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**TECHNOLOGY ACCEPTANCE MODEL: THE
PERCEPTIONS OF TURKISH AND KAZAKH ENGLISH
TEACHERS IN ONLINE TEACHING**

Türkay BULUT¹

Tatyana DEL²

Abstract

Nowadays, there is hardly any area that is not affected to some extent by the consequences of the spread of COVID-19, but the largest ever disruption has been to education systems. It has put education institutes in difficult conditions across the globe, forcing educators to adapt to the current events as soon as possible. Consequently, it has triggered a worldwide shift towards online learning. The aim of this research is to find out whether the Technology Acceptance Model (TAM) based on common social psychology theory and the Theory of Reasoned Action (TRA) can be a remedy for the online education. We specifically focused on the perceptions of English language teachers towards the applying of technology in language classes during the pandemic. For this purpose, we compared the apprehension of 15 English teachers in Kazakhstan and 15 in Turkey during the pandemic. Therefore, a questionnaire in the Google form was adapted and sent to the teachers via e-mail. It consists of four sections: perceived usefulness, perceived easy to use, behavioral intention, and system use. The results indicate that the Turkish and Kazakh teachers hold different perceptions about TAM in online teaching. While the majority of Kazakh teachers expressed negative perceptions about technology usage in online teaching, the Turkish teachers believe in its effectiveness and usefulness in online education.

Keywords: COVID-19, Technology Acceptance Model, Teachers' perceptions, Online teaching

¹ Prof. Dr. Aydin University, Department of Foreign Language Education, turkaybulut@aydin.edu.tr, <http://orcid.org/0000-0003-0711-6869>

² Graduate Student, Aydin University, Institute of Graduate Studies, tatyanadel@stu.aydin.edu.tr, <http://orcid.org/0000-0001-9299-7642>

INTRODUCTION

Since March 2020, the global COVID-19 has affected and changed dramatically the functioning of most of spheres of human life, including education. In order to prevent the spread of coronavirus infection, educational institutes all over the world were forced to shut down schools and universities for indefinite period of time. New sets of rules have been introduced by governments stating that all education processes will be undertaken remotely from home. The educational institutions in Turkey and Kazakhstan are not exceptions since they followed the guidance of the Ministry of Education and also switched to distance learning in order to survive during the pandemic situation in their countries. Consequently, remote teaching has substituted traditional classroom learning in these countries, as well without considering whether or not those teachers are equipped with the necessary skills required for online teaching. Teachers had to adapt and arrange the learning process through distance learning technologies based on various methods of presenting electronic content and accessible tools of communication for both students and instructors.

Consequently, nowadays technology contributes a lot to society and The Technology Acceptance Model (hereafter TAM) has become the main delivery and instructional tool in English classes across the world. As stated by Carliner (2003), online learning refers to learning and other supportive resources that are available through computers. Rosenberg (2007) points out some beneficial aspects of online teaching such as its cost-effectiveness, time and place flexibility, and elimination of students' reluctance in discussion participation; instead, it motivates and allows them to actively engage in learning, and the students feel equally treated since their teachers try to response to individual learner differences. Moreover, Anderson (2008) highlights its unique environment for both teaching and learning in terms of the opportunity for the time and place shift of the educational cooperation, opportunity to access learning content that operates all media attributes, and finally the interaction between an individual and engine in different forms such as text, video, speech and so on. The basic idea of online education is that both teachers and students do not go to educational institutions; instead, they are involved in educational process from home by means of technology. Teachers are offered with many platforms for delivering online classes such as Zoom, WhatsApp, Ruang Guru , Google Classroom, and the like.

However, online education presents some disadvantages as well. Restauri et al. (2001) point out the importance of properly functioning technology, which may bring negative outcomes and become an obstacle on the smooth way of online learning process. According to Shuey (2002), during the distance learning period, a teacher may face with problems that affect the quality of learning. In particular, the lack of self-motivation, self-discipline, and opportunity to develop live communication skills, difficulties in adapting some activities, and assessment of non-verbal indicators of understanding of the material by students can be listed among these problems. Wijekumar et al. (2006) suggest that the lack of criticism and comments between teachers and students in distance education can result in serious negative outcomes; for example, students might feel isolated, less-motivated, and anxious about learning process. In support of interaction importance among teacher and student, Nambiar (2020) and Orhan & Beyhan (2020) have revealed that it is one of the fundamental factors affecting teacher and student content about distance education.

