Behavioral intention and e-learning management among primary school teachers in Turkey using Technology Acceptance Model (TAM)

By

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Abstract

Purpose-Instructors' perspectives of technology learning applications are crucial for effective and high-quality online learning. As a result, it is essential to pinpoint the affecting variables that influence teachers' acceptance of e-learning. The aim of this research is to determine how Turkish primary school teachers' intentions to use e-learning are affected by perceived ease of use and perceived usefulness which are two vital components of the Technology Acceptance Model (TAM) that was utilized in this study. Design/methodology/approach- The online questionnaire that was filled out by 357 educators countrywide, was adapted for the cross-sectional study, which assessed teachers' intentions to employ e-learning in instruction. The quantitative research approach has been used in this research which was conducted during the COVID-19 pandemic. Findings- The data analysis findings suggested that there was a high positive association in between of perceived usefulness, perceived ease of use, and behavioural intention.

Keywords: Behavioral intention; Perceived ease of use; Perceived usefulness; Technology Acceptance Model (TAM);

Introduction

E-learning or online learning is the use of an Internet connection to enhance the delivery of educational materials, communication, and interaction between learners and instructors in a virtual setting (Ibrahim et al., 2021). E-learning provides students with access to learning tools and resources such as text, audio, video, online forums, and assessment results (Hasanah, Wati and Riana, 2019). According to Ngabiyanto et al. (2021), improvements and innovations in learning must be done so that instructors' ability to fully exploit online learning grows. Mailizar, Almanthari, and Maulina (2021) also said that the purpose to utilize e-learning is the adoption of a learning environment in which there are no physical peers and students have the flexibility to select when and where to study.

Learning in its traditional form has moved away from the confines of the traditional classroom and toward more engaging learning environments as a direct result of advances in information technology (McConnell, 2017). E-learning is one of the most creative possibilities, as it provides students with access to a wide range of programs, as well as the ability to study at their own pace and in their own time (Ibrahim et al., 2021). Consequently, Mailizar et al. (2021) concluded that by studying the behavioral purpose of online learners, it is not only beneficial for educators to optimize their teaching results, but also helps the independent

learning process for students. In spite of the fact that not every teacher selects online learning as an alternative form of education, some educators believe that online and in-person programs are of similar quality and efficiency" (Rusli et al., 2019). Many students are enrolled in at least one online course and e-learning has become an essential part of the competitive educational market in the information technology age, according to Sun, Franklin, and Gao (2017). According to Ibrahim et al. (2021), traditional learning approaches are being replaced by online learning, which allows instructors and students to quickly access learning materials and communicate through the internet. Furthermore, Akbarilakeh et al. (2019) emphasized that educational management must be flexible towards both international and domestic developments in teaching and learning via changes in curriculum in terms of pedagogical and assessment strategies.

As Analin (2020) pointed out, past research has concentrated on strategic leadership and technology adoption, but few studies have examined the interplay between behavioral intention traits in management and how they impact workers' acceptance of technological change. On the other hand, the literature on instructors' intention to use e-learning is readily accessible, and research is undertaken from numerous perspectives to establish what elements influence teachers' behavioral intention to utilize online learning (McConnell, 2017). However, Ma et al. (2017) said that it is necessary to investigate the effect of the Technology Acceptance Model on instructors' desire to adopt online learning within the context, since the issue did not take contexts into complete consideration. McConnell (2017) highlighted that despite the growing acceptability of online learning in the area of education, little is known about how educators and educational institutions view and implement web-based courses.

Problem statement

Despite the fact that studies on internet-based education have been conducted in the past, the topic of its effectiveness remains debatable. According to Baber (2020), many online learning measures fail to give users with a favorable experience and, as a result, cannot account for the desired impact and user satisfaction. Therefore, it is vital to comprehend the real elements that influence instructors' intents to utilize e-learning in order to encourage the use of web-based teaching technology (Landrum, 2020). Regarding the issue, Ibrahim et al. (2021) asserted that TAM is a significant model that can facilitate the exploration of users' intention to adopt e-learning, and that a positive perception of the perceived ease of use and perceived usefulness of technology are essential to encourage users to adopt online learning.

The purpose of this study was to examine the influence of perceived ease of use, perceived usefulness, and behavioral intention on the utilization and management of e-learning by primary school teachers in Turkey. The Technology Acceptance Model defines perceived ease of use as the degree to which potential users anticipate the system to be simple (Ibrahim et al., 2021). In the concept of e-learning management, perceived usefulness is the subjective possibility that a user's performance will improve if they use a certain application system. The Technology Acceptance Model supports both of these concepts. E-Learning management can be described as the responsibilities and practices carried out with the goal of providing strategic direction to an institution's e-learning initiatives, ensuring that established objectives are met, risks are appropriately managed, and resources allocated are used responsibly (Baruque 2004). The adoption of online learning by users and its management are two factors that may be used to evaluate the efficiency of e-learning. As a result, it is very necessary to place a primary emphasis on the management and acceptability of online learning.

Research Objectives

RO1   To determine if perceived ease of use has a significant influence on the behavioral intention and e-learning management among primary school teachers in Turkey.

RO2   To determine if perceived usefulness has a significant influence on the behavioral intention and e-learning management among primary school teachers in Turkey.

RO3   To determine if attitude toward using has a significant influence on the behavioral intention and e-learning management among primary school teachers in Turkey.

Hypotheses

H1   Perceived ease of use have a significant influence on the behavioral intention and e-learning management among primary school teachers in Turkey.

H2   Perceived usefulness have a significant influence on the behavioral intention and e-learning management among primary school teachers in Turkey.

