

## The Effect of Using Padlet as a Vocabulary Knowledge Enhancement Application on Saudi EFL Female Learners, and their Attitudes toward its Value in Learning

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### Abstract

This study aimed to investigate the effects of using the digital learning tool Padlet to teach English vocabulary to Saudi females learning English as a Foreign Language (EFL) within the context of Communicative Language Teaching (CLT). Specifically, it examined the attitudes and thoughts of these females toward the application and the effectiveness of using it as a learning platform. The study was set out to answer two questions; the first questions is “How effective is the application Padlet with regard to using a CLT approach to teach English vocabulary skills to Saudi female EFL learners?” while the second one is “What are users’ attitudes toward the online learning platform Padlet?”. The experiment was conducted for two weeks using Padlet. The population size was 50 Saudi females who were level-eight students at the English Language and Translation Department of Al-Imam Muhammad Ibn Saud Islamic University in Riyadh, Saudi Arabia. After inclusion criteria (i.e., the results of an English language placement test) were applied, 30 students were selected for the study; this was done to ensure that the group was homogenous with regard to the level of English skill. The remaining participants then took a pretest; subsequently, the researcher and subjects engaged in seven instruction sessions using Padlet, during which the researcher followed a Communicative Language Teaching approach to presenting English vocabulary. After the experiment was concluded, the participants were given a posttest identical to the pretest in order to assess their knowledge and compare their vocabularies before and after the instructions were provided. In addition, the participants responded to an online survey designed to measure their attitudes toward Padlet. The participants’ scores and mean scores were calculated using the Statistical Package for Social Science (SPSS); specifically, a one-sample t-test and a paired sample t-test were conducted. The findings revealed that the vocabulary instructions given using Padlet were effective at improving the English lexical knowledge of learners. The survey also revealed that the learners’ attitudes toward the tool were positive. Finally, the results indicated that the implementation of Communicative Language Teaching through Padlet was crucial to developing the participants’ English vocabulary skills.

**Keywords:** Arab EFL, attitude, CLT, Collaborative Learning, Communicative Language Teaching, Computer-Assisted Language Learning, constructive learning, e-learning, English as a foreign language female learners, English vocabulary enhancement, Padlet, Saudi EFL, Saudi Female EFL

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## Introduction

The emergence of technology has impacted numerous domains of life and education is one of them. For example, technology has helped transform traditional teacher-centered approaches into new student-centered approaches, such as Communicative Language Teaching (CLT) (Sandholtz, Ringstaff & Dwyer, 1997). Technology has become necessary for such student-centered methods because it has facilitated learning processes and provided convenience and ease. Hence, language learning has evolved and grown beyond the boundaries of classroom walls (Yunus & Salehi, 2012).

Numerous recent studies have investigated the roles of new technologies in language teaching; these studies have found that such developments encourage creativity and improve motivation (Ilter, 2009). Indeed, “educational technology has been found to have positive effects on student attitudes toward learning and on student self-concept. Students felt more successful in school, more motivated to learn, and had increased self-confidence and self-esteem when using computer-based instruction” (Sivin-Kachala, Bialo, & Langford, 2000, p. 5). Technology has also helped students develop language knowledge independently and become more responsible with regard to their learning. In addition, technology has increased student motivation and enabled students to learn successfully; teachers have facilitated this by offering students numerous new learning opportunities.

These opportunities include various web 2.0 sites and tools, such as wikis, social networking platforms (e.g., Facebook and Twitter), blogs (e.g., WordPress), video sites (e.g., YouTube), and other websites that provide educational, social, and business content (e.g., Wikipedia and Weebly); these tools have now become widespread (Parkison & Thomas, 2018). Moreover, according to McCarthy (2010), these tools and websites have begun to provide virtual online environments to help people collaborate, communicate, and share insights with others, and combinations of these tools in EFL learning are crucial parts of Computer-Assisted Language Learning (CALL). Further, such combinations have received significant attention in language research, as they have advanced the development of language technology (Egbert, Paulus, & Nakamichi, 2002; Hubbard, 2008).

Several researchers have found that CALL offers numerous advantages to learning; one of CALL’s core attributes is its focus on the learner-centered approach (Dina & Ciornei, 2013; Hani, 2014; Lai & Kritsonis, 2006). Farrah and Tushyeh (2010) noted that this approach is significant because it results in the creation of enjoyable, meaningful, motivational, and anxiety-free settings that increase learners’ self-confidence and encourages students to learn independently. Further, the researchers noted that an integral facet of CALL is Computer-Mediated Communication (CMC)—that is, communication conducted through the use of a computer. It has been found that CMC is an easy method of participation in communication regardless of participants’ times and geographical locations (Bansal et al., 2012). The method creates enthusiastic students who are confident in their learning abilities and provides learners with equal opportunities to participate, which is unlike in-person interactions (Warschauer, 1995; Wrench & Punyanunt-Carter, 2007).

