

The Acceptance of Online English Language Learning of Undergraduate Students at Rajamangala University of Technology Thanyaburi

Montchatry Ketmuni

Department of Western Languages, Faculty of Liberal Arts, Rajamangala University of Technology Thanyaburi, Thailand, montchatry@rmutt.ac.th

ABSTRACT

The purposes of this study were 1) to study the levels of the acceptance of online English language learning, 2) to study the factors affecting the acceptance of online English language learning, and 3) to study the undergraduate students' satisfaction towards studying English courses with online mode during summer semester in academic year 2019 at Rajamangala University of Technology Thanyaburi, Thailand. This research was employed by the Technology Acceptance Model (TAM) and conducted as a quantitative and qualitative research. The 400 samples were selected by simple random sampling, and the 30 key informants were chosen by purposive sampling. The statistics used for data analysis were percentage, mean, standard deviation, t-test, f-test, correlation, and multiple regression. Findings of the research indicated that the acceptance and the satisfaction of online English language learning were not affected by the individual differences. The acceptance of online English language learning was at high level ($\bar{X}=3.9$): Perceived Usefulness ($\bar{X}=3.96$), Perceived Ease of Use ($\bar{X}=3.94$), Attitude ($\bar{X}=3.79$), and Intention ($\bar{X}=3.7$) which was affected by learners ($\bar{X}=4.17$), teachers ($\bar{X}=4.14$), learning activities ($\bar{X}=4.14$), measurement and assessment ($\bar{X}=4.08$), and technology ($\bar{X}=3.96$) at high level ($\bar{X}=4.11$). The overall satisfaction of the students towards online English learning was also at high level ($\bar{X}=3.97$): knowledge and skills of the teachers ($\bar{X}=4.09$), the clear and consistent measurement and assessment ($\bar{X}=4.07$), and learning feedback ($\bar{X}=4.05$). The key factor of learning management affecting the acceptance of online English language learning was the measurement and assessment ($\beta=.461$) at .05 statistically significant level. The greatest factor affecting the acceptance of online English learning was Perceived Ease of Use ($\beta=.856$) at .05 statistically significant level. The students suggested that the teachers should have teaching techniques to stimulate students' interests and provide a variety of activities, such as VDO recording, asking and answering question activities, and group presentation, whereas the students should pay more attention than studying in classroom and have information technology skills. The major online learning constraint was the stability of internet signal. Moreover, the students preferred studying in classroom. If the university continues online English learning, the learning management should be explained in details including with providing facilitators of learning and lower tuition fees.

Index Terms

Technology Acceptance Model (TAM), Online English Language Learning, English Language Teaching

Article Received: 10 August 2020, Revised: 25 October 2020, Accepted: 18 November 2020

Introduction

The digital transformation is dominating a wide range of economies. If any companies adapt their business to technology, the companies are more competitive. Then they can increase their revenue and customers' satisfaction. This brought Thailand into Thailand 4.0. According to [1], Thailand 4.0 emphasizes the innovative driven economy. The digital transformation not only affects economies, but also education. Currently, there are many emerging innovations supporting the ubiquitous learning. the learners can use the computer or mobile technology to study anywhere and anytime. This is accelerated by COVID-19 pandemic because it suddenly shifts the traditional education to online education. Every university suspended studying in the classroom so as to slow the spread of COVID-19. This affected the universities had to provide the infrastructure and knowledge for the online learning management, and this also affected the teachers to change their teaching into technology-based teaching, but the teachers could be supported by the universities. The students seemed to be most affected because the students' learning was immediately shifted to online learning mode and depended on the technologies. Some learners might go well with the new way of learning and technology, but some might have to struggle with it. The learning performance will be high when the learners are willing to use the technology as [2] [3] mentioned that performance gains are often obstructed by users' unwillingness to accept and use available systems. So as an educator, we need

to investigate the technology acceptance of our students to improve our teaching in terms of teaching strategies and learning management to support our students' learning. Teaching English language was challenged in this context as [4] mentioned that low English proficiency students with no skills in online learning and no experiences in self-directed learning might not be ready for online English language learning. However, it was compulsory to teach English language online and to get more understanding of this context this research would be employed by the technology acceptance model (TAM) [5] to identify the levels and factors of the students' acceptance of online English language learning. The results could be used for online English language development in the future.

