

## مراجعة الاختلافات بين الجنسين في تعلم اللغة القائم على التكنولوجيا

# A Review of Gender Differences in Technology-Based Language Learning

تقوى رشيد جمعة: مدرس لغة انجليزية، المديرية العامة للتربية، النجف الاشرف، العراق.

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DOI: https://doi.org/10.56989/benkj.v3i1.24



## اللخص:

على مدى العقود القليلة الماضية، تُعزى التطورات التعليمية الهائلة في الغالب إلى التقدم التكنولوجي، لذا أصبحت التكنولوجيا أكثر اندماجًا في التعليم، وأكثر دورات اللغة الإنجليزية نجاحًا وجاذبية للطلاب الطموحين هي تلك التي تستخدم فيها التقنية التكنلوجية، وعليه، تهدف هذه المقالة إلى توضيح دور دمج التكنولوجيا في المؤسسات التعليمية، حيث يعتمد البحث الحالي على مراجعة 10 دراسات تختبر الفروق بين الجنسين في استخدام التكنولوجيا لتعلم اللغات، مع التركيز على البحوث التي تم إجراؤها بين عامي 2015 الجنسين في استخدام الدراسة من عرض البحث الأحدث والذي تم نشره عام 2020 الى الأقدم والذي تم نشره عام 2020 الى الأقدم والذي تم نشره عام 2015، نتيجة لذلك، يمكننا استخلاص الاستنتاجات التالية حول دور التكنولوجيا في تعلم اللغة: فهي تسهل التعاون بين المعلم والطالب، وتزود الطلاب بفهم سريع وسهل، وتساعد الطلاب على تطوير مهارات التفكير النقدي لديهم، وتجعل التعليم والتدريس يتركز على الطلاب نفسهم، ويبني استقلالية الطلاب وتقعم، ويزيد من حافزهم للتعلم.

الكلمات المفتاحية: الفروق بين الجنسين، تعلم اللغة، التكنولوجيا، التعليم في العراق

#### Abstract:

Over the past few decades, massive educational developments are mostly attributable to technological advancements. Technology has become more integrated into classroom activities as electronic resources in education has increased. The most successful and engaging English courses for ambitious students are those that offer technical assistance. Accordingly, this article aims to show the role of integrating technology in educational institutions. The current research is based on a review of 10 studies examining gender differences in utilizing technology to learn languages. The emphasis of the study is research undertaken between 2015 and 2020. Therefore, the investigation starts with the most recent study (i.e., conducted in 2020) and proceeds backward (i.e., published in 2015). As a result, we can draw the following conclusions about the role of technology in language classrooms: it facilitates teacher-student collaboration, provides students with easily understandable feedback and performance, helps students develop their critical thinking skills, makes learning and teaching more student-centered, builds students' autonomy and confidence, and increases their motivation to learn.

Keywords: Gender Differences, Language Learning, Technology



#### 1.Introduction

The increased availability of media and internet access for most of the world's population has impacted practically every area of everyday life, including education and language acquisition. Technology is critical to learning both inside and outside of the classroom. The majority of language lessons make use of technology. Language acquisition is aided by technology. Language learning may be improved by customizing classroom activities with technology. Language instructors are benefiting from technological advancements.

Students use different parts of the English language skills, such as listening, walking, reading, and writing, to show how well they know the language and how well they can communicate with others. Also, some technologies allow teachers to differentiate instruction and change classroom activities and homework, which makes learning a language a better experience. Language teachers should use distance learning services to reach all students, no matter where they live, what kind of human and material resources they have, or how much they know or need to know about the language. Thus, technology is increasingly helping foreign language teachers promote and mediate language acquisition for their pupils. Technology can aid language learning, but it depends on the language instructor's talents and expertise.

Additionally, to determine the differences between males and females, gender discrepancies in technology usage and other technology-related issues have been studied. Recent studies have investigated gender variations in language learning strategies and benefits. The use of technology in the classroom highlights the issue of technological adoption, which has become a fascinating area of study for academics worldwide. Research on gender variations in foreign language learning has been contentious in second/foreign language acquisition and learning over the



past three decades. This is due to the long-held belief that disparities in language output between males and females are crucial for establishing language learning theories and teaching approaches and understanding individual and gender differences in language learning.