CLT is a widely adopted approach for language teaching that can be applied to CMC and CALL environments. According to Sekiziyivu and Mugimu (2017), “CLT is based on the concept of communicative competence by which learners are expected to possess the ability to understand

a language and be able to use it for the purposes of effective communication” (p. 8). The main purpose of learning a second language is to communicate effectively in real-life situations; therefore, CLT focuses on presenting learners with situations that closely resemble those found in real life (Lee, 2002). Hence, CLT involves learners in the active production of language by providing tasks and activities that imitate the authentic use of language.

Moreover, learning a second language demands the interaction of the four language skills for effective communication: reading, writing, listening, and speaking (Rivers, 1987). Vocabulary has been regarded as an integral part of these skills. It has been noted that communication relies significantly on vocabulary and meaningful communication cannot take place without adequate vocabulary; therefore, vocabulary shapes the aspect of creating meaning in languages (Huyen & Nga, 2003).

Therefore, given the importance of vocabulary with regard to communication and second language learning, this study aimed to develop students’ vocabulary knowledge. This was done by investigating the use of CLT through Padlet (Version 113.0, Wallwisher, Inc, San Francisco, CA 94103), an online learning platform. Padlet has numerous distinctive learning features, such as uploading items, sharing links, and commenting on and replying to posts. Thus, it can assist students with learning meaningful communication by providing real-time online collaborative environments (Dewitt, Alias, & Siraj, 2015). The following section examines previous studies on second-language learning; the importance of vocabulary, teaching, and technology; and an evaluation of using Padlet.

### ***Research Questions***

Two questions guided this study. The first was “How effective is the application Padlet with regard to using a CLT approach to teach English vocabulary skills to Saudi female EFL learners?” The second was “What are users’ attitudes toward the online learning platform Padlet?”

### **Literature Review**

#### ***Approaches to Second Language Teaching***

The practice of teaching a second or foreign language is an established concept (Musumeci, 2009) that has been documented for decades. However, it is important to distinguish between language acquisition and language learning. Among the things that had a great impact in the field of research is what was mentioned by Krashen (1981) stating that “adults have two independent systems for developing ability in second languages, subconscious language acquisition and conscious language learning.” (p. 1). He mainly described language acquisition as a subconscious process and noted that people acquiring a language are not aware that they are doing so; rather, they are aware only of their usage of the language. In contrast, language learning is a conscious process with regard to knowledge and awareness; learners know the rules of the language they are learning and are able to discuss them (Krashen, 1981). Which indeed had many valuable effects on research in language acquisition and learning.

Foreign language learning has been ascribed great importance (Richards & Rodgers, 2014). Due to this importance, numerous methods and approaches to language teaching have been developed. One of the first approaches was the grammar-translation method, which was introduced

by Karl Plotz, who lived from 1819 to 1881 (McLelland, 2017). This method is used rarely today; a large number of researchers have criticized it for emphasizing only specific areas and for neglecting numerous skills required for appropriate foreign language learning (Zhou & Niu, 2015). During the 1970s, CLT was introduced to address these shortcomings in addition to those of a number of other approaches (Littlewood & William, 1981). According to Abebe, Davidson, & Biru (2012), CLT became one of the most prominent and frequently used methods in classrooms and it is used widely today. The method relies upon and prioritizes interactive communication during the learning process, and aims to “make communicative competence the goal of language teaching” (Richards & Rodgers, 2014, p. 155). The characteristics of this approach include a focus on learning and an aim to utilize real and meaningful communicative interactions in classroom activities (Richards & Rodgers, 2014). An interesting point raised by Larsen-Freeman (2000) indicates that this method emphasizes communication fluency and considers the learning process a creative construction that comprises trials and errors. Further, one of the method’s core features is that it encourages students to practice multiple language skills simultaneously (Johnson & Johnson, 1998). Among the important aspects discussed in many studies, it has been found that CLT is effective in supporting the development of competencies associated with English as a Foreign Language (EFL) and confidence regarding interactions in the target language among learners (Abebe et al., 2012; Hu, 2010; Kavanagh, 2012), which was an important addition to the field of language learning.

