 threshold. Finally, since the Cronbach's Alpha coefficients for the sub-factors exceed the 0.70 threshold value, it was concluded that these factors were reliable (Hair et al., 2014).

Table 3. The Validity, Reliability, and Descriptive Results of the OSRQ

Item	Mean	SD	FL	VE	EV	CA
OSRQ Self-Regulation in Interaction between Learner and Content (KMO = 0.945; x^2 = 3117.05; p<0.001)						
ILCS1	4.24	0.84	0.850			
ILCS2	3.96	0.95	0.838			
ILCS3	4.01	0.93	0.837			
ILCS4	4.07	0.93	0.835			
ILCS5	3.99	0.96	0.832	63.84	7.02	0.938
ILCS6	3.95	0.96	0.825			
ILCS7	3.88	0.98	0.809			
ILCS8	3.90	1.00	0.806			
ILCS9	3.93	0.99	0.784			
ILCS10	4.11	0.92	0.745			
Arithmetic Mean	3.96	0.77	-			
OSRQ Self-Regulation in Interaction between Learner and Instructor (KMO = 0.951; x^2 = 5178.26; p<0.001)						
ILI1	3.57	1.33	0.956			
ILI2	3.54	1.34	0.948			
ILI3	3.52	1.33	0.948			
ILI4	3.58	1.33	0.944			
ILI5	3.56	1.33	0.939	84.22	7.58	0.976
ILI6	3.44	1.34	0.927			
ILI7	3.46	1.35	0.924			
ILI8	3.87	1.28	0.849			
ILI9	3.22	1.35	0.814			
Arithmetic Mean	3.53	1.22	-			
OSRQ Self-Regulation in Interaction between Learner and Learner (KMO = 0.912; x^2 = 2489.22; p<0.001)						
ILL1	3.39	1.33	0.903			
ILL2	3.39	1.34	0.892			
ILL3	3.45	1.32	0.890			
ILL4	3.06	1.40	0.884	78.99	5.25	0.944
ILL5	3.06	1.40	0.875			
ILL6	3.39	1.37	0.854			
ILL7	3.79	1.16	0.756			
Arithmetic Mean	3.36	1.15	-			

As a consequence of the EFA results presented in Table 3, it is seen that the KMO values for the sub-factors of the self-regulated learning skills scale range from good to very good, while the results of Barlett's Test of Sphericity are significant in all sub-factors. In addition, while the variances explained for the scales are well above the 40% threshold, the eigenvalues meet the threshold criterion. On the other hand, factor loadings vary between 0.745 and 0.956 and are over the 0.50 threshold (Hair et al., 2014). Due to Cronbach's Alpha coefficients ($\alpha > 0.70$), all factors related to the scale were reliable (Hair et al., 2014).

The Clustering Process

A cluster analysis was performed in order to group the study participants in terms of e-learning readiness levels. The analysis was carried out in two stages. In the first stage, Ward's technique, one of the hierarchical clustering methods was used and the pattern of the participants within the framework of e-learning readiness was closely scrutinized. The results of the Ward technique indicated that a cluster consisting of two groups would be appropriate.

In the second stage of the analysis, the k-means technique, one of the non-hierarchical clustering methods, was used to test the reliability of the two-group cluster obtained thanks to the Ward technique (Hair, Black, Babin, & Anderson, 2014). It was understood that the item means gathered from both the Ward technique and the k-means technique were fairly similar to each other. Thus, the results of the analysis showed that it would be appropriate to use a cluster consisting of two groups with low and high e-learning readiness levels in the study. Descriptive information about the obtained cluster is shown in Table 4.