Research Objectives

The objectives of this research were 1) to study the level of the acceptance of online English language learning, 2) to study the factors affecting the acceptance of online English language learning, and 3) to study the undergraduate students' satisfaction towards studying English courses with online mode during summer semester in academic year 2019 at Rajamangala University of Technology Thanyaburi, Thailand.

Research Methods

A. Research Design

This research was conducted by using mixed methods. For quantitative data, a questionnaire was employed by the Technology Acceptance Model (TAM) with Likert's 5 rating scales to measure the levels of the students' acceptance and satisfaction toward studying English courses with online learning mode. The questionnaire covered the factors affecting the online English language learning (teachers, learners, online learning activities, teaching technology, learning measurement and assessment), the Technology Acceptance Model (TAM): Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Attitude toward Using (ATU), and Intention to Use (ITU); and the students' satisfaction toward online English language learning. The questionnaire was distributed online to 400 students selected by simple random sampling. The data was analyzed by using frequency, percentage, mean, standard deviation, f-test, Pearson product-moment correlation coefficient, and multiple regression with enter method. Whereas, the qualitative data was collected and summarized from interviewing the 30 students chosen by purposive sampling. The semi-structured interviews were done via Line application (a communication mobile application with free calls and messages) and on the phone. The interview data were analyzed by content analysis.

B. Research Process

The research process was divided into 5 steps: identify the problems and review the related theories and researches, develop the research instruments, apply for human ethics approval, collect the data, and analyze the data and report the findings. The steps were shown as Fig. 1.

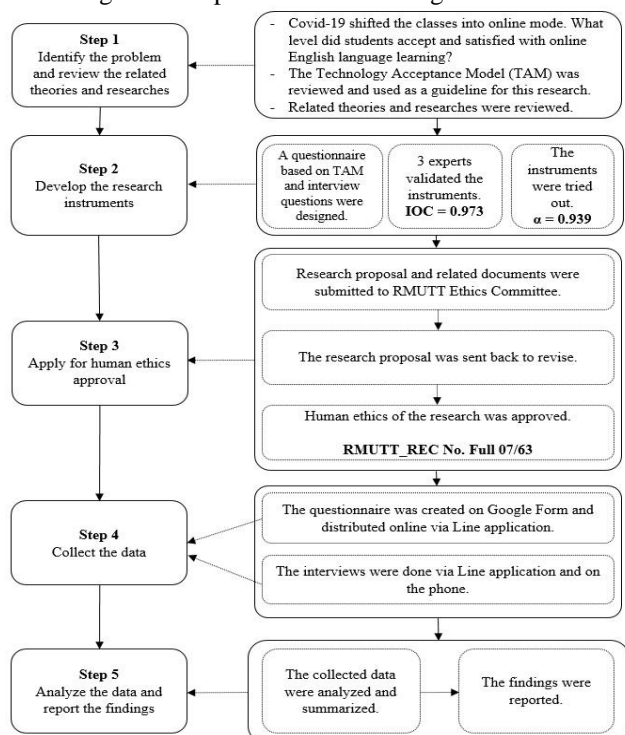


Fig.1 Research process

Results

The research was conducted under Covid-19 pandemic during summer semester in academic year 2019 that every class turned to online mode, so the questionnaire was distributed online with kindly assistance of English language lecturers. The demographic information and learning settings of the 400 respondents were summarized as shown in Table 1 and Table 2.