H3   Attitude toward using have a significant influence on behavioral intention and e-learning management among primary school teachers in Turkey.

Literature Review

Behavioral Intention

According to Landrum (2020), behavioral intention is a term used in the technology acceptance literature to describe a user's future desire to use technology. The behavioral intention concept developed by Fishbein and Ajzen serves as the basis for the concept of intention utilise (Chen and Li, 2020). A behavioral intention to utilize the system precedes actual system usage (Ibrahim et al., 2021). According to Landrum (2020), a TAM meta-analysis research revealed that behavioral intention is a strong predictor of actual system usage in both subjective and objective evaluation. Although attitude and perceived usefulness are factors that influence behavioral intention in the original TAM model, perceived ease of use has been discovered as a component that influences behavioral intention in certain circumstances (Baber, 2020). According to McConnell (2017), perceived utility and perceived simplicity of use both impact behavioral intention to use.

Acceptance of technology

As the field of information technology continues to advance at a dynamic speed, the World Wide Web, more colloquially referred to as the Web, has emerged as an essential resource through which the practice of teaching and learning at a distance has become practical (McConnell, 2017). Users are able to have access to a wealth of information and have more opportunities for connection and cooperation because to the proliferation of the internet (Yang, Zhou and Chen, 2019). Instructional activities that are carried out via the use of the internet are referred to by a variety of names, including e-learning, web-based learning, and digital training (McConnell, 2017).

In recent years, online teaching and learning has become more feasible due to the rapid expansion and widespread use of web-based content (Chen and Li 2020). Given that the majority of educational institutions demand application, e-learning will help schools compete more successfully, especially if web-based learning is widely adopted by students and instructors (Roberts, 2019).

To create and deliver e-learning that fits the diverse needs and maturity levels of students, educators should prioritize self-directed learning interactions, meaningful practical learning, and information accessibility (Ibrahim et. al., 2017). Online education helps students study quicker and more successfully throughout the whole learning process in a virtual learning environment, allowing them to keep up with today's fast-paced, knowledge-based world (Chen and Li 2020). Online learning is replacing conventional teaching in the educational system, stated by Ibrahim et al (2017). According to Roberts (2019), the acceptability and expansion of a new technology approach in the education sector may be contingent on user attitudes about online education.

Global perspective

E-learning has been used for 15 to 20 years in almost all education institutions worldwide (Ibrahim, 2017). The capacity to transmit audio-visual information via the internet converted online education into computer-mediated systems (Landrum 2020). In addition, there is a surge in the usage of e-learning technology in Malaysian institutions, and e-learning presents prospects in both the education and training sectors (Hasanah, 2019). Online education has the ability to give educational opportunities for geographically distant or physically unable-to-attend students, while also making global learning more affordable and equal (Barbour, 2020). According to Landrum (2020), educational institutions throughout the globe are spending extensively in web-based learning platforms to augment their traditional teaching methods and enhance students' educational experiences and results. Alhamad (2000) states that organisations and schools in the United Arab Emirates (UAE) are prepared to adopt e-learning technologies into their present practices as a type of education in order to give target people or employees with the most recent information. The adoption of new technologies by students is crucial to the operation of a web-based learning application in educational institutions, where online education has gained in popularity (Landrum, 2020).

Perspective from Turkey

Due to advances in computer network technology and a rise in the number of computers capable of connecting to these networks, online distance education has grown in popularity over the last few years (Firat and Bozkurt, 2020). Despite the widespread devastation caused by the Covid-19 epidemic, Turkish schools and colleges have used this chance to improve their educational delivery systems via the introduction of modern technologies such as e-learning, as outlined by Kurdi et al (2021). According to Cussó et al. (2018), the Turkish government encourages the shift from traditional to online education. The Covid-19 situation expedited the implementation of online distance learning in the majority of Turkey's schools, which had previously begun to implement it (Gunes, 2020). To prevent academic career failures, Turkish schools have been asked to improve their digital infrastructure and provide online courses to students (Zalat, 2021).

Factors influencing Behavioral Intention

There are many major concepts and models that can be found in the field of research on technology acceptance. These ideas and models are intended to determine the intention of users to embrace technology. For instance, the theory of reasoned action (TRA) proposed by Fishbein and Ajzen in 1975 said that the user's attitude as well as influential individuals have an impact on the user's intentions about technology use as well as the user's actual behavior regarding the use of technology. Later, in 1991, Ajzen extended on TRA by including the non-motivational part of perceived behavioral control into the theory of planned behavior. This was done in accordance with the theory of planned behavior (TPB). The Technology Acceptance

Model (TAM), which evolved from TRA, characterized the main elements to behavioral intention as perceived utility and perceived ease of use of the technology (Davis 1989). According to Hasanah et al. (2019), the Technology Acceptance Paradigm is a well-known model that investigates how individuals accept and make use of information technology. The model places an emphasis on the psychological connection that a user has with technology. In addition, Alhamad (2020) discovered that TAM is a significantly predictive model of information technology adoption that has been experimentally proven which can be find in various research publications. As a result, researchers may use the TAM as a beginning point to uncover additional factors that impact the perceptions and behavioral intentions of users (Chen and Li, 2020).

Gaps in Literature

Even if there have been multiple studies (Alfarsi, 2020; Alhamad, 2020; Ibrahim et al., 2021) on the acceptability of technology in a range of contexts, it is still required to investigate the effect of various aspects in a new situation. Hariguna and Akmal (2019) extended the scope of the Technology Acceptance Model to include other factors and said that a large number of additional variables still need to be researched. In addition, despite the fact that the TAM has been used in a wide number of disciplines, there has been a restricted amount of study conducted on its application in the field of education in the past (Hasanah et al., 2019). The implementation of the TAM approach in e-learning to foresee and explain the usage of a learning management system has gained very little attention up to this point (Ibrahim et al., 2021).