Table 4. The Distribution of the Participants' E-learning Readiness Levels

Factor/Item	OLRS Level			
	Low (n = 208; 53.6%)		High (n = 180; 46.4%)	
	Mean	SD	Mean	SD
Computer/Internet Self-Efficacy	3.64	0.90	4.59	0.55
CSE3	3.48	1.03	4.40	0.84
CSE1	3.58	0.98	4.57	0.69
CSE2	3.86	1.00	4.82	0.43
Self-Directed Learning	3.59	0.81	4.65	0.38
SDL2	3.74	0.96	4.80	0.48
SDL5	3.66	0.96	4.65	0.58
SDL3	3.39	0.97	4.44	0.73
SDL1	3.63	0.88	4.73	0.47
SDL4	3.51	0.91	4.63	0.59
Learner Control	3.38	0.77	4.36	0.59
LC1	3.59	0.91	4.72	0.47
LC3	2.81	1.12	3.62	1.39
LC2	3.74	0.90	4.75	0.46
Motivation for Learning	3.77	0.82	4.79	0.30
MFL1	3.86	0.91	4.87	0.36
MFL3	3.70	0.90	4.76	0.50
MFL2	3.77	0.91	4.78	0.44
MFL4	3.75	0.94	4.77	0.49
Online Communication Self-Efficacy	3.56	0.87	4.74	0.41
OCS3	3.56	0.99	4.68	0.68
OCS1	3.61	0.98	4.83	0.45
OCS2	3.50	0.95	4.69	0.55

In Table 4, it is seen that 53.6% of the study participants had low e-learning readiness levels and 46.4% had high e-learning readiness levels, and, besides, it is observed that the arithmetic means of all sub-factors are high in the participants with high e-learning readiness levels, while these means remain low in those with low level. In this respect, it can be evaluated that the participants with high e-learning readiness levels are higher than those with low e-learning readiness levels with regard to computer and internet usage self-efficacy, self-learning, learner control, learning motivation, and online communication self-efficacy abilities.

The Examination of Self-Regulation in Terms of E-learning Readiness Levels

Independent samples t-test was conducted to determine whether the sub-factors of the self-regulated learning skills of the study participants differed significantly in connection with their e-learning readiness levels. As a result of the analysis, the significance of the unequal variances option was used as the Levene test showed that the variances were not homogeneously distributed regarding the factor of "self-regulation in the interaction between learner and content". On the other hand, the significance of the equal variances option was used, as it indicated that the factors of "self-regulation in the interaction between learner and instructor", and "self-regulation in the interaction between learner and learner" were homogeneously distributed (Pallant, 2011). The results obtained are presented in Table 5.

Table 5. The Examination of Self-Regulation in terms of E-learning Readiness Levels

Variable	Level	N	Mean	SD	t	df	p
Self-Regulation in Interaction between Learner and Content	Low	208	3.59	0.73	-11.794	384.26	***
	High	180	4.38	0.59			
Self-Regulation in Interaction between Learner and Instructor	Low	208	3.09	1.15	-8.341	386	***
	High	180	4.04	1.09			
Self-Regulation in Interaction between Learner and Learner	Low	208	3.04	1.10	-6.270	386	***
	High	180	3.74	1.10			

***p<0.001.

In Table 5, in terms of e-learning readiness levels, the factors of "self-regulation in the interaction between learner and content" (t(384.26) = -11.794; p<0.001), "self-regulation in the interaction between learner and instructor" (t(386) = -8.341; p<0.001), and "self-regulation in the interaction between learner and learner" (t(386) = -6.270; p<0.001) differed statistically significant. Therefore, the findings showed that participants with high e-learning readiness levels had higher self-regulated learning skills in interaction between learner and content, learner and instructor, and learner and learner, compared to those with low e-learning readiness levels. In summary, the participants with high e-learning readiness levels had high self-regulated learning skills while those with low e-learning readiness levels also had low self-regulated learning skills. These findings are presented in Figure 1.