The usage of technology is widely acknowledged to have a substantial impact on how students learn both today and in the future. Consequently, the impacts of technology on male and female students in early, intermediate, and late immersion have yet to be explored. The new study is based on an examination of 12 articles that examine how men and women utilize technology to learn languages differently. The reviews' research was carried out between 2015 and 2020. Therefore, the investigation starts with the most recent study (i.e., conducted in 2020) and proceeds backward (i.e., published in 2015). The study discusses each study's theoretical parts, followed models, data gathering methods, data processing software, key conclusions, and recommendations for follow-up research.

## 2. The Theoretical Parts of the Investigations

In recent years, technology usage in connection to learning has evolved considerably. As a result, several scholars are interested in investigating gender disparities in language learning using technology. The Technology Acceptance Model (TAM) is a revolutionary theory that predicts consumer behavior in reaction to specific technology using two variables: perceived value and perceived ease of use. It is an effective technique for comprehending how technology integration is accepted in diverse areas (Saukah et. al., 2020, 219). Furthermore, gender differences in technology utilization have a range of consequences. Multiple theories, including constructivism, social learning, cooperative learning, and, more recently, collaboration theory, underpin the use of technology in language acquisition.



Technology-facilitated learning is the focus of these ideas (Alzamil, 2020, p.20).

Integrative motivation has dominated investigations on gender variations in language acquisition motivation, according to Gardner and Lambert (1972). On the other hand, Gardner and Lambert's model has been questioned, notably in terms of affiliation with the target language community, which is especially important in the case of English. As a result, researchers must investigate how gender influences all areas of motivation, including perceptions, ability values, and emotional arousal processes. As a result, this study aims to determine how gender influences several elements of Polish learners' motivation to learn English (Iwaniec, 2019, p.2). There are also many findings from an empirical investigation of the pedagogical applicability of EDM in English language classrooms and two analyses of anticipated between–group and within–group variations among educational process participants (Djalev & Bogdanov; 2019, p. 168).

In light of the previous debate, Xodabande tries to fill a vacuum in the research by examining Iranian EFL learners' expectations for developing technologies for language acquisition outside of the classroom and the potential gender implications of their technology and media use. Furthermore, this study analyses how Iranian EFL students view the efficacy of various modern technologies and media in fostering the development of various language skills (Xodabande; 2018, p.20). ID has yet to be researched on male and female early, medium, and late immersion students. This is critical for evaluating how these factors influence male and female students in these three immersion sessions. This paper will examine the English proficiency of male and female undergraduate students in early, middle, and late immersion groups and the effects of ID variables like anxiety, willingness to interact (WTC), self-confidence, and motivational strength. Previous research still needs to fill this knowledge gap. In the theoretical context of this study, gender differences in learning, gender,



motivational strength, and gender differences and attitude are all discussed. Women's issues with self-esteem, WTC, and anxiety are all related to their gender (Lasekan, 2018, p. 30).

Another research effort looked at how WhatsApp and other mobile apps influence collocation learning among Iranian EFL students (Zahra & Hadi; 2017, p.26). Using Vygotsky's social constructivism as a theoretical framework, another study investigated the importance of social contact in learning and the core ideas behind the communicative approach to second language learning (Holao and Wichadee, 2017, p.70).

Multiple studies have demonstrated that technology enhances learning results and motivation. Consequently, the analytical foundation of the present study investigates the potential causes of gender disparities in learning performances and gaming experiences in this context. A separate article addresses three influences on student learning (i.e., machine selfefficacy, teacher attributes, and motivational conditions) using a formal hypothesis formation are addressed. Following that, an overview of previous studies on gender disparities is presented, as well as the three learning appraisal factors (dependent variables) explored in this report, including students' expectations of achievement, pleasure, and happiness (Dang & Zhang; 2016, p. 120). Another study used TAM, a well-known model for technology acquisition and utilization. It was initially proposed by and is currently considered a computational paradigm for describing and forecasting user behavior against new IT systems. Due to TAM, a user's practical usage of an IT device is governed by their behavioral intents, mood, perceived system utility, and perceived system convenience. TAM also revealed that external variables have mediated impacts on perceived utility and perceived ease of use, which influence an individual's intention and actual usage (Kim and Lee; 2016, p. 48).



