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Abstract

Today, the advancement of technology development, the invention of artificial intelligence and its use on mobile devices have provided different alternatives and have greatly contributed to the learning and development of a new language. The adoption of the active learning system in education and training, the transition from traditional methods of learning to multiple methods such as face-to-face, online, and mobile applications, the ability to apply mobile learning wherever and whenever desired, easy access to the desired content, and the effort to ensure continuity in learning with fun activities and reminders have also affected the attitudes of users towards mobile learning in the foreign language learning process. The aim of this research is to reveal the readiness and attitudes of individuals towards mobile learning in foreign language learning. In today's world where education is rapidly integrating with technology and artificial intelligence has become a necessity, it is very important to reveal these attitudes. This research will guide the constantly enhancing and transforming education system and contribute to the literature. The sample of the research consists of students of Sakarya University Faculty of Business Administration. The relational screening design, one of the quantitative research methods, was used in the study, and the data were collected through an online survey with the convenience sampling method based on volunteering. According to the analysis results, a high level (.778) positive significant relationship was found between mobile readiness and mobile learning attitude.

Keywords: Foreign Language Education, Mobile Learning, Multi-learning, Survey.

1. Introduction

Today's world is called the information and technology age. Rapid development and change, the continuous and increasing production of information, the dissemination, use and adaptation of information to life have become inevitable over time (Korucu and Biçer, 2019, p. 33). With this continuous and rapid development in technology, the widespread use of the internet and the availability of wireless usage opportunities, mobile devices such as smartphones, laptops and tablets have become indispensable elements of our lives (Gökbulut, 2021, p. 163). Keeping up with this rapid transformation and achieving many tasks in a short time has become a necessity, and all areas such as education, health and finance have been affected by the opportunities offered by information technologies (Korucu and Biçer, 2019, p. 33). The increase in the applications and contents of

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mobile technologies and their widespread use have brought a different alternative to education and training and have made mobile devices functional tools, used in education (Gezer and Ersoy, 2021, p. 792).

Mobile learning, which is used as a supporter and complement to traditional education, is an e-learning (electronic learning) distance education model in which learning and teaching applications are provided via mobile devices (TeknologWeb, 2024). Mobile learning is also a useful form of learning that allows users to access the information they need wherever and whenever they want, and allows them to stay in touch with other users and establish collaborations (Satır et al., 2023, p. 24; Önal and Önal, 2019, p. 283). Mobile learning has brought many opportunities such as enabling permanent and lifelong learning by eliminating the time and space limits with the portability of mobile devices, supporting individualized learning, and providing equal opportunities in accessing information (Çobanoğlu, 2023, p. 76; Koçak and Keskin, 2024, p. 26).

With technological developments such as the widespread use of the Internet and the emergence of new generation mobile devices (smartphones, tablets, etc.) (Koçak & Keskin, 2024, p. 26), the borders between countries have completely disappeared and knowing a foreign language has become an even more important element than before in communication among people and interaction with different cultures (Bakır, 2014, p. 436; Peker, 2018, p. 19). In other words, knowing a foreign language is now essential in order to develop and maintain relations between countries and people, to follow the developments in the world and not to be left out of the information and technology age (Zengin, 2019, pp. 12-13). This lifestyle transformed by the technology and information age and the necessity of knowing a foreign language have also affected the use of technology in learning a foreign language and have made the use of mobile devices widespread (Ozer & Kılıç, 2017, p. 580). Nowadays, every transaction and action is carried out through mobile devices; The fact that mobile devices have become an indispensable part of our lives has also changed the perception of learning a foreign language and has created a generation that internalizes, interprets and perceives technology. This new generation, unlike traditional education, wants to obtain the information they are looking for, wherever and whenever they want, without waiting (Bozkurt, 2015). Individuals who previously wanted to learn a foreign language through school or courses have turned to mobile learning as a result of the rapid and diverse increase in mobile applications, and this has supported multiple learning styles. From this point of view, it is important to reveal the readiness of individuals towards mobile applications and their mobile learning attitudes. Because revealing these attitudes is essential to develop, support and integrate education-training methods into mobile applications.