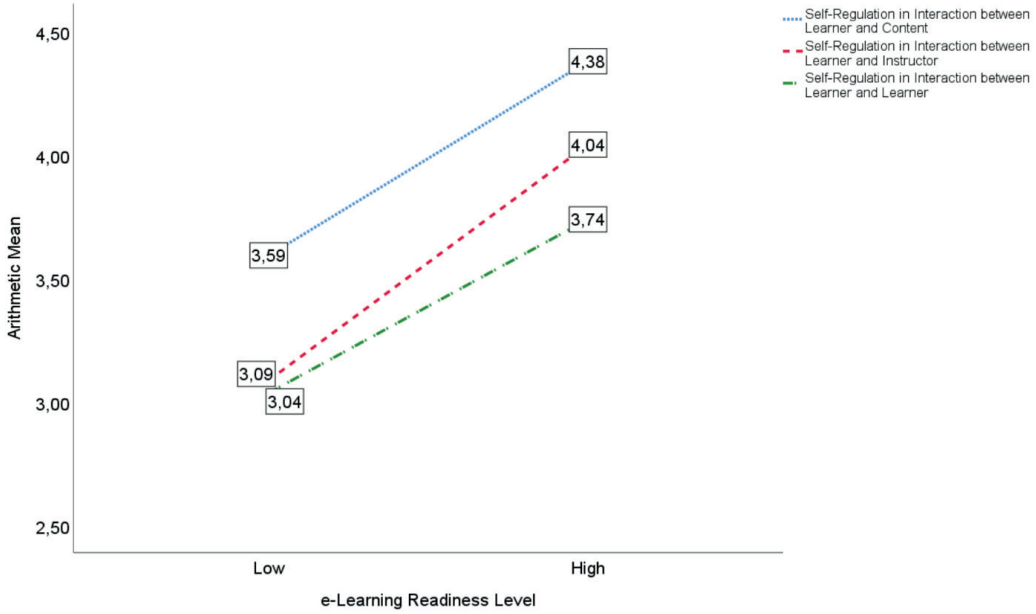

Figure 1. The Examination of Self-Regulation in terms of E-learning Readiness Levels

The Examination of Self-Regulation in Terms of Demographics

Difference tests were carried out to determine whether the sub-factors of the online self-regulation questionnaire differed significantly in terms of the demographic characteristics of the participants. In this context, one-way analysis of variance (ANOVA) was performed for age and time spent on Anadolum eKampus variables as well as independent samples t-test was used for gender variable. Moreover, when the Levene test showed that the variances were homogeneous, the significance of the equal variances option and the significance of the ANOVA statistic were used. On the other hand, the significance of the unequal variances and the Brown-Forsythe options were examined when it indicated that the variances were not homogeneous. The findings are presented in the following headings.

The Examination of Self-Regulation in Terms of Gender

It was examined whether the sub-factors of the self-regulated learning skills scale differed regarding gender, and the results of the analysis were presented in Table 6.

Table 6. The Examination of OSRQ in terms of Gender

Variable	Group	*n*	Mean	SD	*t*	df	*p*
Self-Regulation in Interaction between Learner and Content	Female	173	3.92	0.82	0.013	318	0.990
	Male	147	3.92	0.76			
Self-Regulation in Interaction between Learner and Instructor	Female	173	3.38	1.33	-0.795	318	0.427
	Male	147	3.49	1.14			
Self-Regulation in Interaction between Learner and Learner	Female	173	3.17	1.20	-1.121	318	0.263
	Male	147	3.32	1.11			

In Table 6, it is noteworthy that the sub-factors of the self-regulated learning skills did not differ regarding gender ($p>0.05$) and showed similar levels of distribution in both male and female learners.

The Examination of Self-Regulation in terms of Age

In order to examine whether the factors in OSRQ differ significantly regarding age, a one-way ANOVA was carried out. The results obtained are shared in Table 7.

Table 7. The Examination of Self-Regulation in terms of Age

Variable	Group	*n*	Mean	SD	*F*	*p*	PH Tukey
Self-Regulation in Interaction between Learner and Content	1. 29 and below	130	3.87	0.89	0.983 BF	0.401	-
	2. 30-39	72	3.92	0.75			
	3. 40-49	67	3.89	0.75			
	4. 50 and over	51	4.08	0.62			
Self-Regulation in Interaction between Learner and Instructor	1. 29 and below	130	3.66	1.17	4.022	**	1-3 1-4
	2. 30-39	72	3.49	1.21			
	3. 40-49	67	3.10	1.31			
	4. 50 and over	51	3.17	1.28			
Self-Regulation in Interaction between Learner and Learner	1. 29 and below	130	3.50	1.12	5.821	**	1-3 1-4
	2. 30-39	72	3.32	1.15			
	3. 40-49	67	2.87	1.12			
	4. 50 and over	51	2.94	1.18			

PH = Post-Hoc; $^{**}p<0.01$.