### ***The Importance of Learning Vocabulary***

According to the Cambridge Dictionary (2020), vocabulary is “all the words that exist in a particular language or subject” (para. 1) Further, vocabulary—in addition to other language skills, such as grammar, reading, and writing—can be taught and learned using various teaching methods. The importance of using such methods to build vocabulary and develop language skills has been noted by numerous researchers (Alqahtani, 2015; Hong, 2010; Jabar & Ali, 2016; Nation, 2003; Schmitt, 2000). Schmitt (2000) stressed on vocabulary as a critical skill most EFL students need : “lexical knowledge is central to communicative competence and to the acquisition of a second language.” (p. 55). In other words, there is a direct relationship between lexical knowledge and language use (Nation, 2003). The more a learner uses a language, the more likely it is that the learner will gain lexical knowledge; it is this vocabulary competence that facilitates language use. Hence, there have been a number of studies emphasized the importance of learning vocabulary and described it as fundamental to second language learning (Alqahtani, 2015; Ghazal, 2007; Hong, 2010). Nation (2003) has noted that lexical awareness—that is, knowledge of vocabulary—can greatly impact all areas and skills regarding a language because it can help learners read, write, and speak the language, among other things. Additionally, amongst many researchers, (Dakhi & Fitria, 2019) mention that vocabulary “is the heart of language skills. More importantly, it appears to function as a basis for communication.” (p. 23). Thus, as Yang and Dai (2011) found that “It is clear that a learner who is constantly adding to his vocabulary knowledge is better prepared both for productive and receptive language skills.” (p. 64). Moreover, “there is not much value in being able to produce grammatical sentences if one does not have the vocabulary that is required to convey what one wishes to say... without grammar, very little can be conveyed and without vocabulary nothing can be conveyed.” (Wilkins, 1972, p. 97).

However, vocabulary skills can be taught utilizing a CLT approach. According to Wu

(2009), teachers who have mastered the spirits and principles of CLT can help their students enlarge, enhance, and develop their vocabulary knowledge and abilities. Another view by Brown (2007), points to the idea that a CLT approach to vocabulary can offer learners interactive student-centered environments that facilitate vocabulary building and real-world meaningful communication, which corroborate the objectives of the current study.

### ***The Emergence of Technology in Teaching***

It has been noted that a digital revolution has begun; this revolution has impacted a large number of people worldwide (Collins & Halverson, 2018). Consequently, numerous aspects of daily life have evolved (Delgado, Wardlow, McKnight, & O'Malley, 2015). For example, according to Clements (1998), children around the world are surrounded by technology, and as Delgado et al. (2015) noted, young children and teenagers interact with and are influenced by media on a daily basis.

Two decades ago, Strommen and Lincoln (1992) stated that researchers predicted a generation of children that would be accustomed to multidimensional media sources and would have views of the world that are completely different from those of previous generations. Indeed, as Rideout, Foehr, & Roberts (2010) stated, "over the past five years, there has been a huge increase in media use among young people." (p. 2). As technology has been normalized in daily life, it has been integrated into language learning as well. Technological advancements have assisted teachers in classrooms by providing increasing opportunities for students to directly interact with different technologies. Indeed, Saidin, Halim, & Yahaya (2015) expressed that education has been significantly influenced by technology and this has motivated students and teachers to instruct and learn by employing dynamic learning processes.

However, there are a few challenges associated with these changes; teachers require certain proficiencies in order to use technology meaningfully, effectively, and successfully (Sadik, 2008). Despite this, numerous researchers have found a strong correlation between the use of technology and increased student engagement and academic achievement (Rashid & Asghar, 2016; Sahin & Yilmaz, 2020). They have also noted that technology can be an effective tool for the development of language learning and critical thinking skills and can lead to academic achievements; for example, the use of podcasts can help learners improve their pronunciation skills (Ducate & Lomicka, 2009; Morin, Thomas, & Saadé, 2012).

### ***Enhancing Academic Achievements with Technology***

As Spinath (2012) mentioned, "academic achievement refers to performance outcomes in intellectual domains taught at school, college, and university." (p. 1). In a study that used a smartphone application to test student engagement, Pechenkina, Laurence, Oates, Eldridge, & Hunter (2017) concluded that there was a strong relationship between improvements in students' academic achievements and their use of the application; scoring highly in the application helped students and, in turn, influenced their overall performance. Similarly, in a study that utilized the same methodology to teach mathematics, improvements in student performance correlated with the use of mathematical applications (Zhang, Trussell, Gallegos, & Asam, 2015). A similar standpoint was emphasized by Outhwaite, Faulder, Gulliford, & Pitchford (2019) who conducted a study with almost 400 children from the United Kingdom; interactive math applications were

employed and their impacts on student performance were measured. The researchers found that the use of applications in conjunction with regular math lessons improved student achievement; mathematical gains were considerably higher for students exposed to interactive applications (Outhwaite et al., 2019).

Thus, due to the widespread use of smartphones worldwide, numerous educational institutions have begun to use these devices. Consequently, teachers have begun to rely on technologies with increasing frequency, and the effectiveness of using technology within classrooms has received academic attention (Olsen & Chernobilsky, 2016). Olsen and Chernobilsky (2016) studied the impacts of technologies on students' motivation and mathematical achievements; using pretests, posttests, questionnaires, and other tools, they found that students' scores and motivation increase with the use of technology. Thus, researchers have encouraged teachers to identify new technological materials to use during instruction to improve the learning experiences of students. Similarly, a few researchers have recommended the use of video games and the internet to improve academic performance and achievements; one study demonstrated that students who used the internet more often than other students had better reading skills than their peers (Jackson, Von Eye, Witt, Zhao & Fitzgerald, 2011).