Covid-19 outbreak triggered rapid raise of distance education across the globe; therefore, it is crucial to investigate the perceptions of its users in order to understand its perspectives and drawbacks. In a study conducted by Retno Puji Rahayu & Yanty Wirza (2020) on teachers' perception of online learning during pandemic Covid-19 in Indonesia, it was revealed that teachers had positive perceptions towards the technology use along with high satisfaction level in online teaching. Similarly, Verma & Priyamvada (2020) found out positive views of the majority of Indian school teachers in terms of online education during lockdown such as no binding to a specific territory, flexibility, and effective feedback between the teacher and the student, development and implementation of literacy skills and new methods of teaching, and so on.

Davis (1985; 1989) developed the TAM model in order to find out key factors in human behavior that prompt them either to reject or accept technology use. This model is premised on general common psychology theory and the Theory of Reasoned Action (TRA) specifically (Fishbein, & Azjen, 1975). Davis (1985, 1989) suggests that variety of factors exist that determine user's attitude and intention towards technology, namely: perceived usefulness (PU), perceived ease of use (PEOU), attitude, and behavioral intention to use. Among many factors PU and PEOU are central and most important ones as they predict further intentions on acceptance or rejection.

With the rapid technological development in recent years, many studies were conducted on TAM in educational field to examine learners' and teachers' perceptions and readiness to adopt e-learning systems (Lee, Cheung, & Chen, 2005; Ngai, Poon, & Chan, 2007; Ong, Lai, & Wang, 2004) According to meta-analysis of TAM conducted by King and He (2006), TAM is a notably trustworthy and powerful model that may be deployed in various scopes.

Owing to rapid transition from traditional to online way of learning started in the first part of 2020, this study is highly relevant and contributes to the educational field as it sheds light on the perceptions related to TAM model applied in online education during the pandemic. In particular, this study attempts find an answer to the question about how teachers of English perceive online teaching using TAM as an instructional tool in English classes in Turkey and Kazakhstan.

METHODOLOGY

Participants

In the present study, 30 high school English teachers from Northern Kazakhstan and Turkey were chosen as the respondents through convenience sampling. The participants were contacted by email and asked to complete the survey questionnaire in The Google Form. The respondents' educational background, teaching experience, and demographic background differ significantly. In particular, the participants bear differences in their age, gender, nationality, years of teaching, academic level, and duration of using online educational platforms.

Table 1. Kazakh participants' demographics overview

Variable's category	Percentage	Total Participants
Gender	73.3 % Females 26.7% % Males	15
Age	42.9 % 25-35 years 28.6% 35-45 years 7.1 % % 45+ years 17.4% % 21-24 years	15
Academic Level	53.3% Bachelor Degree 33.3% Master Degree 13.3% % High School Degree	15
Teaching Experience	42.9% 1-5 years 35.7% 5-10 years 21.4% 10-15 years	15
Time period of using online educational platforms	46.7% 1-2 years 53.3% 6-12 months	15

As illustrated in Table 1, the number of Kazakh female participants (n=11; 73.3%) is considerably higher than the males (n=4; 26.7%). In terms of age, 42.9% of Kazakh participants aged between 25-35 years old, 28.6% were at the age from 35 to 45, 7.1 % aged 45 and above, 17.4% were in the age between 21 and 24. In relation to the level of education, 53.3% of Kazakh respondents had Bachelor Degree, 33.3% had Master Degree, and 13.3% had high school diploma. Regarding teaching experience of Kazakh teachers, 42.9% taught for 1-5 years, about 35.7% between 5-10 years, and 21.4% from 10 to 15 years. Most of the Kazakh teachers (46.7%) used online educational platforms for 1-2 years and 53.3% from 6 to 12 months.