Table 1 The demographic information and learning settings of respondents

Demographic information	n	%
Genders		
Male	248	62.00
Female	152	38.00
Total	400	100.00
Students' years		
1 st year	78	19.50
2 nd year	232	58.00
3 rd year	54	13.50
4 th year	36	9.00
Total	400	100.00
Students' faculties		
Faculty of Engineering	329	82.25
Faculty of Business Administration	8	2.00
Faculty of Home Economics Technology	3	0.75
Faculty of Fine and Applied Arts	9	2.25
Faculty of Technical Education	13	3.25
Faculty of Science and Technology	4	1.00
Faculty of Mass Communication Technology	7	1.75
Faculty of Liberal Arts	27	6.75
Total	400	100.00
Subjects		
English for Communication 1	41	10.25
English for Communication 2	45	11.25
English Conversation	162	40.50
English Reading	21	5.25
English for Presentations	131	32.75
Total	400	100.00

Table 1 above shows that most students were male (62%), and most students were studying in the 2nd year (58%) from the Faculty of Engineering (82.25%). Whereas the English language subject most students enrolled was English Conversation (40.50%). Regarding the learning settings, most students studied online English language courses by connecting to the internet via mobile network (47.50%). Computers (50.75%) were the equipment for online learning most students used for their studies, and the software that most students used for online learning was Microsoft Teams (68.25%) as shown in Table 2.

Table 2 The students' learning settings

Learning settings	n	%
Networking		
Wi-Fi	182	45.50
Mobile network	190	47.50
LAN	28	7.00
Total	400	100.00
Equipment for online learning		
Computer	203	50.75
Mobile phone	172	43.00
Tablet	25	6.25
Total	400	100.00
Programs / software for online learning*		
Microsoft Teams	273	68.25
D-Learn (Moodle)	136	34.00
Google Classroom	122	30.50
Line	142	35.50
Zoom	169	42.25
Facebook	44	11.00
YouTube	15	3.75
Others	2	0.50

* check all that apply

The research results of online learning management showed that the learning management factors affected online English language learning at a high level. Table 3 showed that the students were the most influential factor followed by instructors, online learning activities, measurement and assessment, and teaching technologies. To clarify this point, each factor was shown in the following tables.

Table 3 The learning management factors affecting online English language learning

The learning management factors affecting online English language learning	Acceptance			
	\bar{x}	S.D.	Levels	Ranking
Teachers	4.14	0.72	High	2
Learners	4.17	0.62	High	1
Online learning activities	4.14	0.74	High	3
Teaching technologies	3.96	0.78	High	5
Measurement and assessment	4.08	0.74	High	4
Total	4.11	0.64	High	

Regarding the acceptance of online English language learning, the overall acceptance was at a high level. Considering each aspect in descending order, the students accepted online English language learning at a high level in every aspect as shown in Table 4: Perceived Usefulness, Perceived Ease of Use, Attitude, and Intention.

Table 4 The acceptance of online English language learning

The acceptance of online English language learning	Acceptance			
	\bar{x}	S.D.	Levels	Ranking
Perceived Usefulness	3.96	0.84	High	1
Perceived Ease of Use	3.94	0.84	High	2
Attitude to Use	3.79	0.96	High	3
Intention to Use	3.70	1.07	High	4
Total	3.88	0.85	High	

The research results in terms of the students' satisfaction indicated that overall satisfaction was at a high level (\bar{x} =3.97, S.D.=0.80). The online lecturers' knowledge and teaching skills were the most satisfying at a high level (\bar{x} =4.09, S.D.=0.92) following by clarity and fairness in measurement and assessment (\bar{x} =4.07, S.D.=0.88), and providing student feedback for self-development (\bar{x} =4.05, S.D.=0.86).

The research hypothesis testing could be divided into 3 parts: H1: Differences of demographic information and learning settings affected the differences of the acceptance and satisfaction toward online English language, H2: Online English language course management influenced the acceptance of online English language courses, and H3: The relationship of factors influencing the acceptance of online English language.

1. H1: Differences of demographic information and learning settings affected the differences of the acceptance and satisfaction toward online English language. According to the hypothesis testing by using f-test with LSD method, the collected data about the acceptance and satisfaction toward online English learning were compared with genders, internet connection, and equipment for online learning, the results showed that there were no statistically significant differences between demographic information and learning settings and the acceptance and satisfaction toward online English learning at the level of .05.