When the literature was reviewed, it was seen that many mobile learning and mobile learning readiness studies were conducted. In the literature review conducted in line with the aim of the research, it was determined that the students' readiness levels for mobile learning were high and their perception levels for distance education were moderate in the study conducted by Gökbulut (2021) and Çobanoğlu (2023). Based on his research, Çobanoğlu (2023) stated that students used mobile devices more for learning purposes and that students could actively participate in education with mobile devices, especially smartphones, since there were no time and place constraints. In the study conducted by Satır, Kaya, and Beji (2023) on students receiving online education during the COVID-19 period, it was found that the students' attitudes towards mobile applications were moderate. In their study, they also stated that mobile learning decreased anxiety levels and contributed to an increase in self-confidence. In the study conducted by Çıtak and Akman (2023) on university students, it was determined that the relationship between mobile learning attitudes and self-directed learning skills was positive and significant. In addition, they added that gender did not show any difference in attitudes towards mobile learning and self-directed learning. However, most of the studies conducted were either on nursing students and distance education (online-open education, earthquake, Covid-19 etc.) was conducted without traditional education (Çobanoğlu, 2023; Satır, Kaya, & Beji, 2023; Koçak, Keskin, 2024) or mobile applications (dualingo, podcast, tusk etc.) were examined (Keskin, 2010; Gülseçen, et al., 2010). The aim of this research is to contribute to the support of traditional education with mobile applications in the education sector, to increase academic success in students, and to positively develop students' readiness and active use of mobile devices in the integration of technological devices into education.

2. Method

In this study, the relational screening model of the quantitative research method was used and the survey data was collected by the convenience sampling method. For this, a survey link was created by Google forms and individuals were asked to fill it out voluntarily. The obtained data were used in the analysis.

2.1.Purpose and Importance of the Research

The main purpose of this research is to reveal the relationship between the readiness levels of individuals learning foreign languages towards mobile learning and their attitudes towards mobile learning. Revealing this

relationship is very important, when education has shifted to a multiple learning system and is integrated with technology. Because getting the maximum efficiency from technology in education depends on individuals being ready for technological developments.

2.2. Population and Sample of the Research

The research universe consists of students of Sakarya University Faculty of Business Administration. The total number of students in the 2024-2025 fall semester of the Faculty of Business Administration is 3011. 1396 of them are girls and 1615 of them are boys (Sakarya University | Faculty of Business Administration Demographic Information). A total of 63 people were reached through Google form. Of these, 5 people who did not use mobile devices in learning foreign languages were not included in the analyses after the frequency analyses. In addition, when the data obtained from 3 people were excluded in the analyses, it was determined that they disrupted the normal distribution excessively and did not give real answers, so they were not included in the analyses.

2.3. Data Collection Tool

The questionnaire applied to collect data consists of three parts. The first part consists of demographic and descriptive questions. In the second part, the "Mobile Learning Readiness Scale" developed by Lin, Lin, Yeh, and Wang (2016) was used, and this scale was adapted to Turkish by Gökçearslan, Solmaz, and Kukul (2017), and the Cronbach alpha coefficient of the scale was found to be .95. In the third part, the "Foreign Language Mobile Learning Attitude Scale" was used, and this scale was developed by Liu (2017). The scale was adapted to Turkish by Önal and Önal (2019), and the Cronbach alpha reliability coefficient was found to be .90.

Scale	Developed by	Within the Scale
Mobile Learning Readiness Scale	Lin, Lin, Yeh and Wang (2016)	It consists of 17 questions. Questions 1-6 of these questions constitute the "Self-Sufficiency" dimension; questions 7-13 constitute the "Optimism" dimension; and questions 14-17 constitute the "Self-Learning" dimension.
English Mobile Learning Attitude Scale for Adult Learners	Liu (2017)	It consists of a total of 21 questions. The first 9 questions constitute the "Perceived Usefulness" dimension, questions 10-12 constitute the "Effectiveness" dimension, questions 13-16 constitute the "Perceived Control" dimension and finally questions 17-21 constitute the "Behavior" dimension.