Table 2. Turkish participants' demographics overview

Variable's category	Percentage	Total Participants
Gender	69.2% Females 30.8%. Males	15
Age	76.9% 25-35 years 76.9% % 35-45 years 7.7% 23 years	15
Teaching Experience	46.2% 1-5 years 30.8% 5-10 23.1% 0-12 months	15
Academic Level	61.5% Bachelor Degree 38.5% % Master Degree	15
Time Period of Using Online Educational Platforms	61.5% % 1-2 years 23.1% %, 6-12 months 15.4% 3-6 months	15

It can be seen from Table 2 that the Turkish female participants (n=9; 69.2%) dominated the male respondents (n=4; 30.8%). Moreover, it was revealed that 76.9% of the Turkish respondents aged between 25-35 years old, 15.4% were in the age 35-45, and 7.7% were 23 years old.

About 61.5% of the Turkish teachers had Bachelor Degree, 38.5% had Master Degree. Among the Turkish participants, 46.2% had teaching experience between 1 and 5 years, 30.8% from 5 to 10 years, and 23.1% up to a year. Majority of the respondents (61.5%) used online educational platforms for 1-2 years. Meanwhile, about 23.1% of the Turkish teachers used online platforms from 6 to 12 months and 15.4% from 3 to 6 months.

Instruments

This study was carried out through a close-ended questionnaire in The Google form which was sent to 100 Turkish and Kazakh teachers. Only 30 teachers in total answered it. This instrument was adapted from Rahayu & Wirza (2020). In total, it is composed of 26 questions that divided into two parts. Section one provides six questions on demographic background of participants (gender, age, nationality, level of education, teaching experience, the duration of their using online educational platform). The second section collects information about teachers' perceptions on technology use in online learning approximately after a year since the pandemic spread across the globe; it is divided into four themes with total 20 questions: 1) Perceived Usefulness 2) Perceived Easy to Use 3) Behavioral Intention 4.) System Use. The questionnaire includes multiple choice questions in the first section and Likert Scale questions in the second section with five items option differing from (SD) Strongly Disagree, (D) Disagree, (N) Neutral, to (A) Agree and (SA) Strongly Agree.

RESULTS AND DISCUSSIONS

This study aimed to find out how teachers perceive online teaching using TAM as an instructional tool in English classes in Turkey and Kazakhstan. Based on the answers the teachers gave, we can conclude that there is a considerable disagreement between the perceptions of the Turkish and Kazakh teachers about the effectiveness of online education. The study investigated their perceptions from four different perspectives: Perceived usefulness, Perceived ease of use, Behavioral intention, and System use.

Theme 1, perceived usefulness determines the extent to which individuals put confidence in utilization a specific system that would increase their working efficiency (Davis, 1989). Table 3a and Table 3b illustrate that prevailing 33.3% of Kazakh teachers (hereafter KTs) disagree that online learning system improves their teaching performance, while dominating 60% of Turkish respondents (hereafter TTs) agree to that. Furthermore, the participants in the TT group have more positive tendency than KTs toward the usefulness of TAM during online education. KTs (42.9%) disagree that online learning is easy and effective unlike to 53.3% of TTs who agree with this statement and believe in its usefulness and positive effects on learning system. This trend is recorded throughout the participants' responses.

Table 3a. The Perceived Usefulness of TAM (KTs)

Item No	SD f %	D f %	N f %	A f %	SA f %	KTs (N)
1		5 33.3	4 26.7	4 26.7	2 13.3	15
2	1 7.1	3 42.9	3 21.4	1 7.1	3 21.4	15
3	1	5	4	1	3	15

	13.3	33.3	26.7	6.7	20	
4	3	2	5	1	4.	15
	20	13.3	33.3	6.7	26.7	
5		4	6	1	4	15
		26.7	40	6.7	26.7	

Table 3b. The Perceived Usefulness of TAM (TTs)

