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WhatsApp-Mediated Vocabulary Learning: A Study of Kurdish EFL Learners

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Abstract

Mobile-assisted language learning technologies, such as WhatsApp, have gained scholarly attention for their capacity to facilitate language acquisition through flexible and interactive digital platforms. This study investigates the effectiveness of WhatsApp as a medium for vocabulary instruction among Kurdish EFL learners, focusing on its impact on vocabulary development, learner attitudes, and potential differences in outcomes based on gender. The research design involved a sample of 60 Kurdish EFL learners divided into two equal groups: an experimental group that used WhatsApp to receive vocabulary instruction and a control group that received traditional classroom instruction. The study results indicate that the experimental group significantly outperformed the control group on vocabulary tests, suggesting that WhatsApp can be an effective tool for teaching vocabulary to Kurdish EFL learners. Additionally, the results showed that using WhatsApp improved the learners' motivation and engagement in vocabulary learning. This research underscores WhatsApp's potential to enhance vocabulary acquisition in EFL contexts, highlighting its functionality and learner appeal.

Keywords: Kurdish EFL learners, mobile-assisted language learning, vocabulary learning, WhatsApp

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Introduction

Education is critical to achieving success in almost all spheres of life. There has been a significant transition in education over the past few decades, one that is reflected in a focus on students and the learning process rather than on instructors and instructional strategies (Hanif & Sajid, 2019). With the advancement of technology, teaching, and learning, in general, and particularly language education, is taking new pedagogical forms (Solanki & Shaylee, 2012; Pourhossein, 2017; Aslam, 2021; Crescent & Lee, 2011; & Ahmed & Meena 2022). However, this does not imply that these new advancements might be completely advantageous and ease the process. In this line, mobile phones have become more efficient, user-friendly, and adaptable to various uses as technology has advanced. Basically, due to mobile devices' portability and, more importantly, the potential to erase the spatial and temporal boundaries of the classroom, mobile learning is particularly well suited for studying anytime and everywhere, both for formal and informal learning. As a matter of fact, the prevalence of mobile devices has increased, so have mobile applications and social networking sites aimed at helping educators and students capitalize on this development (Alamer, 2015; Shadiev, Liu, & Hwang, 2020; & Loewen, et al., 2019). To a good extent, literature has depicted that these apps improve vocabulary knowledge and encourage user collaboration, increasing motivation and learning. Motivation is essential when determining a student's readiness and excitement to communicate in the target language (Al-dalawi, et al., 2023). As a result, mobile-assisted language learning (MALL) as a field of inquiry emerged to investigate how different tools might be used in the classroom and how it impacts students' desire to learn a new language. Mobile-assisted language learning is a type of language education that uses mobile devices, such as smartphones and tablets, to aid learning. This approach to language learning allows learners to access learning materials and resources on their mobile devices, which they can use to study and practice their language skills at their own pace and in their own time.

According to Kumar, Lian, and Vasudevan (2016), with the proliferation of mobile devices and social media platforms like WeChat, Twitter, WhatsApp, Line, Facebook, etc., students now have more opportunities to expand their education beyond the classroom. In this regard, WhatsApp is one of the most popular mobile apps, making it easy to send and receive messages, including audio, video, and text files (Ahmadi, 2017). Due to its visible multiple functions and user-friendly, this app has been increasingly integrated into the teaching context, especially for vocabulary teaching. Numerous second language (L2) educators have proclaimed the important function of vocabulary acquisition in the field of language learning for all four skills (Taylor, 2005). According to Lessard-Clouston (1996, p. 27), "vocabulary, phrases, idioms, etc.-is at the center of all language usage in the skill areas of listening, speaking, reading, and writing, as well as culture." Moreover, as McCarthy (1990) suggests expressing various meanings, it is necessary to know a wide range of vocabularies. Likewise, Wilkins (1974) states that without grammar, just a small amount of meaning can be communicated, but nothing can be said without vocabulary. Therefore, good lexical knowledge is immensely important to mastering a second language. Thus, implementing

various tools and using different materials and methods is becoming imperative for language educators to enhance the vocabulary teaching process, and technology (MALL) is at the center of the process.