Table 1. Scales of the Survey

2.4. Research Model

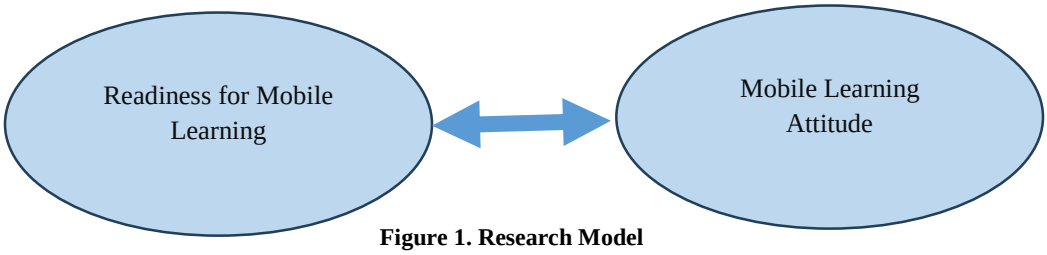

Figure 1. Research Model

2.5. Analysis of Data

The data collected for use in the study were analyzed with SPSS 18. The demographic structure of the data was examined, factor analysis, reliability analysis, descriptive statistical analysis and correlation analysis were performed to measure the direction and degree of the relationship between the variables.

2.6. Demographic Findings

Of the 63 participants who participated in the study, 30 were female and 33 were male. Of these participants, 28 were between the ages of 15-25, 19 were between the ages of 26-35 and 16 were between the ages of 36-45. Approximately 91% (57) of the participants in the study had Turkish as their mother tongue, while 9% (6) had other languages (Arabic (1), Kurdish (2), Azerbaijan Turkish (3)). While the number of individuals, who used mobile devices in learning foreign languages was 58, the number of individuals who did not use them was 5. Approximately 88% (51) of the individuals who used mobile devices stated that they used mobile devices to learn English, 7% (4) Turkish and 5% (3) other languages. Of the individuals who participated in the study, 22 stated that their foreign language proficiency was "beginner level", 34 stated that they were "intermediate level" and 2 stated that they were "advanced level". Four of the individuals said they used mobile devices for "reading", eight for "listening", four for "speaking" and 42 for all of their skills. When asked "Which mobile devices do you use for learning a foreign language?", approximately 58% (34) responded "smartphone", 14% (8) responded "computer" and 28% (16) responded "all". Of the individuals who participated in the survey, 39 said they used mobile devices "every day", four said "every weekday", four said "every weekend day", five said "1-2 days a month" and six said "other times". Additionally, 14 people answered that they used mobile devices to learn a foreign language for 5-15 minutes, 27 people for 16-30 minutes, 10 people for 1-2 hours, 2 people for 3-4 hours, and finally 5 people for more than 4 hours (See Table 2).

Properties		F	%
Gender	Woman	30	47,6
	Man	33	52,4
Age	15-25	28	44,4
	26-35	19	30,2
	36-45	16	25,4
Native language	Turkish	57	90,5
	Other	6	9,5
Leveraging a Mobile Device	Yes	58	92,1
	No	5	7,9
Which Foreign Language	English	51	87,9
	Turkish	4	6,9
	Other	3	5,2
Foreign Language Level	Beginner	22	37,9
	Intermediate	34	58,6
	Advanced	2	3,4
What Skill	Reading	4	6,9
	Listening	8	13,8
	Speaking	4	6,9

	All	42	72,4
Which Mobile Device	Smartphone	34	58,6
	Computer	8	13,8
	All	16	27,6
Frequency of Use	Every day	39	67,2
	Every weekday	4	6,9
	Every day on the weekend	4	6,9
	1-2 days per month	5	8,6
	Other	6	10,3
Average Time Spent	5-15 minutes	14	24,1
	16-30 munites	27	46,6
	1-2 hours	10	17,2
	3-4 hours	2	3,4
	More than 4 hours	5	8,6

Tablo 2. Frequency analyses of scales

2.7. Factor and Reliability Analysis

Before moving on to factor analyses, normal distribution analyses of the scales were performed; the skewness value of the "Mobile Readiness" scale (N=55) was calculated as (-.525, std.h=.322) and kurtosis (kurtosis) value (.617, std.h= 634), and the skewness value of the "Mobile Learning Attitude" scale was calculated as (.008, std.h=.322) and kurtosis (kurtosis) value (.451, std.h= 634). Since the values found were within the normal distribution range, other analyses were performed. The factor and reliability analysis findings regarding the mobile readiness and mobile learning attitude scales used within the scope of the research are given in Table 2.