On the other hand, due to the fact that instructors and students in higher education have a greater amount of freedom in terms of when and how they may utilize web-based devices, they are more inclined to adopt and put into practice online learning than those in elementary and secondary schools (Landrum, 2020). Nevertheless, primary schools in Turkey were chosen as the setting for this research since, generally speaking, less attention is paid to teachers' plans to use e-learning in primary schools (Baber, 2020). Primary school education, which is the foundational level of education for children, will eventually be influenced by the rapid changes in technological innovations, particularly with the way courses are delivered shifting toward an Online-Merge-Offline mode due to the influence of the Covid-19 pandemic. Primary school education is the level of education that is provided to children in the first few years of their lives. There is an urgent need for primary schools to improve how well they integrate web-based knowledge acquisition into the traditional classroom setting. As a result, it is essential to do research on the elements that have a bearing on TAM's influence on teachers' intentions to utilize e-learning within the setting of primary schools in Turkey.

Grounded Theory of the research

The Technology Acceptance Model (TAM) is often used to explain how an information system is approved, and there are multiple research articles in this area (Landrum, 2020). TAM combines two main ideas to evaluate the adoption of information technologies by individuals: perceived usefulness and perceived ease of use (Ahmed, 2021). According to Rosly and Khalid (2018), Theory of Reasoned Action (TRA) formed the foundation of TAM theory, which aided Davis in constructing the TAM to show mainly users' adoption of information systems or technologies. Davis (1989) then applied this theory to characterize the behavior of technology adoption in terms of perceived ease of use, perceived utility, attitudes and behavioral intention.

TAM is a well-known model that has been utilized in education management research in the past. It provides a characterization of users' intentions and adoption of new technologies
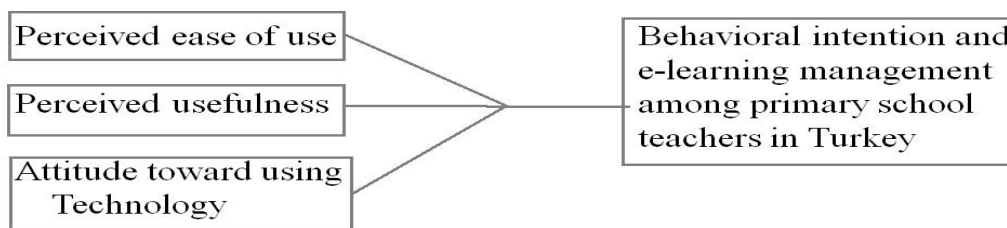
that is founded on logic (McConnell, 2017). According to the findings of a study that was carried out by Hasanah et al. (2019), a more optimistic attitude toward new technology would result from a greater perceived usefulness of the new technology, as well as a greater perceived ease of using the new technology. This would lead to a higher intention to use the innovation technologies. Based on Wingo, Ivankova, and Moss (2017) the social and cognitive impacts were examined further by using the technology acceptance model. According to prior research on technology acceptance, TAM is the most often used approach in the area of information systems to evaluate technology adoption. Its effectiveness as a highly predictive model of information technology (IT) adoption has been experimentally proved (Hasanah et al., 2019). Perceived ease of use and perceived usefulness were the primary influencing variables on behavioral intention for the aim of this research.

Conceptual Framework

From the preceding explanation, the conceptual framework of this study is summarized as follows:

Research Methodology

Nature of Research

A descriptive study is applied within the framework of research in order to learn about and describe the features of the variables that have been found. Collecting data to find the commonalities across comparable circumstances (Zyphur and Pierides, 2019). Investigating the features of the population that is the subject of the study is the purpose of descriptive research (Cortina, 2019). When conducting a descriptive research, the goal is to provide a researcher a profile or to identify and describe connected aspects of an object or event under observation from numerous viewpoints (King, Goldfarb and Simcoe, 2021).

Type of Investigation

In order to determine the degree of connection that exists between the independent factors and the dependent variables, the correlation design is the method of research that is most suited to this kind of investigation (Cortina, 2019). Whenever there is a shift in the independent variables, there will also be a corresponding shift in the dependent variables. The degree of statistical significance of this link may be determined by using the correlation method (Zyphur and Pierides, 2019). For the purpose of this research, a descriptive correlation design was employed for the analysis to determine whether or not there are connections between perceived ease of use, perceived usefulness, and the behavioral intention. It was also looked at how much effect the independent factors had on the dependent variable.

Extent of Researcher Interference

When deciding what kind of study to use for the research, one of the determining elements that should be taken into account is the amount of interference that will be exerted by the researchers (Reddy, 2020). When it comes to research interference, elements may be altered and have an influence on the study's dependent variables to varying degrees (Zyphur and Pierides, 2019). The researcher's role in this study was limited to the provision of questionnaires for respondents to fill out; as a result, the researcher had very little opportunity to influence the results. In addition, the phenomena was investigated in its natural environment; hence, the researcher did not regulate or otherwise affect the answers in any way. Additionally, Reddy (2020) said that the optimal scenario for conducting a correlation study is one in which the researchers intervene as little as possible, if at all, in order to get a very accurate image of the correlation that exists between the factors that are being investigated.

Research Setting

Due to the fact that the questionnaire was sent through the internet and respondents volunteered to fill it out, the research for this study was carried out in an online setting. The research setting can be categorized natural and uncontrived since it was not altered by any environmental elements and did not suffer any alterations over the course of the investigation.