Literature Review

Theoretical Framework

Both Uses and Gratifications Theory and Social Constructivist Learning Theory are prominent examples of theories developed to explain the role of social media in language learning and teaching. Uses and Gratifications theory is a communication theory that suggests that people use media to fulfill certain needs or gratifications (Herzog, 1944). This theory suggests that people are active in their media consumption and seek out media that will satisfy their specific needs or desires. According to this theory, people use the media to escape from reality, pass time, reduce boredom, feel connected to others, or stay informed about current events (Abaido, & El-Messiry, 2016). Additionally, constructivist learning theory is a cognitive learning concept that is based on the idea that learning occurs through the construction of new knowledge based on the learner's previous experiences (Bruner, 1966). This theory emphasizes the importance of the learner's active role in constructing their own understanding of the world and suggests that learning is an interactive process that involves the learner actively constructing meaning from their experiences. According to constructivist theory, learners are not passive receivers of information but rather are actively involved in the process of constructing their own understanding of the world through the construction of mental models and frameworks. This theory has been influential in developing educational approaches such as problem-based learning and inquiry-based learning, which seek to engage learners in active, experiential learning. In this regard, the principles of the constructivist theory of learning underpin the current study in which a learning environment on the WhatsApp platform is established for the learners where the instructor acts only as a facilitator. This is based on what Vygotsky (1978) suggests: educators should create a setting where students feel comfortable asking questions and gaining feedback from their peers and the teacher.

WhatsApp as a Mobile-assisted Language Learning

WhatsApp is a popular messaging app that has become a common tool for teaching English (Yeboah & Ewur, 2014). This is because it offers several benefits for both teachers and students (Lauricella & Kay, 2013). One of the main benefits of using WhatsApp for English language teaching is that it allows for real-time communication between teachers and students. This means that teachers can provide immediate feedback and support to students, which can be particularly useful for language learners who need extra help or clarification on a particular point.

Another advantage of using WhatsApp in English language teaching is that it is easily accessible and user-friendly. Most people are already familiar with the app, which means that there is no need for students to learn new software or platforms in order to use it for language learning (Doering, Lewis, Veletsianos, & Nichols Besel, 2008; & Sweeny, 2010). In addition, WhatsApp

is available on a wide range of devices, including smartphones, tablets, and computers, which means that students can access it from anywhere and at any time.

WhatsApp also allows teachers to create group chats with their students, which can be a great way to foster a sense of community and collaboration among learners (Bouhnik & Deshen, 2014). This can be especially useful for language learners, who often benefit from their peers' support and encouragement. Group chats can also be a useful tool for teachers, as they can use them to share resources and materials with their students, as well as to facilitate group discussions and activities.

In conclusion, WhatsApp is a valuable tool for English language teaching, as it allows for real-time communication, is easily accessible and user-friendly, and facilitates collaboration among learners. While it may have some limitations, they can be addressed using it with other language-learning tools and platforms.

WhatsApp and Vocabulary Learning

In the last decade and after the emergence of the COVID-19 pandemic, increasing digitization and virtualization have impacted every aspect of human experience. This includes education, learning, and development (Barzani & Jamil, 2021; Aslam, 2021; & Rasool, et al. 2022). As a result, the world of education has undergone a drastic change. To this end, mobile devices and various applications have grown ubiquitous in contemporary society, and their applicability has been expanded to educational settings (Nazari & Xodabande, 2020). Mobile aided language learning (MALL) is a type of teaching and learning methodology that operates on smartphones and other handheld devices with varying wireless connectivity (Arancon, 2013). Recent studies reveal that MALL plays a key role in language teaching at multiple levels (Hsu, 2016). In this way, Nazari and Xodabande (2020, p.25) articulate that the personalization, portability, and flexibility of mobile technologies paved the way for theory and research. Thus, they have concluded that "if teachers choose to employ mobile phones, both they and their learners can benefit from the outcomes." In this regard, integrating mobile devices into educational settings has been researched from various angles. Earlier, the use of SMS in vocabulary teaching and idiomatic expressions attained attention, and the bulk of research indicated positive results (e.g., Alemi & Lari, 2012; Cavus & Ibrahim, 2009; Lu, 2008; Song, 2008; Thornton & Houser, 2001; Zhang, et al., 2011). Nevertheless, there was concern regarding the expense of SMS, which could end up being pricey. Therefore, as a most preferred platform for education, WhatsApp already has so many practical applications that it is now hard to imagine the world of knowledge without it and eased the expense issue too (Barhoumi, 2015). This platform has been used for teaching various language skills, especially vocabulary teaching, which is the focus of current study as well. In this line, one of the first studies was conducted by Fageeh (2013), who through an experimental study looked at how ESL students at a Saudi university used WhatsApp to learn new vocabularies. The findings unveiled that the posttest scores of the experimental and control groups differed significantly in which the WhatsApp group scored higher on vocabulary tests. Similarly, Lawrence (2014) also