Factors	**Factor Items**	**Factor Load Values**	**Variance Explained (%)**	**Cronbach's Alpha**	**Average**	**Std. d.**
Mobile Readiness	(Total 14 questions)		71,179	,925	4,24	0,52
Self-Sufficiency	1,2,4,5,11,14,15	,565-,833	51,377	,898	4,35	0,54
Optimism	7,8,9,10	,729-,788	10,655	,887	4,35	0,58
Self-Learning	12,16,17	,679-,839	9,147	,819	3,84	0,81
Mobile Learning Attitude	(Toplam 19 soru)		72,499	,904	3,99	0,47
Behavior (Self-Confidence)	11,13,15,16,17,18,19,21	,594-,820	40,364	,900	4,25	0,55
Perceived	2,3,7,8,9	,669-,873	13,225	,897	4,07	0,72

Usefulness						
Effectiveness in Learning	1,4,5,6	,708-,918	11,170	,879	4,19	0,58
Influencing (Adaptation)	10,12 (re-coded)	,905-,908	7,740	,844	2,35	1,27

Table 3. Factor and Reliability Analyses of Scales

According to the analysis findings, the significance level of the mobile readiness scale was found to be $p<0.01$ and the KMO value was found to be 0.806, which is suitable for factor analysis. According to the analysis results, the mobile readiness scale consisted of 3 factors and the total variance rate explained by these factors was found to be 71%. Three items of the mobile readiness variable, which had 17 items in its original scale, were removed from the analysis because they did not fit into the dimensions completely or were almost equally distributed in more than one dimension. Accordingly, the reliability coefficient (α) of the mobile readiness scale consisting of 14 questions was 0.925, and since it is above 0.70 and very close to 1, we can say it is highly reliable. The general average of the mobile readiness scale is quite high with 4.24. This confirms that individuals benefit from mobile applications while learning a foreign language or are ready for this purpose. In other words, there is consistency between the answers given by individuals. When the means of the sub-dimensions are examined, the means of the self-efficacy and optimism dimensions are found to be equal and high with 4.35. Although the self-learning dimension has a low mean of 3.84 compared to the other dimensions, it has a high mean above the average. As can be understood from the findings, individuals who are ready for mobile learning in foreign language learning think that they have self-efficacy, optimism and self-learning skills.

The significance level of the mobile learning attitude scale was found as $p<0.01$ and the KMO value was found as 0.743, and this variable is also suitable for factor analysis. However, due to the small number of data included in the analysis and the closeness of the questions, it was observed that the factor loadings were not distributed in accordance with the original of the survey. For this reason, the dimensions were named by considering the large number of questions containing the dimensions and the question meanings. In addition, since 2 questions were seen in more than one dimension at the same time, they were removed from the analysis. Accordingly, the total variance explanation rate of the dimensions constituting the mobile learning attitude scale is 77%, and the reliability coefficient of the scale (α) is 0.904. The general mobile attitude scale average is 3.99, and this rate shows that individuals' attitudes towards mobile learning are at a high level. Behavior, one of the sub-dimensions, has the highest average with 4.25. It is followed by perceived usefulness and effectiveness, respectively. However, perceived control has a value below the average with 2.35. Accordingly, individuals are afraid of damaging the device and making mistakes while using a mobile device.

2.8. Correlation Analysis

The findings of the correlation analysis examining the relationship between variables are shown in Table 3.