2. H2: Online English language learning management influenced the acceptance of online English language learning. First of all, the collected data were measured for the strength of a linear association by using the Pearson product-moment correlation coefficient. The results shown in Table 5 confirmed the hypothesis that every variable of online English language learning management was positively related at the statistical significant level of .05, namely, the lectures related to the acceptance of online English language learning at a moderate level (r =.650), the students related to the acceptance of online English language learning at a moderate level (r =.613), the online learning activities related to the acceptance of online English language learning at a high level (r =.701), and the online teaching and learning technologies related to the acceptance of online English language learning at a high level (r =.775).

Table 5 Online English language learning management influencing the acceptance of online English language learning

Variables	LEC	STU	ACT	TEC	EVA	ACC
Teachers (LEC)	1					
Learners (STU)	.642**	1				
Online learning activities (ACT)	.844**	.697**	1			
Teaching technologies (TEC)	.699**	.642**	.788**	1		
Measurement and assessment (EVA)	.723**	.639**	.838**	.780**	1	
Acceptance (ACC)	.650**	.613**	.701**	.775**	.781**	1

**p < .05

Then the data were analyzed by multiple regression with the enter method, and it found that the lecturers, the students, the online learning activities, the online teaching and learning technologies, and the measurement and assessment

influenced the acceptance of online English language learning at the statistical significant level of .05. In addition, the most influential factor was the measurement and assessment ($\beta=.461$). The five predictors were able to account for 69% of the variance in the acceptance of online English language learning, as also noted in Table 6.

Table 6 The results of analyzing the factors of online English language learning management influencing the acceptance of online English language learning with multiple regression with the enter method

Online English language learning management	The acceptance of online English language				
	B	S.E.	β	t	p
(Constant)	-.367	.169		-2.179	.030*
Teachers	.127	.062	.108	2.033	.043*
Learners	.148	.055	.109	2.688	.008*
Online learning activities	-.197	.081	-.171	-2.441	.015*
Teaching technologies	.442	.054	.405	8.167	.000*
Measurement and assessment	.531	.063	.461	8.368	.000*

R = .831 R² = .690, Std. Error of the Estimate = .476 F = 175.725, p = .000

3. H3: The relationship of factors influencing the acceptance of online English language as shown in Table 7 were analyzed by using the Pearson product-moment correlation coefficient, and it confirmed the hypothesis that factors of the acceptance and satisfaction toward online English language learning were positively related at the statistical significant level of .05.

Table 7 The relationship of factors influencing the acceptance of online English language

Variables	PU	PEOU	ATU	ITU	SA
Perceived Usefulness (PU)	1				
Perceived Ease of Use (PEOU)	.856**	1			
Attitude to Use (ATU)	.861**	.835**	1		
Intention to (ITU)	.826**	.793**	.893**	1	
Satisfaction (SA)	.815**	.824**	.798**	.805**	1

**p < .05

However, when the collected data were analyzed by multiple regression with the enter method, it found that the factors influencing the intention in online English language learning were perceived usefulness, attitude, and satisfaction; whereas, perceived ease of use did not influence the intention in online English language learning. The results revealed as shown in Fig 1.

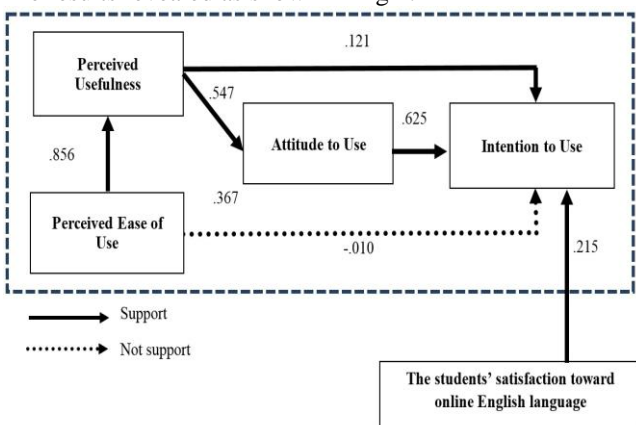


Fig 1 The results of analyzing the factors influencing the intention in online English language learning with multiple regression with the enter method