### *Using Padlet as a Teaching Tool*

Padlet (<https://www.padlet.com>) is a "free web-based application that provides a wall that allows to post words, pictures, and even videos, which can be viewed by anyone with link or address to the specific wall" (Rashid, Yunus, & Wahi, 2019, p. 613). Different researchers have demonstrated that such online interactive tools have become more popular with the development of web 2.0 applications, which positively influence student learning (Matias & Wolf, 2013; Rahimi, van den Berg & Veen, 2014; Uzunboylu, Bicen, & Cavus, 2011). As Fisher (2017) argued, Padlet can improve student learning; it replaces the traditional use of whiteboards to share and store information; enables students to interact with each other and with teachers, ask questions, and request feedback; and can be used by teachers for activities during and after classes, such as summarizing and applying key points to lessons. In addition, the research has demonstrated that the application strengthens teacher-student relations, encourages and motivates students, and offers effortless and continuous communication. Fuchs (2014) puts forward an interesting argument for Padlet, in which he confirms that the application is can "encourage real-time, whole class participation and assessment." (p. 7). Moreover, Padlet is very simple and easy to use. Hence, Fisher (2017) encouraged teachers and students to use Padlet, as it supports their participation and engagement with one another both within and outside the classroom with ease. Also, a very good contribution to the argument of Padlet's effectiveness and impact is what was mentioned by (Zainuddin, Azmi, Yusoff, Shariff & Hassan, 2020) and was supported by their study, as they state "The use of Padlet could help to enhance students' comprehension in topics studied. Therefore, the use of more learning software should be encouraged and further developed to achieve more successful learning and teaching process." (p. 56).

Due to these benefits, numerous surveys of attitudes toward Padlet have found positive views of the application, and researchers found that utilizing Padlet in the sphere of education increases student interest and motivation (Awaludin & Karim, 2017; Haris, Yunus, & Badusah, 2017; Saepuloh & Salsabila, 2020; Toti, 2018). Lestari and Kurniawan (2018) conducted a study

that aimed to investigate the effectiveness of Padlet with regard to improving students' mastery over writing; the researchers designed their experiment in two phases and each phase included observations of student "planning, implementing, observing, and reflecting." (p. 184). They concluded that the implementation of Padlet improved students' writing skills.

Similarly, Algraini (2014) measured the effectiveness of Padlet with regard to enhancing the writing performance of Saudi females; 24 students participated in the study and were assigned to either an experimental group or a control group. The experimental group received intensive academic writing instruction using Padlet, while the control group did not; the results indicated that Padlet was a very effective teaching tool. Indeed, the data showed a noticeable improvement in the writing skills of the experimental group (Algraini, 2014). Kleinsmith (2017) also examined the effectiveness of Padlet; specifically, improvements in engagement and academic achievement among fifth-grade math students were measured. The study used a single-subject methodology that included different testing phases. The academic achievements of students were evaluated using daily assessments and the students' engagement was evaluated at daily intervals. It was concluded that Padlet led to an "increase the weekly mean engagement score[s of four] out of [six] students" (p. 5) and was helpful with regard to improving students' engagement and academic achievement rates (Kleinsmith, 2017).

Further, Nurviyani (2018) investigated the effectiveness of the application at enhancing the critical reading skills of college students. The researcher conducted a study that used two phases and a sample size of 25 students. Different methods were used to collect data, such as reading tests, questionnaires, and classroom observations. It was found that "over 80% of the students reached the learning outcome in critical reading" (p. 66) and there was a significant improvement in the skills of almost all the participants. Thus, the researcher recommended the implementation of Padlet considering its efficiency (Nurviyani, 2018).

Similarly, a study on the effectiveness of Padlet for tenth-grade writing students was conducted by Ismawardani and Sulistyanto (2019). The researchers used a quasi-experimental design with posttests and two participant groups: control and experimental. While the experimental group received instruction through Padlet, the control group was taught traditionally—that is, without the use of any media. After testing both groups, the results revealed that the experimental group had higher scores than the control group. Consequently, the researchers confirmed the effectiveness of using Padlet to teach writing. Finally, with regard to Padlet's efficacy in teaching English grammar to ESL learners, Haris et al. (2017) implemented pretests and posttests to measure the achievements of 30 university students; their findings indicated significant improvements in learners' grammar performance.