utilized WhatsApp to present vocabulary items to a group of five undergraduate Afrikaans learners before they read texts. The findings demonstrated that WhatsApp is a valuable tool for extending students' opportunities to gain experience and vocabulary outside of the classroom, particularly those students who struggle the most. In addition to that, Basal, Yilmaz, Tanrverdi, and Sari (2016) investigated the effectiveness of WhatsApp and traditional classroom activities for Turkish university students learning English idioms. The study concluded that WhatsApp facilitates the acquisition of idioms in which the post-test results were in favor of the experimental group. Following that, Jafari and Chalak (2016) examined how Iranian EFL students in middle school used WhatsApp to increase their vocabulary knowledge and to investigate if there is any significant difference between male and female learners. The findings demonstrated that students' vocabulary learning was aided significantly by using WhatsApp. The findings also revealed that there was no significant variation in vocabulary knowledge between male and female students after using WhatsApp. To investigate the practicality of WhatsApp in vocabulary learning and the perceptions of the learners regarding the use of the application in teaching, Bensalem (2018) conducted a study. The results of the study demonstrated that the use of WhatsApp has a visible positive impact on vocabulary acquisition and that learners' perceptions are highly positive. Furthermore, Hashemifardnia et al. (2018) via an experimental study investigated the impacts of WhatsApp on students' vocabulary learning. Likewise earlier studies, the findings indicated that the experimental group significantly outperformed the control group. This also supports the effectiveness of the application in vocabulary learning. In the same line, using a quasi-experimental study, Sivabalan and Ali (2022) assessed the benefits of WhatsApp in teaching vocabulary among Malaysian students. The results indicated that WhatsApp had a significant effect on assisting students to learn and improve vocabulary. Ultimately, using an experimental design, Raba, Qadous, and Itmeizeh (2023) investigated the impact of WhatsApp messaging on vocabulary acquisition among Palestinian sixth-grade students. Results indicated a significant improvement in vocabulary knowledge, with males benefiting more than females. The study further suggests WhatsApp as an effective tool to support vocabulary learning and promote learner autonomy in diverse educational settings.

Though a number of studies have examined the impact of WhatsApp on vocabulary learning, since it is an almost recent field, the findings could not be considered solid and conclusive Hashemifardnia et al. (2018). WhatsApp has not been well explored, particularly among Kurdish EFL students who are part of an educational system where the role of reading to enhance vocabulary knowledge is undervalued. In other words, more research is needed to have better and valid generalizations. From a different perspective, there are other pertinent and important elements to be investigated as well, namely the perceptions of the learners regarding the effectiveness of this application and more to be investigated regarding gender differences. Thus, this study aims to make a further contribution to those relevant issues. In this line, this study endeavors to answer the following research questions:

1. What is the impact of utilizing WhatsApp on the vocabulary development of Kurdish EFL learners?
2. What are the perceptions and attitudes of Kurdish EFL learners towards using WhatsApp for vocabulary learning?
3. Is there a statistically significant difference in vocabulary learning outcomes between male and female Kurdish EFL learners when using WhatsApp?

Methodology

Participants

A total of 60 students (26 male and 34 female) comprised the participants of the present study. The participants were Kurdish EFL university students learning English as a foreign language at the English Language Teaching department in a private university in the Iraqi-Kurdistan region. The English proficiency of participants was intermediate according to the results of the Oxford Quick Placement Test. A random sampling method was used for the selection of the participants from 86 students. The selected sample was randomly allocated into two equal groups of one experimental (12 male & 18 female) and one control group (14 male & 16 female).