According to problems and recommendations at the end of the questionnaire, there were 90 respondents giving the information about their problems about online English language learning. The results showed that the most difficult problem during learning English language online was network signal stability (75.55%), followed by unreadiness of the equipment for online learning (60%), such as a computer, a webcam, and a microphone. Some students (25.55%) said that they lacked a computer or a computer notebook, just only a mobile phone for online learning. In addition, the students (14.44%) said that the communication problems caused the difficulties to understand. Furthermore, there were 38 students providing some recommendations on online English language learning that they would like to study in the classroom because of more effective learning (100%), and some students (18.42%) said that the lecturers should give clearer explanations when teaching and when giving assignments.

Regarding the results from the interview, there were 30 key informants: 60% was male and 40% was female. The interview was semi-structured and divided into 7 main questions to ask about the factors in the online English language learning: the online lecturers, effective online English learning styles, the online English language learning skills, the online English learning activities, the online English language instructional media, the appropriate online English language measurement and assessment, and the online English language learning constraints and recommendations.

For the online English language lecturers, most students thought that the lecturers should be punctual, professional, patient, flexible, caring and willing to give the students' advice. The lecturers should understand the students' limitation of online learning. The lectures should have a sense of humor, build up a relaxed classroom atmosphere and fun online classroom, and make the lessons easy to understand. The lecturers should have some knowledge about technology and use various kinds of technology to make the lessons more interesting. The lecturers should also ask the students some questions while teaching and allow the students to express their opinions. However, some students also thought the lecturers should concisely teach, otherwise the students could not understand because of many distractions.

The students gave some opinions on how to learn English language online effectively. Online English language learning should be paid more attention than learning in a normal classroom. The students should be punctual, have self-discipline, and study in a good environment promoting online learning, such as a quiet place. Also, the students should ensure the availability of online learning equipment, study before class, take notes when studying, and self-study after class. If it is possible, the lessons should be recorded in order to study repeatedly. And if the students don't understand what they have already learned, they should ask the lecturers immediately after class. Furthermore, some students told about their learning techniques that they used 2 devices at the same time: one for online learning and another one for finding the vocabulary.

For the online English language learning skills, the students said that online learners should have ICT skills in order to

easily access the online classroom, lessons, and materials and for self-study. The online learners should have listening skills, also communication skills, for practicing English language with the lecturers. In addition, the online learners should have problem solving skills because they have to study alone.

The online English language learning activities the students suggested are making video clips, frequently or randomly asking the questions, group works, presentation, conversation in pairs, doing some exercises in class, writing a dialogue then making a conversation face to face via webcam, expressing opinions or class discussion individually, in pairs, or in groups, and providing videos for learning out of class.

The online English language instructional media that the students thought that they can be used in the online classroom are pictures, videos, Kahoot, and English practice applications.

For the appropriate online English language measurement and assessment, the students said that there should be objective and subjective tests, listening and speaking testing by real time testing or recording video clips, presentation, unit tests, as well as tests in pairs or groups.

However, the students mentioned their online English language learning constraints. The problems could be categorized into 3 groups: technology and communication constraints, online learning constraints, and online learning environment constraints. First of all, most students agreed that the stability of mobile networks caused discontinuity of learning, unsmooth listening, unclear pictures, especially when raining. The slides were small when studying via mobile phones; moreover, some students said that staring at the screen too long caused their eye pain. Some also mentioned the unreadiness of the online learning equipment: lack of computers and printers, old mobile phones causing out of date applications including not topping up the internet. While the online learning constraints varied among the students, some students studied under pressure because they did not know the answers, took time for translation, found the difficult vocabulary, and they were shy to answer the questions in class with many people or with students from other faculties as well as they were shy to ask the questions and shy to turn on the camera. When the students asked the lecturers in person, the answers were delayed. The students could not get the answers immediately. The sound was unclear, and sometimes there was no sound. And the test time was quite limited, so they could not finish the test in time. For the online learning environment, the students could not concentrate with the lessons because the atmosphere at home or dormitories did not facilitate study. There was a lot of noise during studying from the lecturers and classmates because some students turned on the microphones all the time.