Oz's theoretical framework is concerned with many previous studies. To bridge the gap, this study compiles and examines the perspectives of future EFL educators on mobile-assisted language learning, stratifying respondents by gender, year in school, and grade point average (Oz; 2015, pp.22-24). Furthermore, Teo and his colleagues state that while technology integration topics have been extensively researched, education scholars are currently focused on gender inequalities surrounding teachers' technology integration in classrooms. As a result, the current theoretical paradigm is concerned with how gender issues can influence school technology adoption. Many main components of technology adoption, such as attitude, perceived usefulness, perceived ease of use, and willingness to utilize technology, need to take gender variations into account (Teo et al.; 2015, p. 236).

## 3. The Findings of the Investigations

In each of the studies that have come before, the study is based on different results that academics have made either qualitatively or quantitatively. Three major conclusions can be drawn. First, the perceived impact of a mobile learning application on students' competence can explain their desire to use it. Second, mobile learning application adoption is consistent across gender groups, with female and male students experiencing the same effect and voicing the same willingness to use mobile learning apps. As a result, it is suggested that the instructor or other educational organizer distributes the mobile learning application to both male and female students as soon as possible so that they can communicate and interact in order to grow their knowledge through the application. Third, as students become more familiar with the program, they will become more comfortable with it, improving their performance (Saukah et. Al., 2020, p. 225). According to the findings, most participants were enthusiastic about utilizing Instagram as a language learning tool. In addition, the results revealed no significant differences between male and



female EFL learners' perceptions of Instagram as a language-learning tool. The study's findings have implications for using Instagram to teach and learn English (Alzamil, 2020, p. 413).

Self-regulation, instrumentality, self-efficacy, and the English selfconcept vary. The findings show that self-regulation, instrumentality, selfefficacy, and English self-concept vary substantially. Gender differences are higher than previously thought. Females outperformed males on international orientation, ideal L2 self, and self-regulation. Instrumentality, self-efficacy, English self-concept, and intrinsic motivation were genderneutral. Consequently, gender discrepancies are more frequent than indicated by earlier studies (Iwaniec, 2019, pp, 9–11). Djalev and Bogdanov found that all independent factors and their relationships significantly impacted the EDM's pedagogical usability testing. On average, women give pedagogical usability a higher score than men. When gender and rank are considered, female teachers and students score higher on usability than their male counterparts. The relationship between the participants' gender and the usability measurements influences the degree of ratings, with women providing higher ratings on individual dimensions than men. The interaction of the three variables has a significant effect, exposing many trends: women rate usability higher than men, students rate usability higher than teachers, and different metrics have varying degrees of usability. According to the study, regardless of the participant's age, gender, or place, the most influential dimension of pedagogical accessibility is applicability. The study's findings highlight the importance of people in the instructional process and aspects of EDM's pedagogical usability (Djalev & Bogdanov, 2019, p.185).

Moving on to another analysis, we will examine male and female college students' English competence in early, middle, and late immersion classes and how ID characteristics like anxiety, WTC, self-confidence, and motivational intensity affect their performance. English competence varies



by gender. Men and women have different levels of English proficiency. These results indicate that female student are, on average, more competent than male students. There is no statistically significant difference between male and female immersion students due to the effects of the World Trade Center, anxiety, and motivation. Nonetheless, this study established a correlation between the better English competence observed primarily among the three groups of female immersion students and a more optimistic outlook and increased self-confidence. As a result, the current study adds to the growing evidence that female learners from different immersion classes have higher proficiency than male learners (Lasekan, 2018, pp.38-39). The online survey findings revealed that participants use various media and multimedia tools outside of the classroom to improve their language skills, with electronic dictionaries, journals, and films being among the most commonly used communication formats, according to Xodabande. The only significant differences between male and female participants were in video game and music use, according to MANOVA analysis. Despite some limits on social networks and Internet access in Iran, the study's results indicate that most Iranian EFL students use them outside the classroom to supplement their language learning (Xodabande; 2018, p.27).