Thus, Padlet can be a helpful tool for approaching teaching from a CLT perspective; indeed, it provides students with access to classmates' replies and answers; thus, it is a setting that facilitates peer-to-peer learning and self-assessments (Rashid, 2015). Creating a student-centered environment in which learners' ideas and opinions are expressed, cooperative learning among students is encouraged, and opportunities for learners to listen and speak are provided are crucial to CLT learning, and this is what the current study aims to investigate. Padlet offers precisely such an environment to teachers and students (Mahmud, 2019); it provides students with opportunities to think, correct mistakes, and learn from instructors and peers and can, therefore, help instructors

to teach vocabulary skills within a CLT framework. Indeed, Padlet is an effective tool for incorporating numerous aspects of CLT (Ab Hamid, Rosli & Yunus, 2019; Awaludin & Karim, 2017). However, despite this knowledge, further research on Padlet can provide additional perspectives regarding its application in EFL learning and can confirm the findings of previous studies; one means by which this can be done is by investigating the use of Padlet within communicative language teaching settings.

## Materials and Methods

### *Participants*

The study took place at Al-Imam Muhammad Ibn Saud Islamic University, Riyadh, Saudi Arabia. Potential participants were informed of the experiment on Whatsapp, the social messaging platform; due to the online nature of the experiment, this platform was selected to establish the initial communication between the researcher and the participants. Thus, the study's participants comprised 50 female students who were learning EFL and were level-eight students at the English Language and Translation Department of the University. The average age of the participants was 22 years and they were Arabic native speakers, and they all willingly agreed to participate in the study.

Subsequently, inclusion criteria were applied; that is, all the students were asked to take an online English placement test, which can be found at <http://englishenglish.com/englishtest.htm>. This was done to ensure that the participants were similar with regard to their English language skills and that a homogenous group of participants was used for the study. After the results of the test were considered, 30 out of the 50 students were included as participants. Thus, approximately 60% of the study's population was selected to participate. A group chat that comprised the 30 participants was created on WhatsApp to inform them of the instructions of the experiment and obtain approvals. In addition, in order to encourage participation, students were offered motivational incentives once the experiment was concluded.

### *Materials*

#### *Padlet*

The current study used Padlet as a teaching and learning instrument as well as a communication method between the researcher and the participants. It was used primarily to present the experiment's materials to the students.

#### *English Online Pretest and Posttest*

A standardized vocabulary test was designed on Google Forms using vocabulary items adopted from a preliminary English test; this preliminary test was developed by Cambridge English (Appendix B). The resulting vocabulary test was used as a pretest to measure the prior vocabulary knowledge of the participants; moreover, it was used as a posttest to determine the participants' knowledge at the conclusion of the experiment and to compare results. The test comprised 23 multiple-choice questions; for each question, the participants were asked to carefully read a description and select the correct vocabulary item that corresponded to the question.

#### *English Online Questionnaire*

An online questionnaire by Dewitt et al. (2015) was adapted for this study in order to collect



feedback from the participants regarding their learning experiences during the two weeks (Appendix C). Specifically, this was done to determine whether the participants considered Padlet as a motivating and useful tool in learning. The questionnaire was in a Likert-scale format and was created using Google Forms and included at the end of the experiment.

It is important to note that numerous researchers have stated that using an online survey for research provides certain advantages (Wright, 2005). Such questionnaires save researchers time, as written surveys require researchers to physically distribute and collect the surveys and manually enter data for analysis. In contrast, online surveys enable researchers to collect data while working on other tasks and provide researchers with the opportunity to export their collected data into different statistical programs for analyses (Llieva, Baron & Healy, 2002). In addition, online surveys provide the advantage of cost-efficacy—sharing a link to a survey costs less money than printing multiple sheets of paper (Yun & Trumbo, 2000).

### *Vocabulary*

110 English vocabulary items were selected from the book *Vocabulary Power 2* (Dingle & Lebedev, 2007) for vocabulary instruction. The vocabulary items included nouns, adjectives, and verbs. Thereafter, the words were presented to the students over WhatsApp prior to the experiment. They were asked to indicate which vocabulary items they were familiar with and which ones they were unfamiliar with. Only unknown words were used for the experiment, and known items were excluded. A total of 70 words were noted as novel and were, therefore, taught and presented to the participants (Appendix A).

### *Statistical Analyses*

SPSS was used to analyze the data by conducting a one-sample t-test. This was done to measure the dependent variables (the pretest and posttest scores) in relation to the independent variables (each student). Subsequently, a paired sample t-test was used to compare the differences between the two variables.

### *Method*

This study aimed to answer the research questions quantitatively; thus, the collection and analysis of data was conducted using an experimental research design. Numerous researchers stated that one of the most suitable ways to answer questions regarding language teaching and learning is through the implementation of an experiment (e.g., Brown & Rodgers, 2002). Further, in experimental research on language and education, an attempt is made to build theories that explain the mental processes underlying language and literacy learning, the individual differences that go along with these processes, and the outcomes of differential treatments intended to stimulate such processes (Verhoeven, 1997).