As shown in Table 7, there is a significant difference related to "self-regulation in interaction between learner and instructor" (F = 4.022; p<0.01) and "self-regulation in the interaction between learner and learner" (F = 5.821; p<0.01). However, the factor of "self-regulation in the interaction between learner and content" did not differ significantly (p>0.05). In order to investigate which age groups differed significantly regarding the factors of "self-regulation in the interaction between learner and instructor" and "self-regulation in the interaction between learner and learner", a Tukey post-hoc test was carried out. The results indicated that there was a significant difference between younger learners and older learners, and younger learners had higher self-regulated learning skills compared to older learners.

The Examination of Self-Regulation in terms of Time Spent on Anadolum eKampus

It was investigated whether the factors in the OSRQ differ significantly in terms of time spent on Anadolum eKampus, and the result of the analysis is given in Table 8.

Table 8. The Examination of Self-Regulation in terms of Time Spent on Anadolum eKampus

Variable	Group	*n*	Mean	SD	*F*	*p*	PH Tukey
Self-Regulation in Interaction between Learner and Content	1. Less than 1 hour	42	3.65	1.03	4.155 BF	**	1-4 2-4
	2. 1-2 hours	132	3.89	0.79			
	3. 3-4 hours	140	4.00	0.68			
	4. 5 hours and over	74	4.17	0.67			
Self-Regulation in Interaction between Learner and Instructor	1. Less than 1 hour	42	3.38	1.22	0.290	0.833	-
	2. 1-2 hours	132	3.55	1.20			
	3. 3-4 hours	140	3.52	1.22			
	4. 5 hours and over	74	3.60	1.27			
Self-Regulation in Interaction between Learner and Learner	1. Less than 1 hour	42	3.30	1.20	0.219	0.832	-
	2. 1-2 hours	132	3.40	1.18			
	3. 3-4 hours	140	3.38	1.11			
	4. 5 hours and over	74	3.29	1.18			

PH = Post-Hoc; $^{**}p<0.01$.

The results presented in Table 8 reveal a significant difference in the factor of "self-regulation in interaction between learner and content" regarding time spent on Anadolum eKampus (F = 4.155; p<0.01). Tamhane test, one of the post-hoc tests, was utilized to determine among which group was a significant difference. The test demonstrated significant differences in terms of "self-regulation in interaction between learner and content" between "learners spending less than 1 hour in a day" and "learners spending 5 hours and over", and between "learners spending 1-2 hours in a day" and "learners spending 5 hours and over" on Anadolum eKampus. In brief, learners spending more time in a day on Anadolum eKampus have more self-regulation in the "interaction between learner and content" skills than those spending less time. In other words, learners who spent more time on the platform interacted with the content more and had more self-regulation skills in the context of the content.

DISCUSSIONS

The present study examines the differences in self-regulated learning skills of open and distance learners in terms of e-learning readiness and learners' demographic characteristics. For this aim, the e-learning readiness levels of learners were determined and the participants were divided into groups by applying cluster analysis. As a result of the cluster analysis, two groups with low and high e-learning readiness were found. The findings showed that learners with high levels of e-learning readiness had better self-regulated learning abilities in three subscales, namely interactions between learner and content, learner and instructor, and learner and

learner than others with low levels of e-learning readiness. These findings coincide with the results of Yavuzalp and Bahcivan's (2021) research. The researchers found that e-learning readiness was a key predictor of self-regulation learning skills and the ability of learners to self-regulate their learning is positively correlated with their level of e-learning readiness. Our findings are also consistent with the findings of Lin and Dai's (2022) study, which reported that e-learnings readiness positively influences self-regulated learning and learners that have a high level of e-learning readiness are more likely to employ self-regulated learning practices. Similarly, Tugtekin (2022) states in her study that the online learning experiences of learners might increase with grade level and implied that learners' e-learning readiness could increase in this process. In this context, it can be said that e-learning readiness might also increase, considering that the online learning experiences of the learners could increase in time with their grade levels. Therefore, learners with high e-learning readiness in the Open Education System might have a high level of self-regulated learning skills.