Instruments

Three instruments were employed in this study to address the research questions. First, to assess the participants' proficiency levels (i.e., elementary, pre-intermediate, intermediate), the Oxford Quick Placement Test was administered. The results indicated that the students were at an intermediate proficiency level. Second, to explore participants' attitudes toward the use of WhatsApp for vocabulary learning, the researcher developed an attitude questionnaire. The questionnaire consisted of 15 items rated on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). To enhance the reliability and validity of the instrument, it was pilot tested on a group of 20 students, and necessary revisions were made accordingly. Lastly, a vocabulary pre-test and post-test were designed to measure the participants' initial vocabulary knowledge and the impact of the intervention. The test comprised 70 items, including 30 multiple-choice questions, 30 fill-in-the-blank items, and 10 word-completion tasks. The items were derived from the students' coursebook. The content validity of the test was confirmed by a panel of English language specialists, and its reliability was established using Cronbach's alpha, yielding a coefficient of 0.78. The test was also piloted with 20 students to ensure clarity, timing, accuracy, and objectivity, and appropriate adjustments were made. The pre-test was then reordered and used as the post-test.

Treatment

Prior to the treatment, the participants were instructed regarding the aim of the study, and they were randomly divided into two equal groups of one experimental and one control group. A list of 120 vocabularies was selected from the course book. The selection of content words included verbs, nouns, adverbs, and adjectives. The pre-test was administered to both groups. The experiment took six weeks each week for two hours; on an average of 20 words per week.

WhatsApp was used by the experimental group to receive the list of the words; on the other hand, the control group was instructed the traditional way following the printed list and course book in the class. Weekly class periods determined vocabulary list delivery. Assignments, based on the given list, were given to the participants and they had to submit them at the end of each week. The experimental group participants were discussing the words, and the words were sometimes visualized. Likewise, the control group participants were also contextualizing the words and discussing them. At the end of the six-week treatment, the post-test was administered to unveil the effect of the treatment.

Data Collection and Analysis

The collected data are participants' attitudes from the attitude questionnaire and results of pre-test and post-test. SPSS was used to examine the data collected. To do this, frequency measures were applied to explore the attitudes of the participants, and a t-test on independent samples was utilized to compare the pre- and post-test as well as the gender difference outcomes of the experimental and control groups.

Results

An independent t-test was conducted to examine if there is any notable significant difference in the pre-test performance of the two groups (traditional and WhatsApp). Table 1 depicts the findings of the descriptive statistics and clearly suggests that both the traditional group and WhatsApp group performed similarly on the pre-test, with almost similar mean score and standard deviation ($M=20.30$, $SD=8.879$; $M=19.13$, $SD=9.239$, respectively). Concluding that, by conventional criteria, this difference is not statistically significant.

Table 1. Results of the independent sample t-test of pre-test of both groups

	Group	N	Min.	Max.	Mean	Std. deviation	Std. error mean
Pre-test	Traditional	30	10	42	20.30	8.879	1.621
	WhatsApp	30	8	41	19.13	9.239	1.687

Additionally, an independent t-test was performed to address the post-test of both groups. This is to determine the influence, if any, of WhatsApp in vocabulary learning. As Table 2 shows, the WhatsApp group ($M=33.03$, $SD=8.747$) outperformed the traditional group ($M=26.77$, $SD=9.406$). That is, by conventional criteria, this difference is considered to be very statistically significant in which WhatsApp plays an effective role in vocabulary development.

Table 2. Results of the independent sample t-test of post-test of both groups

	Group	N	Min.	Max.	Mean	Std. deviation	Std. error mean
Post-test	Traditional	30	12	45	26.77	9.402	1.717
	WhatsApp	30	17	55	33.03	8.747	1.597

Furthermore, Table 3 illustrates the results of the male and female learners in the WhatsApp group. This is to investigate if there is any significant difference in the use of WhatsApp between male and female learners regarding vocabulary development. As results show, there is a slight difference in the performance of both groups (male and female) learners ($M=32.25$, $SD=9.536$ & $M=32.89$, $SD=8.464$, respectively). However, by conventional criteria, this difference is not statistically significant.

Table 3. Independent sample *t*-test of males and females in WhatsApp group

Gender	N	Min.	Max.	Mean	Std. deviation	Std. error mean
Male	12	11	45	33.25	9.536	2.753
Female	18	15	48	32.89	8.464	1.995

Finally, the administered questionnaire explored the attitudes of learners from the experimental group after using WhatsApp for a period of six weeks. The questionnaire specifically endeavored to attain learners' attitudes in three different domains, namely perceptions about WhatsApp experience (items 1-4), attitudes towards usefulness of WhatsApp in vocabulary learning (items 5-11), and behavioral intention towards the usage of WhatsApp in future (items 12-15).

As figure 1 illustrates, a vast majority of learners (85%) responded positively (strongly agree & agree) to the items addressing experience perceptions. The majority of the participants reported that they find it fun and engaging to practice their vocabulary on WhatsApp. This vividly indicates that the learners' experience of the interactive six-week use of WhatsApp is of high importance.