Unit of Analysis

Based on Reddy (2020), the research unit of analysis indicates to the main topic being investigated in the study, which might be a person or an organization, relying on the research context. Zyphur and Pierides (2019) have indicated that the notion of units of analysis is important in a research study since it relates to the primary focus to be analyzed and for which the required data will be generated. In this study, primary school teachers in Turkey became the unit of analysis since the goal was to examine the behavioral intention and e-learning management of these instructors. Sampling Population and Sampling Plan

It is essential to have a suitable sample strategy since this enables researchers to recognize and choose an adequate number of relevant components from an acceptable target population (Sekaran, 2016). The instructors who were presently working in Turkey's primary schools were the ones who involved in this research as participants. These educators were considered a sample frame for the purpose of this research since they had a variety of demographic characteristics and had prior experience with using online learning during the COVID-19. Because every teacher comes from a unique background, their perspectives and intentions regarding e-learning and its management are also unique. The purpose of this study was to identify the significant factors that impact primary school teachers' intentions to use e-learning and its management. Questionnaires were handed out to participants in order to fulfill the requirements of this research's data collection goals. It is generally accepted that the tables of Krejcle and Morgan (1970), which provide the sample size of certain population sizes, are a method for establishing sample size.

Questionnaire Design and Instrument

The quantitative research approach often refers to the practice of distributing standardized questionnaires to various people or organizations (Yaddanapudi, 2019). Questionnaires are a flexible approach for collecting data that is uncomplicated and comfortable for participants, as well as cost-effective and straightforward to administer to a big number of respondents over a broad geographical region (Oosterveld, Vorst and Smits, 2019). When a quantitative approach is being taken to the analysis of the data, and the

research sample is drawn from a certain population, a questionnaire is the instrument of choice (Yaddanapudi, 2019). In order to carry out the measurement and analysis for the study, the statistical analysis software known as Statistical Packages for the Social Science (SPSS) Version 24 was used.

The questionnaire has a total of twenty questions and is broken up into three distinct parts. It starts out with an introduction that goes into some detail on the individuals who participated in the survey and includes some of their responses. The conceptual framework and the research questions served as the foundation for the following four sections of the questionnaire. They consist of IVs such as perceived usefulness, perceived ease of use, and attitudes towards using technology, as well as DV such as users' behavioral intention and e-learning management. The last section of the questionnaire expresses gratitude to all responders for their involvement.

Table 1: Questionnaire design

Section	Variable	Item	Source
A	Demographic profile	4	-
B	Behavioral intention (DV)	5	Adapted from Huang and Teo (2019)
	Perceived ease of use (IV 1)	4	Adapted from Huang and Teo (2019)
C	Perceived usefulness (IV 2)	4	Adapted from Huang and Teo (2019)
	Attitude towards (IV 3)	3	Adapted from Huang and Teo (2019)

Measurement Scales of the Questionnaire

In this particular research project, the group of e-learning users who served as the target audience consisted of teachers working in primary schools in Turkey. In this research, TAM was adapted and then implemented in order to assess the behavioral intention as well as the management of e-learning. A questionnaire comprising questions for four of TAM components. The following includes these component elements:

1   Perceived Usefulness
2   Perceived Usefulness
3   Attitude
4   Behavioural Intention

Comprehensively, the survey was structured integrate five items for behavioral intention (BI-5), four items for perceived ease of use (PEOU-4), four items for perceived usefulness (PU-4) and three items for attitude towards (AT-3).

On a five-point Likert scale, the aforementioned factors were assessed as follows: 1: strongly disagree (SD), 2: disagree (D), 3: neutral (N), 4: agree (A), and 5: strongly agree (SA). Furthermore, the researcher adapted measures verified by the associated literature (Huang and Teo, 2019) with wordings changed for the targeted respondents and

technological contexts. Table 2 lists the variables and their corresponding measurements. In addition to the shown components, the participants provide demographic information in response to the four questions of demographic profile that were included in the questionnaire. These four items were the respondent's age, gender, degree of education, and employment location.