Specifically, a pretest was applied before the instruction on Padlet began. Instructions were provided both in English and Arabic (when needed). At the end of the sessions, the participants took a posttest and as well as answered the online questionnaire. The experimental design involved the utilization of a CLT approach to provide English vocabulary instruction to EFL students. Using Padlet, over the course of two weeks, the participants and the researcher engaged in seven teaching and learning sessions; each session lasted approximately 20–30 mins. As CLT was implemented

as a method of instruction, it was used to stimulate the communicative consciousness of the participants to elicit a creative and authentic use of language. For example, it involved activities such as describing a vocabulary item in a short story, describing what they see in pictures and providing their opinion regarding certain words that they were introduced to. During each session, the researcher presented the students with 10 new vocabulary items, and the participants were expected to learn the meaning of each word as well as its part of speech and how it could be used within a sentence. The entire teaching process of the 70 selected new English words used Padlet. Subsequently, the researcher used SPSS to analyze the collected data by conducting both one-sample and paired sample *t*-tests.

## Results and Discussion

### *One-Sample t-Test*

As noted earlier, the participants were administered a pretest and posttest at the beginning and at the end of the experiment, respectively, in order to measure the subjects' knowledge of the targeted English vocabulary items. One sample *t*-test was applied to determine statistical differences between the participants regarding the tests. These results of the pretest and posttest data and their means and standard deviations (SDs) are presented in Table one below.

Table 1. *Pretest and posttest data and the results of the One-Sample t-Test*

Pretest and Posttest Data				
	N	Mean score (out of 23)	SD	Standard error mean
Pretest	30	18.5333	2.63574	0.48122
Posttest	30	20.5333	1.67607	0.30601

  

The Results of the One-Sample <i>t</i> -Test*				
	T	Df	p (two tailed)	Mean difference
Pretest	-9.282	29	0.000	-4.46667
Posttest	-8.061	29	0.000	-2.46667

\*The test value was 23.

The results revealed that the pretest had a mean of 18.5 and a SD of 2.6, and the posttest had a mean of 20.5 and a SD of 1.6. Further, with regard to vocabulary knowledge, the results indicated that the Padlet vocabulary instruction was effective at improving the participants' English lexical knowledge;  $t(8)$  was 29 and  $p$  was less than or equal to 0.000.

### *Paired Sample t-Test*

As previously stated, a paired sample *t*-test was conducted in order to investigate differences between the variables; that is, the test was conducted to measure the effectiveness of using Padlet to improve the students' English vocabulary by comparing the pretest and posttest results. Table two below presents the results of the paired sample *t*-test.

Table 2. *The results of the Paired Sample t-Test*

		Paired Sample Statistics			
		n	Mean score (out of 23)	SD	Standard error mean
Pair 1	Posttest	30	20.5333	1.67607	0.30601
	Pretest	30	18.5333	2.63574	0.48122

  

		Paired Differences					
		Mean	SD	Standard error rate	t	df	p (two tailed)
Pair 1	Pretest and posttest	2.00000	1.64002	0.29942	6.679	29	0.000

These statistical data show a significant difference between the pretest and posttest scores. The pretest had a mean of 18.5 and a SD of 2.6, and the posttest had a mean of 20.5 and a SD of 1.6;  $t(6.6)$  was 29 while  $p$  was less than or equal to 0.000. These findings indicated that using Padlet within the CLT approach settings had a positive impact on learners' vocabulary learning outcomes.

### *Attitudes toward Padlet*

Table three below presents the descriptive statistics for the Likert-scale questionnaire. It shows the percentage of students who selected each answer to the online survey questions with regard to how they felt about the application.

Table 3. *Descriptive statistics for the Likert-scale questionnaire*

Question	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)
1 I like to see my friends' comments on Padlet	40	40	20	0
2 Padlet enables me to share ideas with my friends	33.3	46.7	20	0
3 I developed new ideas from the activities on Padlet	35.7	50	14.3	0
4 I learned new concepts from others' posts on Padlet	40	33.3	26.7	0
5 I learned through collaborative learning with Padlet	60	26.7	13.3	0
6 The materials posted on Padlet were clear	40	33.3	26.7	0
7 The materials posted on Padlet were useful	40	40	20	0
8 The activities on Padlet were challenging	6.7	33.3	40	20

A statistical analysis of these results revealed that approximately 80% of the participants enjoyed seeing their peers' comments in the application and found the materials presented to be useful. Further, 73.3% of respondents found the materials clear as well as learned new concepts from their peers' posts. Further, 80% of the respondents believed that Padlet enabled them to share their ideas with their peers and helped them develop new ideas using the activities presented. Finally, 60% of the participants did not find the activities challenging.