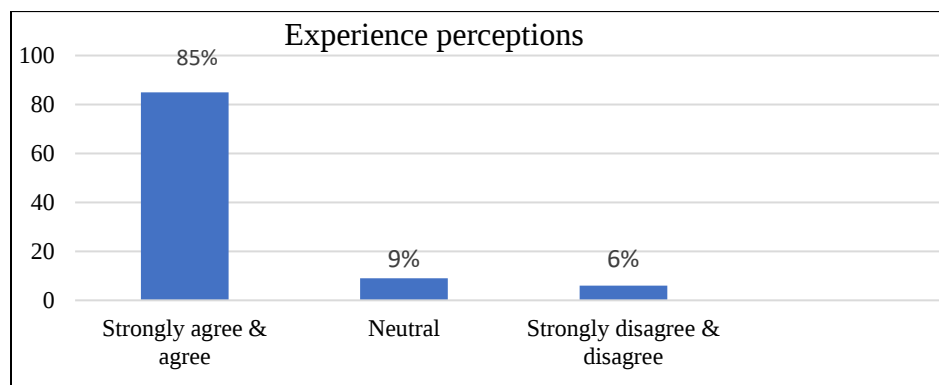


Figure 1. Learners experience perceptions of WhatsApp

Following that, as figure 2 shows, the use of WhatsApp in vocabulary learning was perceived positively as an effective tool to enhance vocabulary acquisition. The overwhelming majority of learners (90%) indicated that WhatsApp integration in vocabulary learning is highly effective. This is mostly due to the platform's interactive features such as group chats, voice and video calls, and instant messaging which allows for a dynamic and engaging way to practice their vocabulary. The

convenience of being able to use WhatsApp on mobile devices with learners noting that it allows them to practice their vocabulary anytime and anywhere is another contributor.

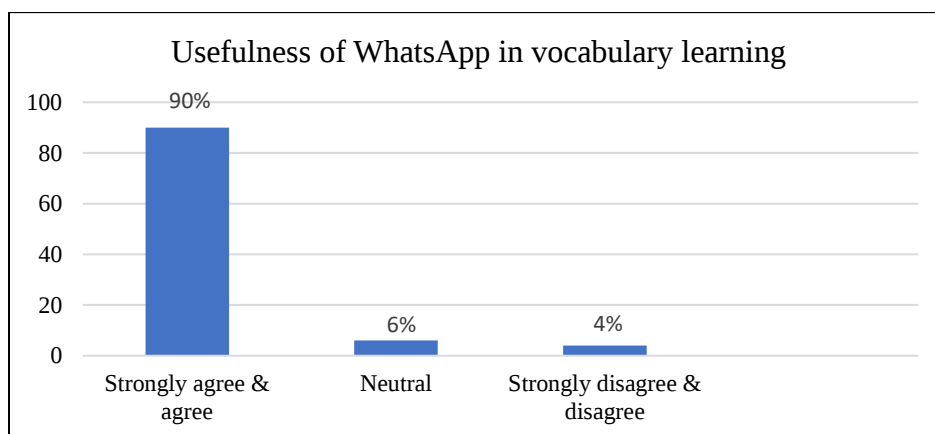


Figure 2. Learners' perceptions regarding the usefulness of WhatsApp

Lastly, figure 3 indicates that vast majority of the respondents (84%) strongly agree that they will continue using the app in vocabulary learning. This also indicates and supports the idea of the effectiveness of WhatsApp in vocabulary learning. Additionally, these positive perceptions might be also due to the social aspect of the app, with the ability to connect with their peers and native speakers which provide authentic language exposure and feedback on their language use.