Table 2: Questionnaire items of measuring variables

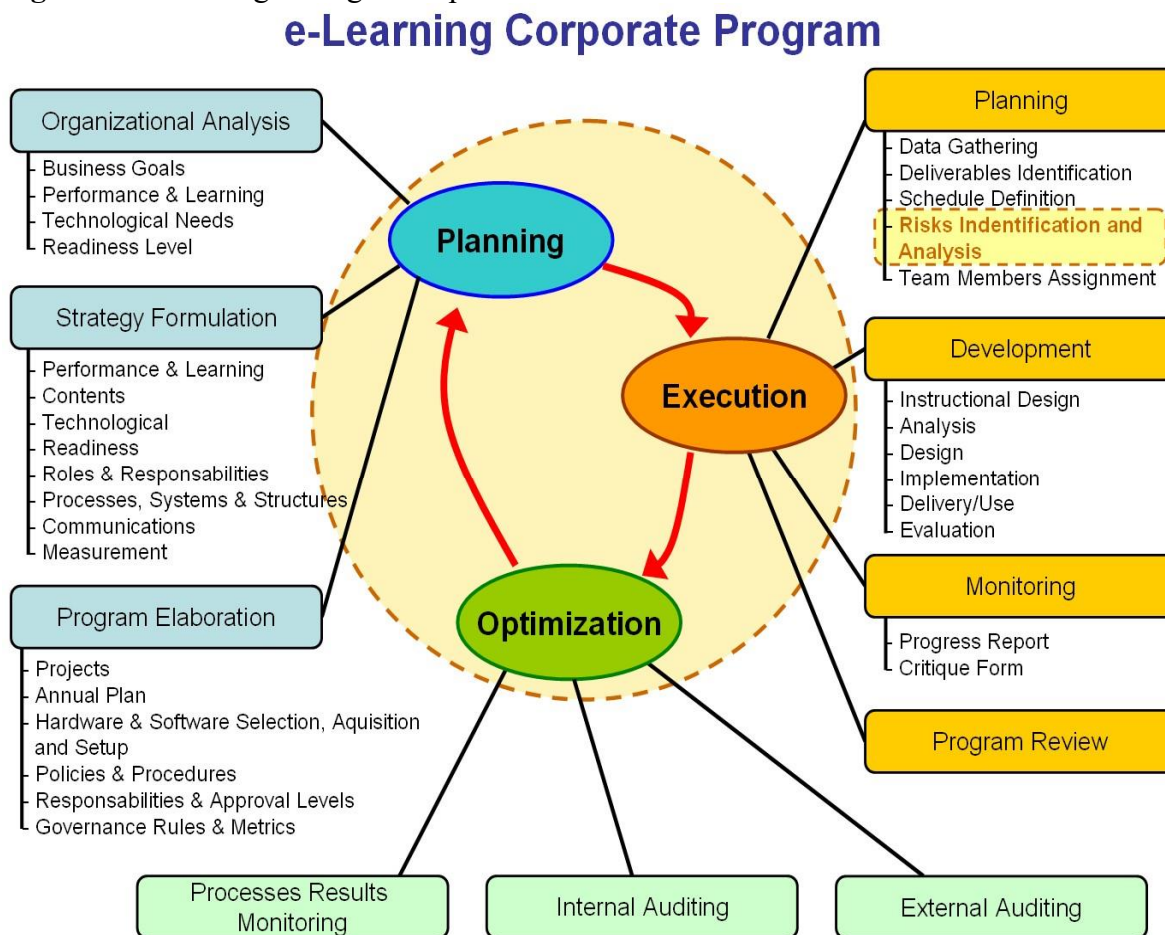| Components		Items
Perceived Ease of Use	PEOU1	I find it easy to get e-learning to do what I want to do.
	PEOU2	I find computers easy to use.
	PEOU3	I find e-learning easy to learn.
	PEOU4	I find it easy to become skilful at using e-learning.
Perceived Usefulness	PU1	Using e-learning enables me to efficiently use limited class time.
	PU2	Using e-learning enhances my teaching effectiveness.
	PU3	Using e-learning enriches my teaching materials.
	PU4	Using e-learning is useful in my job.
Attitude towards using technology	AT1	Managing e-learning makes work more easy and interesting.
	AT2	Using e-learning in teaching is a good idea.
	AT3	Using e-learning in teaching is a wise choice.
Behavioral Intention	BI1	I will use e-learning in the future.
	BI2	I plan to use e-learning often.
	BI3	I will continue using e-learning.
	BI4	I expect that I will use e-learning in the future.
	BI5	I am sure that well-managed e-learning at schools will increase technology usage in the future.

Based on the research topic, the researcher adopted the word management in the research questionnaire with the aim of investigating whether primary school teachers in Turkey give importance to management of e-learning as it is the key in increasing technology usage in the future.

E-learning Management

The term "e-Learning Management" refers to the duties and procedures that are carried out with the intention of providing a strategic direction to e-learning efforts, as well as ensuring that organizational goals are reached and risks are handled in an acceptable manner. In addition to that, it includes making appropriate use of the resources provided by the institution (Baruque, 2004).

A review of the literature reveals that e-learning management necessitates the coordination of three key e-learning processes: the planning, implementation, and optimization of e-learning programs.

Figure 1: E-learning management process

According to Andre Luiz Brazil (2014), in a broad sense, the e-learning management process includes the function of Planning the eLearning Program, which sets rules for how the different e-learning projects should be run. These are run as part of the e-Learning Program Execution function, and the results are put together as part of the e-Learning Program Review function. The Optimization of e-Learning Processes function keeps an eye on the results of these projects and evaluates them. This measurement is done by management using Balanced Scorecard Techniques or by an independent group like Auditing. The Auditing function does an independent review of the controls set up by management and makes suggestions for how the Institutional e-Learning Program could be improved. These suggestions are taken into account by the Planning function. So, this cycle ensures that things will keep getting better and that the processes will reach a higher level of maturity. The e - learning management jocent process is shown in Figure 1.

Pilot Test

In the field of research, a pilot test is a preliminary study that is conducted on a smaller size to determine whether or not a planned research project is feasible before it is carried out on a larger scale (Reddy, 2020). The methods and processes used in this smaller research are often the same as in the larger research paper, and the major goal of a pilot survey is to determine if the larger method is suitable (King et al., 2021).   Prior to the completion of the research and distribution of the questionnaire, a restricted number of instances will undergo a pilot test to assess the processes and quality of the responses (Reddy, 2020). The goal of a pilot survey is to develop or redesign questionnaires in such a way that respondents have no difficulty completing questions or gathering data.

To validate the first version of the questionnaire, a random selection of seven educators served as test group. The purpose of the evaluation is to determine whether or not the questions in the questionnaire are simple enough for the respondents to understand, as well as whether or not the format of the questionnaire needs to be altered. The findings of the examination revealed that the questionnaire that was used for the research had a high level of reliability. In an effort to boost the general reliability and quality of the survey, it was assured that all respondents understood the final questionnaire.