According to various publications, Zahra & Hadi found that WhatsApp-trained learners outperformed conventional learners. Finally, because there was no significant deviation, the null hypothesis of no link between gender and utilizing WhatsApp to educate collocations was verified. Gender differences, in an instance, were shown to have no effect on collocation progression among Iranian EFL students. As a result, gender must be regarded as a neutral feature in the current study (Zahra & Hadi; 2017, p.37). As in Hilao & Wichadee's study, male and female students did not differ in their use, attitudes toward mobile phone language acquisition, or learning performance. Students ranked the tiny screen and keyboard as the most significant restrictions of using a mobile phone for learning in an



open-ended question, followed by the intrusiveness of SMS background information and the mobile phone's limited memory. It was explained how a mobile phone might be completely integrated into the teaching process to increase student involvement (Hilao & Wichadee, 2017, p.76).

Educators will be affected by the results regarding computer selfefficacy in several ways. In the following study, three factors strongly affected female students' learning satisfaction, with the students' perceptions of their success and fun playing the most important roles. However, machine self-efficacy had no significant impact on perceived accomplishment or enjoyment for male students. Since machine selfefficacy significantly and positively impacts female students' perceptions of achievement and learning satisfaction, educators must help them improve their self-efficacy. For male students, this impact does not exist. According to previous studies, one possible reason is that they were overconfident in their computer skills and abilities, which contributed to a lack of commitment and effort in learning. In that case, educators should remember this and try to motivate students (particularly males) to work hard and respect them for their commitment and hard work rather than their computer skills (Dang & Zhang, 2016, p.126). Kim and Lee's analysis (2016, p. 51) showed that most path coefficients between constructs were statistically important, indicating that the current research model accurately represented the evidence. However, students' M-learning self-efficacy and MALL interaction did not alter MALL's perceived utility. This may be interpreted as the students were comfortable using M-learning gadgets and socially connected via mobile devices, but they were suspicious of their value as language-learning resources (Kim & Lee; 2016, p.51).

According to Oz, this study examined Turkish preservice English instructors' experiences using mobile-assisted language learning (MALL) (2015, p.30). Despite scoring 26 of the m-learning questionnaire's products positively, the results showed substantial disparities in participants'



perceptions of MALL's applicability and efficacy in EFL classrooms and the likelihood of delivering m-learning courses for preservice English teacher training. These favorable perspectives and attitudes are the main reasons the administration obeys MALL. Due to its cost. accessibility, portability/mobility, and variety, female EFL students have higher requirements for m-learning. They believe mobile technology will improve results. Most participants agree that m-learning technologies can assist in overcoming the time and space constraints of language learning by giving them chances to practice English and convey information and skills inside and outside the classroom (Oz; 2015, p.30). in the last study, progressively severe multi-sample invariance analysis models (configural, metric, and scalar) indicated that male and female per-service teachers measured the technology acceptance model (TAM) components identically, with one tiny statistical deviation. These findings suggest that TAM model construct calculations are gender-invariant. Three TAM model components showed no gender differences among preservice instructors. However, preservice teachers perceived computers differently. PEU use is a more typical definition of computer proficiency, making it important for measuring classroom technology use. Thus, female preservice teachers are less computer-savvy than their male counterparts, which may hinder their technology adoption and utilization in the classroom. This gender imbalance will impact how they use technology in their professional teaching careers. Teacher education programs should cover this issue to close the gender gap (Teo et al., 2015, p. 264).