### Discussion

As previously explained, the primary aim of this study was to investigate whether Padlet had a positive impact on enabling students to develop vocabulary skills and examine the students' attitudes toward the application. While comparing the mean pretest and posttest scores for the group, it appears that there is a clear difference; the majority of the students scored higher on the posttest than on the pretest. Indeed, the students' average score on the pretest was 18.5 out of 23, with a standard error mean of 0.48; this implies that from among 23 questions, the students answered an average of 4.4 questions incorrectly. After the experiment, the results showed a decrease in errors, with a standard error mean of 0.3 and an average score of 20.5 out of 23; this implies that out of 23 questions, the students answered an average of only 2.4 questions incorrectly. Further, the survey results revealed positive feedback on Padlet from the learners' perspective—that is, a majority of the participants found it helpful, easy, and fun. Thus, the use of Padlet positively influenced participants' vocabulary knowledge and was perceived positively by the learners; these results provided clear evidence for answering the study's research questions.

Further, the findings supported the use of technology—that is, mobile and tablet applications and interactive websites, which is in line with Olsen and Chernobilsky (2016). In particular, Padlet, can truly be an effective tool in education; in the context of the current study, it helped to improve students' vocabulary performance. This finding is an agreement with another study which examined the effective usage of Padlet in learning vocabulary (Ab Hamid et al., 2019). It provided the participants with equal opportunities to improve their knowledge and gain confidence regarding their communicative abilities. Padlet also offered an environment in which the students could view others' responses; therefore, it enabled them to practice peer learning and self-assessment, as discussed by Rashid (2015). In addition, Padlet enabled the participants to be independent from the researcher during the study. The participants often replied to their peers' comments and attempted to correct their peers' mistakes; this led them to improve their knowledge in a collaborative manner, without interference from the researcher.

With regard to the motivation, the researcher noted seriousness among the learners regarding the learning process. The participants were always punctual for sessions, were regularly active in discussions, and were confident in their posts, views, and ideas. Indeed, based on the results of the online questionnaire and the researcher's observations, the majority of the participants expressed their positive attitudes toward the platform, which confirms the results of a similar study conducted by Ab Hamid et al. (2019). Further, a large number of participants even mentioned that they found it an acceptable replacement for actual classrooms.

The results obviously showed that Padlet was an effective tool for learning vocabulary within the CLT environment and learner-centered settings, which is consistent with the findings of previous studies in this topic such as Lestari and Kurniawan (2018), Algraini (2014), Zainuddin

et al. (2020), and Saepuloh and Salsabila (2020). In addition other researchers (e.g., Awaludin & Karim, 2017; Haris et al., 2017; Toti, 2018) also described it as an effective tool with a significant role in improving students' language skills as well as contributing to their positive attitudes. Therefore, it is fair to say that the language performance of EFL learners—particularly their vocabulary skills—could be enhanced through the implementation of Padlet as an instance of a vocabulary learning smart application, particularly with the realization that the goal of language is to connect and establish effective communication in the target language and that vocabulary is the main tool for doing so (Brown, 2007).

### Conclusion

This study aimed to investigate attitudes toward and the effectiveness of using Padlet to improve the English vocabulary skills of female Saudi EFL students; specifically, it investigated this in the context of female students at Al-Imam Muhammad Ibn Saud Islamic University, Riyadh, Saudi Arabia. The study examined how Padlet could be utilized as part of the CLT approaches to teach English vocabulary to EFL learners. The study demonstrates that the application significantly contributed to the participants' vocabulary knowledge enhancement; this was supported by the statistical results of a comparison between pretest and posttest scores. Indeed, Padlet helped the majority of the participants familiarize themselves with new lexical items and become aware of their vocabulary usage. Subsequently, results of the experiment offered considerable insight on how similar smart applications could have positive effects on participants' vocabulary knowledge acquisition. Evident decrease in error rates noted by the tests results, as many participants improved their vocabulary skills and gained new lexical items. Further, in support of the use of technology, results show that Padlet can be regarded as an influential tool in education as well as a enjoyable method of learning for students. The results of two together, the surveys and observations confirmed the participants' positive attitudes towards using the application in learning. As already reported that vocabulary words were crucial to establishing meaningful communication using a specific language (Schmitt, 2000), the findings of this study suggest that smart applications like Padlet could possibly be viewed among the effective learning tools to enhance English language vocabulary skills beyond the classroom context.