The recommendations from the students noted that they preferred studying in a normal classroom because they got more understanding. However, some students thought that online learning was beneficial. For example, they had more time to do something else. There was nobody interrupting while studying. They could get up any time and eat snacks while studying. Also, it was easier and convenient to contact the lecturers. There should be ready for online English learning, such as learners, lecturers, activities, technology,

and measurement and assessment. The university should explain the online learning management in details including providing facilitators of online learning and lowering tuition fees.

Discussions

The research results showed that the students accepted the online English language learning at a high level. Regarding each factors behind the online English language learning. Firstly, genders had no statistically significant differences of the acceptance and satisfaction toward online English language. This might because both male and female students had no significant differences found in barriers and needs in online learning [7]. The learning setting for the online English language learning pointed that the most of students accessed the internet via mobile network. This is because the mobile phones are a device most people have, so there is no need to buy any equipment for online learning. The research of [8] noted that the important factor for blended learning was inexpensive access to the online learning materials and the use of internet. Moreover, the COVID-19 pandemic led to the universities suspending learning in classroom, then no one prepared for this situation as well as the students. Using mobile network for online learning was the best and fastest way to proceed their learning to the end of semester.

Although the mobile phones were used to access the internet, mobile phones were not the learning equipment most students used for their online learning. The result was discovered that most students used the computers instead. [9] mentioned that the mobile phones had small screen sizes and keyboard and the battery and memory were quite limited. So these limitation might cause the students using the computers more than mobile phones in online English language learning. This is supported by the students' interviews that slides on the mobile phones were too small and staring at the phones for a long time caused them eye pains.

About the programs used for online learning, most students said that the programs they used to learn online was Microsoft Teams. This may be because Microsoft Teams was provided by the university, so there were technical supports that teachers and students could ask for some assistance related to [10] that technical support could help the users of the particular program feel comfortable to use the program in terms of perceived usefulness and perceived ease of use. Also the results of [11] indicated that the technical support was related to attitude and technology usage.

Regarding the factors of online English language learning management, the results from the study about online learning management for English language courses showed that the students were the most influential factor that was consistent with [12] said that implementing the new technology needed to be accepted by the users otherwise it wasted time and money.

About the acceptance of online English language learning, perceived of usefulness was the most influential factor because when the students perceived usefulness of the new technology they were likely to intend to use and adopt it [5][13]. And when each factor of the acceptance employed

by TAM was analyzed by multiple regression to study the influential factors affecting intention to use the technology for online English language learning. The results were consistent with the previous researches. However, there was no statistically significant difference between perceived ease of use and intention to use. As [14] said earlier, the experienced and inexperienced users would differently related to perceived of use and perceived usefulness: the experienced would focus on the usefulness, but the inexperienced would focus on perceived ease of use. According to the table 4, perceived usefulness was the highest and there was no relationship between perceived ease of use and intention to use, so it could be interpreted that most students responding to the questionnaire in this research were the experienced users. And it is supported by the students' interview that they were not confused if the teachers used many different programs for online English language learning.

Recommendations

A. Recommendations for Practices

1. Based on students' recommendations, the teachers should develop teaching online skills trying to find the way to build the good atmosphere and encourage the students to learn online, such as, having a sense of humors, studying the new technology to make the lessons more interesting. However, the teacher should not distract the students too much. Moreover, the teacher should give the students a variety of task tests.
2. The recommendations for the new online learners were paying more attention than studying in classroom. Self-directed skills are required because they have to study alone. For low English language proficiency, using two devices might be beneficial for online learning support, for example 1 for online English language classroom and another one for research during class.
3. For online English language learning, ICT is one of the important skills.
4. The online English language learning should be tested by both objective and subjective tests, online face-to-face, groups and pair work.
5. According to the students' interview about the learning constraints, the bad weather is the big problems, so the students should find a backup plan, for example, using LAN instead of mobile networks or Wi-Fi, or asking the teacher to record videos.