## 3. Methodology

The studies mentioned previously followed various theories, utilized different research designs to address the research questions or approve their hypotheses, and employed several methods to collect and analyze data. This information is summarized below. See Table (1):



## Table (1): Researches Information

				Data	Data	
NO.	Author Name/s	Theory/s	Sampling	Collection  Method	Analysis Method	Research Design
1.	Saukah et.al (2020)	Technology Acceptance Model (TAM)	97 Hello English users (24 males and 73 females)	online survey questionnaire	SPSS	Quantitative design
2.	Alzamil (2020)	Constructivism, social learning theory, cooperative	60 men and 60 women	handing a questionnaire	SPSS	Qualitative design
3.	Iwaniec (2019)	Gardner and Lambert's model	599 Polish English students from ten schools (295 males, 298 females)	The motivational questionnaire	SPPS	Qualitative design
4.	Djalev & Bogdanov (2019)	No Theory	20 lecturers (10 women and 10 men	directions and the PML questionnaire	Two consecutive ANOVAs with repeated measures were conducted	Qualitative design
5.	Xodabande (2018)	No Theory	127 Iranian adult EFL learners (56 males and 71 females)	Online Survey questionnaire	SPSS	Quantitative design
6.	Lasekan (2018)	No Theory	221 students from various disciplines (B.Sc,	A questionnaire was used to gather	SPSS	Quantitative design

## مجلة ابن خلدون للدراسات والأبحاث || المجلد الثالث || العدد الأول || 01-2023م E-ISSN: 2789-3359 || P-ISSN: 2789-7834 || AIF: 0.93 GIF: 1.5255



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			B.Com,	quantitative		
			B.Tech, B.A.,	data		
			and B.C.A.)			
				1.Oxford		
			60 Iranian	Placement		
7.	Zahra & Hadi	No Theory	EFL learners	Test (OPT)	SPSS	Experimental
, •	(2017)		aged 20 to 28			design
			agea 20 to 20	2. Pretest		
				and posttest		
8.	Hilao&Wichadee		122 students,	five-point		Quantitative
	(2017)	No Theory	65 females	rating scale	SPSS	design
			and 57 males	questionnaire		
					structural	
9.					equation	
<i>)</i> .	Dang & Zhang		854	Online survey	modeling	Quantitative
	(2016)	No Theory	Participants	approach	(SEM)	design
	(2010)		, and a particular to the part		techniques	g
		Technology	244			
10.	Kim & Lee	Acceptance	undergraduate			Quantitative
	(2016)	Model	Students (146	Questionnaire	SPSS	design
	(2010)	(	females, 98			dealgii
		(TAM)	males)			
			339			
			preservice		Separate	
			teachers	Online survey	tests were	
11.	Teo et al.	No Theory	studying in a	by using the	run for	Qualitative
	(2015)	140 THOOLY	teacher	questionnaire	calculation	design
			training		invariance	
			institute		iiivaiiaiioo	
			outato			_
			220			Quantitative
12.	Oz (2015)	No Theory	participants	questionnaire	SPSS	and
	02 (2013)	INO ITI <del>C</del> OLY	(165 females,	and interview	UF UU	Qualitative
			45 males)			Design



As shown in the table above, most of the studies reviewed in this paper consider the applications of previous studies and base their research on them. As a result, only two experiments use various models and hypotheses. Output expectancy, commitment expectancy, Social Influence, and favorable circumstances are the four main determinants of users' plan to use and real use of the UTAUT. Saukah et al. (2020, p.219) used The Technology Acceptance Model (TAM). This groundbreaking hypothesis forecasts user behavior in response to specific developments based on perceived value and perceived ease of use. It is proved to be a valuable method for figuring out how technological convergence is embraced in different fields. In addition, Kim and Lee (2016, p. 48) use the Technology Adoption Model (TAM), a well-known technology acceptance and use model. It has been used as a computational model to describe and forecast how people respond to new IT systems. TAM says a user's practical usage of an IT device depends on their behavioral intents, mood, perceived system value, and perceived convenience. TAM also argued that external elements mediate utility and ease of use, which affect purpose and usage. Saukah et al. (2020, p.219) used The Technology Acceptance Model (TAM). This groundbreaking hypothesis forecasts user behavior in response to specific developments based on perceived value and perceived ease of use. It has proved to be a valuable method for figuring out how technological convergence is embraced in different fields.

The samples for the studies ranged from 20 to 600 students and teachers who were learning languages via technology. The scholars do not use a precise or standardized number in their experiments, as seen by the table, which shows that the number of participants varies from one study to the next.