	Mobile Readiness	**Mobile Learning Attitude**	**Self-efficacy**	**Optimism**	**Self-learning**	**Behaviour**	**Benefit**	**Effect**	**Control**
Mobile Readiness	1								
Mobile Learning Attitude	,778**	1							
Self-efficacy	,913**	,713**	1						
Optimism	,842**	,633**	,683**	1					
Self-learning	,768**	,612**	,525**	,498**	1				

Behaviour	,601**	,801**	,575**	,584**	,347**	1			
Benefit	,728**	,841**	,643**	,555**	,648**	,533**	1		
Effect	,689**	,700**	,632**	,623**	,482**	,457**	,534**	1	
Control	,034	,299*	,026	-,137	,193	-,085	,132	,003	1

Table 4. Correlation Analysis Findings of Variables

The relationship between the mobile readiness scale and the mobile learning attitude scale was measured using Pearson correlation. It was found that there was a positive and significant relationship between these two variables at a high level ($r(df)=0.778$, $p<0.001$). According to this result, we can say that individuals who are ready for mobile learning in foreign language learning develop a positive perspective on mobile learning. There are also high-level significant positive relationships between the sub-dimensions of the mobile learning readiness scale. In addition, above-average positive relationships were found between the sub-dimensions of the mobile readiness scale and the mobile learning attitude scale. However, while there were positive significant relationships between the sub-dimensions of the mobile learning attitude scale, behavior, benefit, impact and mobile readiness, no significant relationship was found with control. Similarly, no significant relationships were found between Control and all other sub-dimensions. A low-level positive relationship was found only between the mobile learning attitude scale and the control sub-variable.

Conclusion, Recommendation, Assumptions and Limitations

With technology taking its place in all phases of life, it has become a necessity for people to keep up with this rapid development of technology. The development of technology does not only transform companies, but also forces people to transform and develop themselves. The fact that banking transactions, school registrations, bill payments, shopping and almost all transactions are carried out via mobile devices and that companies carry all transactions to mobile devices with fast and practical applications in this way has led to individuals being intertwined with mobile devices and tending to benefit from technology even in daily transactions. Education has also been affected by this change and has evolved into a multi-dimensional education-training system. Today, education is provided in both traditional, online and mixed system formats. At the same time, mobile learning with mobile applications integrated with artificial intelligence has been instrumental in making education much more convenient and effective as a support and complement to traditional education. Especially in terms of foreign languages, borders have disappeared and cultural interaction between individuals has increased thanks to mobile devices and wireless communication. This has also provided convenience in many ways to individuals who want to learn a foreign language. With mobile devices, individuals can now review grammar, practice speaking with artificial intelligence, and improve their listening and writing skills. Considering all these benefits, revealing individuals' mobile readiness and attitudes towards mobile learning in terms of foreign language learning and development is important for both application developers and the education-training system that is trying to integrate with technology.

In this study, in which the relationship between the mobile readiness level of foreign language learners and mobile learning attitudes was investigated, many studies investigating mobile readiness and mobile learning attitudes were found when the literature review was made. However, it has been determined that the researches are generally aimed at the perception of distance education or the variables are handled individually or together with different variables. In this study, it is aimed to support traditional learning with mobile learning by revealing mobile readiness attitudes.

According to the findings, a significant positive relationship was found between mobile readiness and mobile learning attitude in foreign language learning. This result is consistent in various studies in the literature. Saran and Seferoğlu (2010) found that multimedia messages and short message messaging exams made a significant contribution to foreign language vocabulary acquisition in foreign language vocabulary learning. In addition, it was concluded that the students welcomed the use of smartphones very positively in the process of learning foreign language words. Gökbulut (2021) and Çobanoğlu (2023) found the level of perception of distance education as medium level and the level of mobile readiness as high level in their study investigating the

relationship between distance education perception and readiness for mobile learning. In addition, they determined the relationship between the two variables to be moderately positive. In the study conducted by Satır, Kaya and Beji (2023) on individuals who received online education during the COVID-19 process, it was determined that attitudes towards mobile applications were at a moderate level. Çıtak and Akman (2023), on the other hand, found a positive relationship between mobile learning attitude and self-directed learning.

With this study, it is thought that technology is now an important part of learning and will contribute to the literature and practice in terms of determining the level of mobile readiness and mobile learning attitude levels and ensuring that the applications to be made and developed are harmonized accordingly. It is thought that the next researches should try to measure the relationship and effect between these two variables exactly. When this research is considered in terms of time and cost constraints, it can be considered as a preliminary study since it was done on very few samples. Studying a sample of sufficient size to fully reveal the relationship and effect between these two variables will make the effect of the study even more valid.

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