Item No	SD f %	D f %	N f %	A f %	SA f %	TTs (N)
1	1 6.7	2 13.3	2 13.3	9 60	1 6.7	15
2	1 6.7	1 6.7	2 13.3	8 53.3	3 20	15
3		2 13.3	2 13.3	9 60	2 13.3	15
4	1 6.7	1 6.7	1 6.7	8 53.3	4 26.7	15
5		1 6.7	1 6.7	7 46.7	6 40	15

Further analysis deals with teachers' responses on perceived ease-of-use. According to Davis (1989), perceived ease of use is the degree to which an individual thinks that using a specific system will enable effortlessness. This section investigates teachers' views on using online teaching tools during lockdown. As illustrated in Table 4a and Table 4b, 40% of KT's showed neutral attitude towards the statement that it is easy to operate an online learning system, but 46.7 % of TTs agree to this. It is evident that 13.3% of teachers in Kazakhstan strongly disagree that interaction with the online learning system is obvious and comprehensible, opposite to 60% of TTs who agree and 13.3% strongly agree with this statement. However, the Kazakh and Turkish teachers expressed similar perceptions regarding some statements. In particular, 26.7% of the Turkish and Kazakh teachers strongly agree that the online learning system is flexible to interact with, as well as 33.3% both of them strongly agree that it would be easier if they were competent in the applying of the online learning mechanism. In addition to this, KT's (20%) disagree to consider that distance learning mechanism is user-friendly while 66.7% of TTs agree to this.

Table 4a. Perceived Ease of Use

Item No	SD f %	D f %	N f %	A f %	SA f %	KTs (N)
1	2 13.3	2 13.3	6 40	1 6.7	4 26.7	15
2	2 13.3	4 26.7	5 33.3	4 26.7		15
3	-	7 46.7	3 20	1 6.7	4 26.7	15
4	-	4 26.7	6 40		5 33.3	15
5	-	3 20	4 26.7	4 26.7	4 26.7	15

Table 4b. Perceived Ease of Use

Item No	SD f %	D f %	N f %	A f %	SA f %	TTs (N)
1	2 13.3	2 13.3	6 40	1 6.7	4 26.7	15
2	2 13.3	4 26.7	5 33.3	4 26.7		15
3	-	7 46.7	3 20	1 6.7	4 26.7	15
4	-	4 26.7	6 40		5 33.3	15
5	-	3 20	4 26.7	4 26.7	4 26.7	15

According to Davis (1989), the third theme, behavioral intention, is the strength of a person's wish to conduct a performance. It helps in measuring teachers' perception and intention to implement the technology while teaching online. According to Table 5a and Table 5b, 20% of KT's disagree and 53.3% of TTs agree to use online learning system in their English classes even after the COVID-19 pandemic is over. TTs (46.7%) believe in importance of applying the distance learning system, while the Kazakh ones (40%) disagree. Furthermore, 33.3% of the Turkish teachers agree to encourage their students in the online learning system, but 20% of KT's disagree. Moreover, TTs (46.7%) agree on employment of the online learning system in the future after the pandemic is over. However, 20% of KT's strongly disagree with this.

Table 5a. Behavioral Intention

Item No	SD f %	D f %	N f %	A f %	SA f %	KTs (N)
1	-	3 20	5 33.3	3 20	4 26.7	15
2	-	3 20	6 40	3 20	3 20	15
3	-	4 28.6	4 28.6	2 14.3	4 28.6	15
4	-	5 33.3	4 26.7	3 20	3 20	15
5	-	2 13.3	7 46.7	3 20	3 20	15

Table 5b. Behavioral Intention

Item No	SD f %	D f %	N f %	A f %	SA f %	TTs (N)
1	-	1 6.7	1 6.7	8 53.3	5 33.3	15
2	1 6.7	1 6.7	2 13.3	7 46.7	4 26.7	15
3	2 14.3	1 7.1	1 7.1	5 35.7	5 35.7	15
4	-	3 20	2 13.3	5 33.3	5 33.3	15
5	1 6.7	1 6.7	-	7 46.7	6 40	15

In Table 6, the last theme of the questionnaire, System use, is identified as the extent to which users utilize the data method capabilities. It reveals teachers' engagement in technology use in order to teach online.