As with the methods used for collecting data, the researchers commonly used questionnaires and interviews in their studies, such as Saukah et.al (2020), Alzamil (2020), Iwaniec (2019), Djalev & Bogdanov



(2019), Lasekan (2018), Djalev & Bogdanov (2019), and Teo et al. (2015). Moreover, some of them, such as Xodabande (2018), and Saukah et al., gathered data through an online survey (2020).

Means and standard deviations were determined along with other descriptive statistics. In order to compare the means of the pre-and post-tests, they analyzed the data using the Statistical Package for the Social Sciences (SPSS) and a paired samples t-test. Even the questionnaires were used to see if there were any differences between the two genders and to get a clearer understanding of the phenomena under review. The content analytic method was used (2020). Finally, some of the studies are only qualitative, such as Djalev & Bogdanov (2019), while others are quantitative, such as Saukah et al. (2020), Xodabande (2018).

## 5. Further Studies

There are gaps in the study that have been conducted from various perspectives. Because several of the previously discussed studies included one or more flaws, the researchers provided various suggestions for further investigations to fill the gaps in their investigations. Participants' differences in perceived impact (PE) and intention to use (IU) of a mobile application for language learning are compared only based on usage length differences. Other criteria, such as education level or technological experience, may yield a more specific result. This study focused on a limited number of elements that impact students' choice to utilize a mobile application. Thus, future experiments should incorporate other external factors from the Unified Theory of Acceptance and Use of Technology (UTAUT2). A more comprehensive analysis that covers all possible UTAUT 2 associated variables is expected to contribute more to proven mobile technology understanding and application acceptance. Other scholars are urged to repeat this study in various environments, resulting in more generalizable findings and a positive effect on the growth of mobile learning apps and



activities among pupils, instructors, and other ELT practitioners worldwide (Saukah, et. al., 2020, p.225). As with the majority of research, the design of another study had flaws. Qassim University only allowed Saudi students to enroll in the courses. Therefore, it isn't easy to generalize the results to the full population of EFL learners in Saudi Arabia. The courses were exclusive to Saudi students at Qassim University. Thus, generalizing the data to all Saudi EFL learners seems difficult. Interviews or experiments may be utilized in future studies on Instagram as a language–learning tool (Alzamil, 2010, p. 27). As a result, if any of these recommendations are implemented in the future, research on the use of technology for language learning will have a compliment circle.

As with the drawbacks of another study, only medium-sized cities, villages, and rural regions were selected initially. This study collected solely quantitative data. The placement test only tested comprehension, grammar, and vocabulary. Participants from major cities, particularly those where English is used more often, may have yielded different results. The qualitative data would disclose more about the specific vocations in mind for both genders. It will be fascinating to observe if gender disparities persist across all abilities and competencies (Iwaniec, 2019, p. P.139). The following study did not examine the differences in assessments between a young and adult female and male learners, which might have illuminated the inequalities in evaluations between these categories. More research is needed to determine why pedagogical usability impacts instructional planners, online teachers, and (linguistic) learners in online and hybrid learning contexts. Another research may have several drawbacks. Participants sent their SMS messages. Participants were told they were participating in a textese linguistic study, which may have exacerbated bias. This study examined Telegram App messaging, spelling variants, and linguistic traits that might identify texting as a language variety (Djalev & Bogdanov; 2019, p.187).



Furthermore, quantitative studies are restricted in their ability to fully understand and examine patterns and preferences in technology usage among language learners, and we still need to figure out why students use and favor those technologies over others. Accordingly, more focused and qualitative analysis is needed to focus on each application class and how language learners use them. With the use of emerging media in the language teaching profession, CALL analysis to find new and unexplored frontiers is becoming more relevant (Xodabande; 2018, p.29).