Correlation Analysis

Correlation Analysis is a type of statistical tool that may be used to quantify the degree to which two variables are correlated with one another as well as the strength of that association (Zyphur and Pierides, 2019). The correlation coefficient is a statistical tool that measures how strongly two variables are linked linearly to one another. A linear correlation coefficient with a value that is larger than zero indicates a positive connection, while a value that is less than zero indicates a negative association, and a value that is equal to zero suggests that the two variables have no relationship (Cortina, 2019).

Reliability and Descriptive analysis

Reliability refers to the degree to which this approach may be relied upon to provide the same results when used continuously (Saunders, 2019). The style of the questionnaire is quite straightforward, which prevents the investigators from being misled into selecting answers that are contradictory with one another in an effort to ensure the reliability of the questionnaire. In addition, discrimination creates a considerable risk to reliability. As a consequence of this, in order to maintain the impartiality of the questionnaire, all of the teachers who take part in it are required to maintain their anonymity.

Descriptive analysis is a type of data analysis that assists in describing, illustrating, or summarizing data points in a constructive manner so that patterns might emerge that meet all of the data's requirements. In the process of analyzing statistical data, one of the most significant processes is called descriptive analysis. It is possible to draw conclusions about the distribution of the data, assist in the detection of mistakes and outliers, and find commonalities between the variables in order to prepare for future statistical analysis.

Findings And Discussion

Participants Characteristics

After the completion of the pilot study, the questionnaire that was used for the distribution of data remained unchanged. In a span of 17 days, a total of 357 different questionnaires were

obtained, all of which yielded meaningful information. The components of the descriptive statistics were age, gender, level of education, and the area where the respondents work. These statistics were generated using SPSS Version 24, and the program was used to analyze the data.

Gender and Age

In this research, participants were requested to provide information on their gender and age. The following descriptors for age and gender are provided. As shown in Table 3 and Table 4, the proportion of male participants was lower than that of female participants, 42.3% (n=151) against 57.7% (n=206). On the other side, respondents ranged in age from 18 to over 45, with 61.3 percent (n=219) of respondents between the ages of 26 and 36 being the greatest number. Followed by the 18 to 25 age range with 13.7% (n=49), the 36 to 45 age range with 21.3% (n=76), and the above 45 age group with 3.6% (n=13) correspondingly.

Table 3: Respondents by Gender

| | | **Gender** | | | |
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
	Female	206	57,7	57,7	57,7
Valid	Male	151	42,3	42,3	100,0
	Total	357	100,0	100,0	

Table 4: Respondents by Age

| | | **Age** | | | |
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
	18-25	49	13,7	13,7	13,7
	26-35	219	61,3	61,3	75,1
Valid	36-45	76	21,3	21,3	96,4
	Over 46	13	3,6	3,6	100,0
	Total	357	100,0	100,0	

Level of Education and Work Location

Respondents were asked regarding their degree of education and workplace location. According to questionnaire results, he majority of respondents had a Bachelor's Degree (60.22 %; n=215). The second greatest group of respondents (36.1 %; n=129) had a Master's Degree. PhD holders made up the third largest group of responders (3.6 %; n=13). Results indicate that 70.9% (n=253) of respondents were from urban areas, whereas 29.1% (n=104) were from rural areas.

KMO and Bartlett's Test of Sphericity

The measure of sampling adequacy is provided by KMO Bartlett's test of sphericity, and an acceptable value of KMO that is more than 0.5 shows that the sample is appropriate. As a consequence of this, the test was carried out, and the findings are presented in the following manner.

Table 5: KMO and Barlett's test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**,560**
Bartlett's Test of Sphericity	Approx. Chi-Square	3108,938
	df	120
	Sig.	,000

According to Table 5, the KMO value is 0.560 (>0.5), indicating that the sample is sufficient and the analysis may proceed.

Test of Normality

Focusing on the sample amount of 357 in this study, the Kolmogorov-Smirnov test was used to assess the type of the following statistical test based on the normality of the data distribution (Oosterveld et al., 2019).

Table 6: Test of Normality

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PEOU	,295	357	,000	,713	357	,000
PU	,217	357	,000	,809	357	,000
AT	,201	357	,000	,800	357	,000
BI	,238	357	,000	,802	357	,000

a. Lilliefors Significance Correction

We shall examine the Kolmogrov-Smirnov test since the sample size of 357 is more than 50, as shown in table 6. Because the p-value is less than 0.05, we may conclude that it is not regularly distributed (Zyphur and Pierides, 2019).

Correlation Analysis

In order to acquire a greater understanding of the connection between the variables in this study, correlation analysis was performed. Specifically, Spearman Correlation Analysis as a type of non-parametric statistics was chosen since, as noted before, the data did not have a normal distribution. Table 7 displays the Spearman Correlation Analysis findings.

Table 7: Spearman Correlation Analysis

Correlations

			PEOU	PU	AT	BI
Spearman's rho	PEOU	Correlation Coefficient	1,000	,607**	,729**	,604**
		Sig. (2-tailed)	.	,000	,000	,000
		N	357	357	357	357
	PU	Correlation Coefficient	,607**	1,000	,697**	,631**
		Sig. (2-tailed)	,000	.	,000	,000
		N	357	357	357	357
	AT	Correlation Coefficient	,729**	,697**	1,000	,701**
		Sig. (2-tailed)	,000	,000	.	,000
		N	357	357	357	357
	BI	Correlation Coefficient	,604**	,631**	,701**	1,000
		Sig. (2-tailed)	,000	,000	,000	.
		N	357	357	357	357

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

According to Table 7, perceived ease of use had the strongest positive link with perceived usefulness (0.607) and behavioural intention (0.604), and it had the highest positive relationship with attitude towards (0.729) compared to the other two factors. Similarly, perceived usefulness exhibited a high positive association with attitude towards (0.697) and a lower positive link with behavioural intent to use e-learning (0.631). Attitude towards showed the largest positive association with behavioural intention to use (0.701) compared to all the other relationships listed. In conclusion, behavioural intention was associated with perceived ease of use (0.604), perceived usefulness (0.631), and attitude towards (0.701).