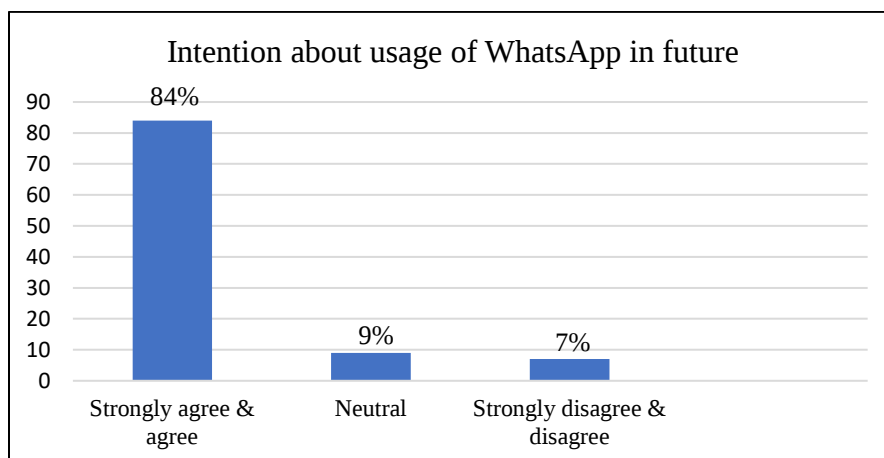


Figure 3. Learners' perceptions regarding future use of WhatsApp

Discussions

Mobile applications like WhatsApp have become popular in language learning due to their accessibility, convenience, and user-friendliness. This study examined the impact of WhatsApp on vocabulary acquisition among Kurdish EFL learners and revealed several positive outcomes. Similar to findings by Fageeh (2013) and Lawrence (2014), Kurdish EFL learners showed significant improvements in vocabulary knowledge through WhatsApp-mediated learning

activities, demonstrating the app's effectiveness in extending vocabulary learning beyond the classroom.

WhatsApp also fostered enhanced interaction and collaboration, leading to greater engagement and motivation among learners—consistent with Bensalem's (2018) observations of WhatsApp promoting positive perceptions and vocabulary acquisition. By providing a platform for continuous communication and feedback, WhatsApp created a more comprehensive environment for vocabulary practice, aligning with Barhoumi's (2015) insights into WhatsApp's multifaceted educational applications. Participants in this study, as in prior studies, preferred WhatsApp over traditional classroom methods, citing the benefits of multimedia resources and connectivity with both peers and instructors (e.g., Basal et al., 2016; Jafari & Chalak, 2016).

This study highlights WhatsApp's potential as a viable alternative to conventional classroom learning, especially in contexts where classroom access may be limited. However, similar to findings by Hashemifardnia et al. (2018), which emphasize the need for further research in varied learner groups and contexts, this study's focus on Kurdish EFL learners suggests that additional research is needed to generalize these findings more widely.

Future studies could build on this research by examining WhatsApp's influence on other language skills, such as grammar and writing, and by assessing its effectiveness in different educational contexts. Furthermore, challenges related to privacy, security, and technology access, identified in other studies, also need attention to maximize WhatsApp's potential as a language-learning tool across diverse settings. Addressing these factors may further enhance the viability of mobile-assisted language learning applications like WhatsApp for a broad range of language learners.

Conclusions

This study supports the notion that WhatsApp serves as a valuable tool for vocabulary acquisition among Kurdish EFL learners. By fostering enhanced interaction, collaboration, and multimedia engagement, WhatsApp provides an enriched environment for vocabulary practice, allowing learners to develop vocabulary knowledge more effectively. The findings align with broader research indicating that mobile-assisted language learning tools, such as WhatsApp, offer distinct advantages in promoting learner engagement and motivation, particularly by extending learning opportunities beyond the classroom. This makes WhatsApp an especially beneficial resource for language learning in contexts with limited access to traditional classroom resources, where flexibility and accessibility are crucial.

Additionally, the preference expressed by Kurdish EFL learners for WhatsApp over conventional methods highlights its potential as a supplemental or alternative approach to classroom-based language learning. However, while this study adds to the expanding field of technology-driven language learning, it remains context-specific; further research is needed to explore the tool's effectiveness across varied language-learning environments and to confirm its generalizability.

Pedagogical Implications

This study, based on the findings, has several implications for language teachers and educational institutions. First, it highlights the importance of providing students with meaningful and authentic language input. This can be achieved using WhatsApp, which allows teachers to provide students with real-time language input in a personalized and interactive manner. Second, it suggests that teachers can use WhatsApp to provide students with opportunities for interaction and collaboration. This will help students develop their language skills and enhance their vocabulary acquisition process. Finally, the study highlights the importance of providing students with regular opportunities for vocabulary acquisition and practice.