B. Recommendations for Further Research

1. The next research might be involved with the activities used for online English language learning.
2. This research collected the data with the students who studied English language, so the research might apply the other subjects or faculties.
3. The further research might be conducted with other stakeholders to study the influential factors and their relationship.
4. The further research might be concerned with learning English language online for the disabilities.

5. Teaching English language online during COVID-19 situation is challenging because English language is a skill need to practice individually, so the next research might propose the online English language activities.

Conclusion

In conclusion, the research results obviously showed that RMUTT could deal with the COVID-19 situation affecting teaching and learning because the students' satisfaction towards online English language learning was high level. As online English language teaching is different from the traditional teaching, the teachers need to be supported and trained to be familiar with the new technology for online teaching in order that the teachers create the proper instructional media with online courses. Furthermore, it is quite important to follow up the students' online learning because the students were the key of online learning management. If the students refuse the new technology, then they would not intend to use it. So the online learning management would not be successful in terms of academics and educational investment

References

- [1] B. Anuroj, "Thailand 4.0 – a new value-based economy", Retrieved on 15th January 2021, from https://www.boi.go.th/upload/content/Thailand,%20Taking%20off%20to%20new%20heights%20@%20belgium_5ab4e8042850e.pdf
- [2] W. Bowen, "The Puny Payoff from Office Computers," *Fortune*, May 26, pp. 20-24, 1986.
- [3] T.R. Young, "The Lonely Micro", *Datamation*, Vol.30, No.4, pp. 100-114, 1984.
- [4] S. Kuama, & U. Intharaksa, "Is Online Learning Suitable for All English Language Students? PASAA", Volume 52 July - December 2016. Retrieved on 15th January 2021, from <https://files.eric.ed.gov/fulltext/EJ1134684.pdf>
- [5] F. D. Davis, "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology", *MIS Quarterly*, Vol.13, pp.319-340, 1989.
- [6] Z. A. Solangi, F. A. Shahrani, & S. M. Pandhiani, "Factors affecting Successful Implementation of eLearning: Study of Colleges and Institutes Sector RCJ Saudi

- Arabia, iJET, Vol. 13, No. 6, pp.223-230, 2018.
- [7] N. Srichanyachon, "The Barriers And Needs Of Online Learners", Turkish Online Journal of Distance Education, Vol. 15, No. 3, pp. 50-59, 2014.
- [8] S.M. Azizi, N. Roozbahai, & A. Khatony, "Factors affecting the acceptance of blended learning in medical education: application of UTAUT2 model", BMC Medical Education, 20, 367, 2020.
- [9] K. Siau, E.P. Lim, & Z. Shen, "Mobile commerce: Promises, challenges and research agenda", Journal of Database Management, Vol.12, No. 3, pp.4-13, 2001.
- [10] R. A. Sánchez, & A. D. Hueros, "Motivational factors that influence the acceptance of Moodle using TAM", Computers in Human Behavior, 26, pp. 1632-1640, 2010.
- [11] E.W.T. Ngai, J.K.L. Poon, & Y.H.C. Chan, "Empirical examination of the adoption of WebCT using TAM", Computer & Education, Vol. 48, No. 2, pp. 250-267, 2007.
- [12] J. Cowen, "The Influence of Perceived Ease of Use, Perceived Usefulness and Subjective Norm on Computed Radiography Systems: A Pilot Study", Retrieved on 15th January 2021, from <https://kb.osu.edu/bitstream/handle/1811/36983/?sequence=1>.
- [13] S. Iqbal, & Z.A. Bhatti, "An investigation of University Student Readiness towards M-learning using Technology Acceptance Model", International Review of Research in Open and Distributed Learning, Vol. 16, No.4. pp.83-103, 2015.
- [14] S. Taylor, & P. Todd, "Assessing IT Usage: The Role of Prior Experience", MIS Quarterly, Vol. 19, No. 4, pp. 561-570, 1995.