The results also indicated that there was no significant difference in the learners' self-regulated learning skills regarding gender. That is, both female and male learners have comparable levels of self-regulated learning skills within the context of the study. This result is consistent with the findings of Basol and Balgamis (2016) which found that both male and female learners have similar levels of self-regulated learning skills in technology-mediated environments. In Artsin et al. 's (2020) research, conducted in the context of a massive open online course platform, AKADEMA, contradictory findings were reported. Female learners had higher self-regulated learning skills compared to male learners. Researchers explained this result with female learners being more regulated and better at acting in an organized way and planning.

According to the results, self-regulated learning skills differed significantly in terms of learners' age. This difference showed that younger learners had more self-regulated learning skills compared to older ones. The finding is in parallel with some studies in the literature. It has been determined that especially young learners have more self-regulated learning skills compared to older learners (Artsin et al., 2020). However, different findings have been reported in different studies that the younger the learners are, the more they encounter time constraints or poor planning, and this causes low self-regulation ability (Rabin et al., 2020). Although it is considered that older learners can have more learning experience compared to learners in other age groups, it is known that older learners have some problems in allocating time to the learning process and their control over their learning process is reduced (Castel et al., 2013). As a matter of fact, considering that young learners have the ability to direct themselves and process information very quickly, it is considered that self-regulated learning skills may also be higher (Artsin et al., 2020). Within this context, it is recommended to investigate new strategies or practices that will improve the self-regulated learning skills of older learners in further studies.

The results also revealed that the learners' self-regulated learning skills differed in terms of the time they spent on the Anadolum eKampus platform. According to the related difference, learners who spend more time on the Anadolum eKampus platform have more self-regulated learning skills compared to learners who spend less time. Cho and Shen (2013) also found that learners who spend more time studying in an online learning environment have higher self-regulated learning skills. However, they also underlined that learners with high self-regulated learning skills spent more quality time in online learning environments by making academic efforts.

Although this study reports substantial insight on e-learning readiness and self-regulation in online distance learning milieus, there are some limitations to be considered. Even though the study has an acceptable sample size, it is relatively small. Taking this as a limitation, future research may replicate a study with larger samples in the same or different contexts. Furthermore, the study examined e-learning readiness and self-regulated learning skills of all learners throughout the Anadolum eKampus, not in a specific course. Future studies can be carried out comparatively each semester, especially for the courses in which most learners are enrolled within the Open Education System. In addition, through the findings, support can be provided to research and development activities that can be carried out specifically for Anadolum eKampus.

Overall, the research suggests that e-learning readiness and self-regulation are important factors in the success of learners in online distance education. Learners who are able to effectively regulate their own learning and who are ready to engage with online coursework are more likely to be successful in this setting. Further research is needed to identify strategies that can be used to improve self-regulation and e-learning readiness in online distance education.

CONCLUSION

The present study explored the self-regulated learning skills of learners using the Anadolum eKampus platform at Anadolu University Open Education System in terms of their e-learning readiness. The findings of this study indicated that learners' e-learning readiness is significantly associated with their ability to self-regulate their learning. The results also highlighted that learners who are highly prepared for online learning also possess a high level of self-regulated learning skills. Therefore, it is important to remember that this point may positively affect the success of the learners, which is the ultimate goal in the learning process. Therefore, online educators should aim to promote e-learning readiness among their students to enhance their self-regulation skills. Additionally, future research should focus on investigating effective interventions that can foster learners' readiness for e-learning and enhance their self-regulation learning skills. The results also stated that learners who spent more time on the online learning platform have more self-regulated learning skills compared to learners who spent less. Finally, raising learners' e-learning readiness will help to increase their self-regulation skills and ultimately to learners' success in open and distance learning environments.

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