Table 6a. System Use

Item No	SD f %	D f %	N f %	A f %	SA f %	KTs (N)
1	-	3 21.4	4 28.6	3 21.4	4 28.6	15
2	-	6 40	4 26.7	2 13.3	3 20	15
3	-	2 13.3	6 40	5 33.3	2 13.3	15
4	-	2 13.3	6 40	4 26.7	3 20	15
5	-	3 20	6 40	1 6.7	5 33.3	15

Table 6b. System Use

Item No	SD f %	D f %	N f %	A f %	SA f %	TTs (N)
1	1 6.7	1 6.7	1 6.7	5 33.3	7 46.7	15
2	-	1 6.7	2 13.3	7 46.7	5 33.3	15
3	1 6.7	1 6.7	-	6 40	7 46.7	15
4	1 7.7	1 7.1	-	7 50	5 35.7	15
5	1 6.7	1 6.7	2 13.3	5 33.3	6 40	15

As illustrated in the tables above, 46.7% of TTs reported that they agree with the first statement opposite to 28.6% of KTs who disagree with this. For the second statement, KT (40%) disagree that they get involved with learning system but TTs (46.7%) agree to this. A further analysis of the third question indicates that 40% of KT disagree with it while 46.7% of Turkish ones strongly agree. Additionally, it was found out that 40% of KT showed neutral attitude to the fourth statement, however 50% of TTs agree with it. According to the fifth statement, 40% of TTs strongly agree and claim that they frequently connect to online learning systems to display the degree of participation and progress of students, while 20% of KT disagree with it.

CONCLUSION

This study explored the perception of English teachers in Turkey and Kazakhstan on TAM in online lessons during Covid-19 outbreak. In the course of data analysis, it was revealed that the Turkish and Kazakh teachers bear significant differences in their perceptions regarding TAM implementation in online education. The Turkish teachers showed positive perceptions toward TAM in online classrooms. They believe in its usefulness and effectiveness pointing out that interaction in such a system is easy and comprehensible. However, the Kazakh teachers do not agree that such a system makes learning effective. They claim that it is hard: it is unclear to operate, and that they will not use this online system in the future, after pandemic is over.

The present study has both strength and limitations to consider. The first limitation concerns with the limited access to the respondents. Therefore, in this research only 30 teachers answered the questionnaire. However, we strongly believe that a larger sample size will ensure more sufficient data for analysis and valid results. Another limitation deals the time constraint which leads to the need for future long lasting studies. Further studies might take into consideration particular online tools and techniques implemented in online teaching, which lead to these different teachers' perceptions on TAM.

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APPENDIX 1

THEME 1 Perceived Usefulness

1. Online learning system makes my performance improves
2. Online learning system makes learning effective
3. Online learningsystem makes teaching becomes easier
4. Online learning system is useful for teaching
5. The online learning system makes teaching convenient

THEME 2 Perceived Easiness

1. It is easy to operate an online learning system.
2. The interaction with the online learning system is clear and understandable.
3. The online learning system is flexible to interact with.
4. It would be easy to be competent in the use of the online learning system.
5. I consider that online learning system is easy to use.

THEME 3 Behavioral Intention

1. I will use the online learning system in my English subject even after the pandemic of Covid-19.
2. It is important to use the online learning system and I would recommend its use.
3. I will modify the teaching activities of my English subjects to take advantage of the capabilities of the online learning system.
4. I will encourage my students in the online learning system.
5. I would like to use the online learning system in the future after the pandemic is over.

THEME 4 System Use

1. I spend a long time interacting the online learning system.
2. I get involved with the online learning system.
3. I Join the online learning system to interact with the subject I teach at least once a day.
4. I frequently connect to participate in interactive activities (forums) I have proposed in the online learning system.
5. I frequently connect to online learning systems to display the degree of participation and progress of students.