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## Appendix

### Appendix A The Vocabulary Items

Absence: The state of not being present	Bell: Hollow device made of metal that makes a ringing sound when struck	College: Complex of buildings in which an institution of higher education is housed
Achieve: Succeed	Bend: Move from a straight position into a curve	Communicate: Be in verbal contact; exchange information or ideas
Administration: Organization and management	Biology: The study of living organisms	Computer: Machine for performing calculations automatically
Advertisement: Public promotion of a product or service	Burst: Break open suddenly	Conscious: Aware
Aid: Help	Castle: Large building formerly or presently occupied by a ruler and fortified against attack	Consist: Made of
Art: The creation of beautiful or significant things	Caution: Acting carefully	Cooker: Appliance or utensil for cooking
Associate: Connect with	Claim: Opinion	Corporation: Large business organization
Behave: Do things in a particular way	Clock: Timepiece that shows the time of day	Deed: Action

Define: Explain a meaning	Frost: Ice crystals that form a white deposit, especially on objects outside	Odd: Strange
Dictionary: Reference book containing an alphabetical list of words with information about them	Heap: Large messy pile of things	Office: Place of business where professional or clerical duties are performed
Distinguish: See a difference	Imitate: Copy	Outcome: Final result
DVD: Digital recording (e.g., a movie) on an optical disk that can be played on a computer or a television set	Joke: Humorous anecdote or remark intended to provoke laughter	Palace: Large and stately mansion
Electric: Using, providing, producing, transmitting, or operating using electricity	Library: Building that houses a collection of books and other materials	Pale: Light in color
Excessive: Much more than is necessary	License: Official document the permits something	Park: Piece of open land for recreational use in an urban area
Exclude: Prevent	Major: Large or important	Poverty: State of being poor
Expert: Person with special skills or knowledge	Notice: Announcement containing information about an event	Profit: Money received
Forecast: Prediction about how something (e.g., the weather) will develop	Occur: Happen	Qualify: Prove capable or fit; meet requirements
Quantity: Amount	Relate: Show a connection	Stadium: Large structure for open-air sports or entertainment
Quiz: Examination consisting of a few short questions	Restrict: Limit	Sting: Give sharp pain
Rain: Water that falls in drops from vapor condensed in the atmosphere	Sacrifice: Give up something you value	Strike: Hit
Region: Part of a state or country	Slight: Not serious or important	Struggle: Deal with a difficult situation
Subject: Branch of knowledge	Underground: Electric railway operating below the surface of the ground (usually in a city)	Urge: Strongly advise

Television: Telecommunication system that transmits images of objects (stationary or moving) between distant points	Video: Recording of both visual and audio components (especially a movie or television program)	Zoo: Facility where wild animals are housed for exhibition
Track: Path	Wreck: Destroy	

*Appendix B*

The Pretest/Posttest

Question	Choices		
1. A machine for performing calculations automatically:	Television	Heating	Computer
2. Be in verbal contact; exchange information or ideas:	Interpret	Message	Communicate
3. A humorous anecdote or remark intended to provoke laughter:	Joke	Chat	Ask
4. Water that falls in drops from vapor condensed in the atmosphere:	Dry	Temperature	Rain
5. An announcement containing information about an event:	Break	Notice	Essay
6. A recording of both visual and audio components (especially a movie or television program):	Video	Mobile phone	Electricity
7. A building that houses a collection of books and other materials:	Library	Cathedral	Police station
8. A reference book containing an alphabetical list of words with information about them:	Dictionary	IT	Educate
9. A utensil for cooking:	Cooker	Telephone	Clock
10. A large structure for open-air sports or entertainment:	Cinema	Stadium	Prison
11. A branch of knowledge:	Arithmetic	Art	Subject
12. A public promotion of some product or service:	Channel	Advertisement	Audience
13. A piece of open land for recreational use in an urban area:	Bridge	Route	Park
14. Using, providing, producing, transmitting, or operated using electricity:	Radio	Video	Electric
15. A timepiece that shows the time of day:	Laptop	Cooker	Clock
16. A large building formerly or presently occupied by a ruler and fortified against attack:	Cottage	Clinic	Castle

17. Prove capable or fit; meet requirements:	Qualify	College	Handwriting
18. An electric railway operating below the surface of the ground (usually in a city):	Subway	Route	Underground
19. An examination consisting of a few short questions:	Documentary	Quiz	Hero
20. A complex of buildings in which an institution of higher education is housed:	Library	College	Gallery
21. A prediction about how something (e.g., the weather) will develop:	Shower	Forecast	Fog
22. A facility where wild animals are housed for exhibition:	Signpost	Zoo	Pavement
23. A place of business where professional or clerical duties are performed:	Theater	Office	Supermarket

*Appendix C*

**Online Attitudes Questionnaire**

Items	Strongly agree	Agree	Disagree	Strongly disagree
1. I like to see my friends' comments on Padlet				
2. Padlet enables me to share ideas with my friends				
3. I developed new ideas from the activities on Padlet				
4. I learned new concepts from the other posts on Padlet				
5. I learned through collaborative learning with Padlet				
6. The materials posted on Padlet were clear				
7. The materials posted on Padlet were useful				
8. The activities on Padlet were challenging				

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