Zahra and Hadi's findings might recommend further evaluations. They studied WhatsApp as an ICT platform. This is the first second-language collocation research. Thus, some research concepts are:

- 1. Another area of investigation will be how L2 teachers and students feel about implementing and applying new technology in and out of the language classroom.
- 2. More research on the impact of various social networks and ICT opportunities on second language learning and growth is expected.
- It is important to examine whether learning a second language over a long period would result in finer development. Indeed, more time is needed to manage such treatments and advance the awareness of EFL students.
- 4. More research is required to determine if online applications affect language development.
- 5. It would be good to investigate the influence of WhatsApp on the learning of four important skills and subskills, such as grammar, vocabulary, and other areas of language development. (Zahra & Hadi; 2017, p. 38)

Dang & Zhang's review's limitations offer many interpretation tests. First- and second-year students tested the proposed study model first. College newcomers may require academic aid. Second, this study covers



blended learning as a teaching method. Third, this research found significantly lower system self-efficacy (CSE) in females, suggesting that CSE, not gender, may explain result measure differences. The research model might include more than system self-efficacy, instructor qualities, and motivating factors. Juniors and seniors (when mixed classes are available) might be studied to determine how they react to blended learning. Future research might examine student learning in face-to-face, e-learning, and blended learning situations to understand their pros and cons better. Future research may support this claim by comparing the test model to two median CSE split data sets instead of the gender split utilized in this work(Dang & Zhang; 2016, p.128). More research is required to deal with recent smart learning situations or infrastructures. Since there has been little research on the behavioral purpose of smartphone-based MALL and relationships among related factors, it is strongly recommended that more research using TAM be conducted (Kim & Lee; 2016, p.52).

Like any other study, Oz's study has some problems. First, the results are limited because they are based on self-reports and interviews. Second, the fact that the student-teachers knew they were being watched made them more positive about mobile learning. Language teacher education programs and traditional English as a foreign language (EFL) programs need more research to answer questions. These studies should focus on how unique communication tools can be used with good teaching methods to help students learn better (Oz; 2015, p.24).

The present study only examined a limited sample of preservice instructors who underwent stricter calculating invariance tests (configural, metric, and scalar invariances, as well as latent mean difference). In order to increase survey query accuracy, it is also a good idea to employ language that helps participants contextualize meaning. Thus, future research could build on the first study by examining how particular demographic variables in the architecture affect teachers' acceptance of technology. Suppose we



better understand the potential barriers to teacher technology acceptance and use. In that case, the researchers could do more in teacher training to overcome them (Teo, et. al., 2015, p. 246).

#### 6. Conclusions

According to all of the studies covered in this article, technology and education are intimately intertwined in the information age. As a result, technology can make learning faster and more interesting. Technology plays an essential part in the language-learning process. In other words, technology is advantageous in terms of content and greatly influences the educational environment via online and offline learning. Due to technological breakthroughs, learning is no longer restricted by distance, time, or geography. Due to the insufficiency of the traditional and its limits in sustaining contemporary learning, the consequence of modernity in industrialized nations is a gradual movement from conventional to online learning. In addition, traditional learning activities, such as direct classroom contact, are no longer sufficient for pupils learning English for EFL learners. Teachers should develop a novel method for changing student learning. Internet platforms are gaining popularity, enabling professors and students to participate in learning activities in the classroom and outside of it through indirect instruction. Language teachers should use technology to help their more involved learners who students become are also communicators. Language teachers will save time, resources, and money this way. In other words, rather than squandering time and effort on a method with no real merit, they should focus on and experiment with various innovations.

Online learning is now commonly used as a media that promotes education, particularly in today's learning. Blended learning is a brilliant way to support this topic by bridging the gap between traditional face-to-face engagement and online learning. As a result, it is proposed that teachers



be persuaded of the worth and advantages of technology in boosting students' learning on the one hand. This implies that teachers require aid and teaching to integrate technology into their language programs. Technology may bring several benefits to both instructors and students when used effectively. It is a platform that learners should utilize since it helps them solve their learning problems and figure out how to apply what they have learned successfully and practically. However, students should utilize technology to enhance their language learning since it is critical in fostering students' creative thinking and presenting them with exciting, interesting, and enjoyable language-learning methods. To sum up, technology allows teachers and students to collaborate, offers comprehensible feedback and performance, aids learners in developing thought skills, makes studying and teaching more student-centered, encourages learners' autonomy and confidence, and improves learners' desire to learn a foreign language effectively.

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