The greatest association among the three independent variables of the study was between perceived ease of use and attitude towards. In addition, attitude towards, one of the three independent factors, showed the highest positive link with behavioural intention, the study's dependent variable.

Multiple Regression Analysis

Multiple Regression Analysis was utilised as a statistical tool to examine the linear connection between the independent factors and the dependent variable in the present investigation. This technique determines if a substantial link exists between independent variables and dependent variables. The model properly explains the variance or coefficient of determination, or R Square, of the variables' relationship effects. According to Oosterveld et al. (2019), if the p-value is less than 0.05, this test is significant. In addition, a Beta coefficient has been used to characterise the extent to which independent variables impact the dependent variable.

Table 8: Model summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,787ᵃ	,620	,617	,59190

a. Predictors: (Constant), AT, PU, PEOU

Table 8's model summary displays a portion of the findings of Multiple Regression. In the table, R represents the Multiple Correlation Coefficient value for all the independent variables, which is "0.787." The R value indicates that a significant positive link exists between independent variables and behavioural intention. In addition, the adjusted R2=0.617 indicates that the three independent factors explain 61.7% of the variation in behavioural intention to utilise e-learning. Consequently, it is possible to state that there is a substantial positive link between independent variables and the behavioural intention.

Table 9: ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	201,881	3	67,294	192,075	,000[b]
	Residual	123,674	353	,350		
	Total	325,555	356			

a. Dependent Variable: BI

b. Predictors: (Constant), AT, PU, PEOU

Using ANOVA, researchers may determine whether the regression model accounts for a statistically significant percentage of the variation. Referring to the findings, the value of F is 192.075, and the p-value is 0.000, which is less than the 0.05 standard. It demonstrates that at least one of the independent factors has a substantial impact on and predicts the dependent variable, behavioural intention.

Table 10: Coefficient

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,085	,168		,504	,615
	PEOU	1,905	,399	,352	4,769	,000
	PU	,168	,072	,148	2,336	,020
	AT	,412	,093	,326	4,446	,000

a. Dependent Variable: BI

The coefficient values in Table 10 provide the precise effect of the three independent variables (PEOU, PU, and AT) on the dependent variable (BI). Perceived ease of use had a strong positive implication on behavioural intention (B= 1.905, t-value = 4.769, p = 0.000);

perceived usefulness had a significantly positive influence on behavioural intention (B = 0.168, t-value=2.336, p = 0.000); and attitude toward had a positively productive influence on behavioural intention (B = 0.412, t-value = 4.446, p = 0.000). In addition, the values of B, which represent the value of unstandardized coefficients, indicate that anytime independent variables rise by 1 point, factors will cause behavioural intention to increase by 1,905, 0.168, and 0.412 points, correspondingly. In conclusion, the findings demonstrated that these three independent factors positively and statistically affect behavioural intention.

In addition, a Beta coefficient, as one of the standardised coefficients, has been used to determine which independent variable has the greatest impact on the dependent variable. The Beta for perceived ease of use (Beta = 0.352) is the greatest in Table 10, indicating that it is the major variable attributing to behavioural intention amongst primary school teachers in Turkey, preceded by attitude toward (Beta = 0.326) and perceived usefulness (Beta = 0.148).

Discussion

The objective of this research was to analyse the behavioural intention of primary school teachers in Turkey and the e-learning management practises that they use. Web-based learning and teaching was a method they were willing to consider because of their positive attitude toward technology usage and their belief that the e-learning tools they were using were simple and effective. Table 11 shows the statistical significance of the hypotheses and the effect of independent factors on dependent variables. The majority of those who took part in this study held the opinion that e-learning was simple to implement, beneficial, and well-supported by their attitudes. Based on the data analysis, Table 11 reveals that all of the hypotheses in this research are supported by the results.

Table 11: Results of hypothesis

Hypothesis		Significant	Results
H1	Perceived ease of use has a significant influence on the behavioral intention and e-learning management among primary school teachers in Turkey.	0.000	Supported
H2	Perceived usefulness has a significant influence on the behavioral intention and e-learning management among primary school teachers in Turkey.	0.000	Supported
H3	Attitude toward has a significant influence on the behavioral intention and e-learning management among primary school teachers in Turkey.	0.000	Supported

Result Conclusion

This research relied on the Technology Acceptance Model developed by Davis (1989)

and the ambiguity model of educational management developed by Bush (2018) in order to define the influential factors of teachers' behavioural intention to use e-learning in primary schools in Turkey. In this study, the effect of three independent factors on the dependent variable, behavioural intention to use, has been examined together with the two TAM model variables, perceived ease of use and perceived usefulness. After conducting a correlation analysis to acquire a better understanding of the link between the variables, a multiple regression analysis is used to investigate the exact effect and test hypotheses.

This study's findings indicate that perceived ease of use has a strong positive effect on behavioural intention, with Beta values of 0.352 (p = 0.000). This study's findings are similar with those of Ibrahim et al. (2017), AlHamad (2020), and Ahmed (2021), which highlight the significance of the user's perception of technology's utility on their intention to utilise it. This study also demonstrates that perceived usefulness has a substantial positive impact on behavioural intention to use e-learning and that the scaled coefficients of Beta are 0.148 (p = 0.000), which is consistent with the findings of Huang and Teo's study (2019). In addition, the effect of attitude toward as an extending variable based on the TAM model is confirmed by the scaled coefficients Beta 0.326 (p = 0.000). This finding is also corroborated by Huang and Teo's research (2019).

In conclusion, the findings of this research indicate that perceived ease of use, perceived utility, and attitude toward e-learning are the main elements that impact teachers' behavioural intention to utilise e-learning in Turkey's primary schools.

Implication Conclusion

This research brought light on some of the reasons why instructors are eager to include e-learning into their instructional practices. As an important component of the ambiguity model in the area of educational management, instructors' attitude toward e-learning was added into TAM to forecast their intention to adopt e-learning. In terms of explaining the elements that influence instructors' desire to employ e-learning, the results of this study represent a step forward. Finding out how instructors feel about online education might motivate school administrators and teachers to investigate e-learning technologies. By evaluating the use of e-learning from both technical and cultural viewpoints, school administrators may enhance the motivation of teachers to incorporate web-based learning into the school in order to maximise instructional strategies in this information era. Consequently, researchers will be able to perform other studies using this research's findings.

In addition, certain management implications might be inferred from this study's findings. As noted before, this study investigated the influence of instructors' attitudes regarding e-learning in affecting their desire to utilise it. This research examines the various aspects that might influence instructors' readiness to accept web-based learning from the viewpoint of educational management, and more specifically, the attitude towards ambiguity model. In Turkey, where solidarity and cohesiveness are highly valued (Huang and Teo, 2019), it is anticipated that attitudes regarding will have a significant influence on how people see things. In the field of education, for instance, an effective leadership and management style in the workplace are likely to have a direct influence on how instructors evaluate recently implemented policies. Consequently, instructors are more likely to adhere to policy requirements and be motivated to use e-learning in the classroom if administrators establish laws after considering teachers' views and ideas.

Recommendations for E-learning Promotion

Promoting e-learning adoption

According to the findings of this study, widespread use of educational technology may assist both students and instructors by making it possible for them to access course information through e-learning systems or platforms regardless of where they are located. As a result, those responsible for formulating public policy need to urge educators to adopt an e-learning approach to their classrooms in order to enhance the educational process. More significantly, it is to satisfy the necessity of effectively utilising web-based learning technology in the current time of Covid-19 with the tight management that is occurring in many academic institutions.

Updating curriculum

The presentation of information, teaching techniques, and evaluation methodologies change substantially from those used in traditional classroom settings when students study online. Because of this, administrators and instructors at schools need to work together to create e-learning-compatible versions of curricula that were originally developed for face-to-face delivery. Curriculum designers may, for example, use the Technological Pedagogical Content Knowledge Framework (TPACK) as a framework to efficiently integrate technology into education.

Shifting managerial style

According to what was discussed earlier, an authoritarian or bureaucratic management style should be avoided if one wants to get the best possible results from collaboration between leaders and personnel. Therefore, those in charge of management at schools should take a page out of the playbook laid forth by the collegial model or ambiguity model of educational management. As Bush (2018) said, the collegial model emphasizes a participatory leadership in which teachers' ideas may be taken into consideration. Alternatively, educational leaders might use the ambiguity model to create a school community that is open to innovative teaching methodologies and receptive to the use of technology.

Enhancing technological infrastructure

For online learning, wireless network and hardware infrastructure and their management are also very important factors. So that e- learning is enjoyable for both students and instructors alike, school administrators should do all they can to enhance network connectivity as well as its management and supply well-functioning computers, eLearning systems, and technical assistance for staff.

Monitoring

Regular quantitative and qualitative research on instructors' impressions of the usage of e-learning technologies should be carried out by the institution so that opportunities for improvement may be identified. Teachers, for example, may need additional training and professional development in order to properly integrate technology into their classrooms.

Recommendations for Future Research

Several restrictions were placed on this study. First and foremost, the findings of this study should be given special consideration since they were relied solely on the impressions of educators. As a result of the survey being self-reporting, the answers provided by the instructors

may have been influenced by their own personal preferences, viewpoints, and interpretations of the survey topics. As a result, this research was done entirely in a quantitative manner. Consequently, in the future, when the restrictions of Covid-19 on face-to-face interaction are lifted, it will be preferred to conduct research using a combination of methods. This will allow for more triangulated and persuasive data to be produced via the use of survey questionnaires, linked publications, and discussions.

Second, only Turkish primary school teachers were the subject of this study. Teachers at Turkey's secondary, vocational, and higher education institutions were not surveyed for this research, therefore the conclusions cannot be generalised to all teachers in the country. Consequently, future studies might examine a more thorough and inclusive data collection aimed at teaching personnel at all levels of educational institutions. In this way, it is possible to get a better understanding of instructors' motivations for using e-learning in Turkey.

As a third reason, the questionnaire was provided through the internet and only 357 items of data were gathered because of time restrictions. A smaller number of people responded compared intended. As a consequence, it is impossible to accurately reflect the whole number of elementary school teachers in Turkey. As a result, a bigger sample size might be used to provide more persuasive data on the affecting elements of Turkish primary school teachers' desire to adopt e-learning. Those certain indicators like digital literacy, self-efficacy, and subjective norms are expected to be included to have a more comprehensive perspective of this topic, even though this research defined a link between perceived ease of use and perceived usefulness, attitude towards, and behavioural intention.

In conclusion, more study into the efficiency with which educators implement e-learning may be carried out in the future in order to better enhance the quality of web-based learning, which is the priority and purpose of encouraging e among those working in the area of education. Other educational models, such as the formal model and the collegial model, could be included in future research to investigate the effects of various managerial styles in the workplace on teachers' behavioural intention to use e-learning.

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