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References

- Abaido, G. & El-Messiry, H. (2016). Efficiency of WhatsApp as a Means of Disseminating Educational Information. *IT & Knowledge Excellence*, 5(2), 1-5.
- Ahmed, M. A. & Meena, R. S. (2022). The Students' Attitude on Using Social Network Site (SNS) in their Academic Life in University. *International Journal of Early Childhood Special Education*, 14(2), 3734-3742.
- Ahmadi M R. (2017). The Impact of Motivation on Reading Comprehension. *IJREE*, 2(1), 1-7. <http://ijreeonline.com/article-1-35-en.html>
- Arancon, R. (2013). The use of current mobile learning applications in EFL. *International Educational Technology*, 26, 1189-1196.
- Aslam, M. Z., Barzani, S. H. H., Aslam, T., & Rasool, U. (2021). Teachers and students' perceptions towards online ESL classrooms during Covid-19: An empirical study in North

- Cyprus. *The Journal of Asia TEFL*, 18(4), 1423-1431.
<http://dx.doi.org/10.18823/asiatefl.2021.18.4.22.1423>
- Barzani, S. H. H., & Jamil, R. J. (2021). Students' Perceptions towards Online Education during COVID-19 Pandemic: An Empirical Study. *International Journal of Social Sciences & Educational Studies*, 8(2), 28-38. <https://doi.org/10.23918/ijsses.v8i2p28>
- Bensalem, E. (2018). The Impact of WhatsApp on EFL Students' Vocabulary Learning. *Arab World English Journal*, 9(1). <https://dx.doi.org/10.24093/awej/vol9no1.2>
- Bruner, J. S. (1966). *Toward a theory of instruction*. Cambridge, MA: The Belknap Press of Harvard University Press.
- Cavus, C., & Ibrahim, D. (2009). M-Learning: An experiment in using SMS to support learning new English language words. *British Journal of Educational Technology*, 40(1), 78-91.
- Crescente, M. L., & Lee, D. (2011). Critical Issues of m-Learning: Design Models, Adoption Processes, and Future Trends. *Journal of the Chinese Institute of Industrial Engineers*, 28(2), 111-123. <https://doi.org/10.1080/10170669.2010.548856>
- Doering, A., Lewis, C., Veletsianos, G., & Nichols-Besel, K. (2008). Pre-service teachers' perceptions of instant messaging in two educational contexts. *Journal of Computing in Teacher Education*, 25, 45-52.
- Jafari, S., & Chalak, A. (2016). The role of WhatsApp in teaching vocabulary to Iranian EFL learners at junior high school. *English Language Teaching*, 9(8), 85-92.
- Fageeh, A. (2013). Effects of MALL applications on vocabulary acquisition and motivation. *Arab World English Journal*, 4(4), 420-447.
- Herzog, H. (1944). *What Do We Really Know About Day-Time Serial Listeners?* In P. Lazarsfeld and F. Stanton (Eds.) *Radio Research 1942-1943*, Duell, Sloan and Pearce, New York.
- Hashemifardnia, A., Namaziandost, E., & Esfahani, F. R. (2018). The Effect of Using WhatsApp on Iranian EFL Learners' Vocabulary Learning. *Journal of Applied Linguistics and Language Research*, 5(3), 256-267.
- Hanif, N., Sajid, M. (2019). Usefulness of WhatsApp in the process of English language learning among undergraduate students: A perception study. *Journal of Communication and Cultural Trends*, 1(2), 27-42.
- Al-dalawi, V., Omar, F. R., Mahmood, M. A. & Mustafa, A. A. (2023) "Friends' Impact on Learners' Motivation to Learn the English Language: Kurdish EFL Learners' Attitudes". *Koya University Journal of Humanities and Social Sciences*, 6(1), 160-169. <https://doi.org/10.14500/kujhss.v6n1y2023.pp160-169>
- Hsu, L. (2016). Examining EFL teachers' technological pedagogical content knowledge and the adoption of mobile-assisted language learning: A partial least square approach. *Computer Assisted Language Learning*, 29, 1287-1297.
- Kumar, V. S., Lian, T. Y., & Vasudevan, H. (2016). UNiKL RCMP undergraduates perception on using WhatsApp as a tool for Mandarin language teaching and learning. In *Language Education and Civilization International Conference (LECIC)*. Retrieved July 14, 2020.
- Lessard-Clouston, M. (1996). ESL vocabulary learning in a TOEFL preparation class: A case study. *Canadian Modern Language Review*, 53(1), 97-119. <https://doi.org/10.3138/cmlr.53.1.97>
- Lauricella, S., & Kay, R. (2013). Exploring the use of text and instant messaging in higher education classrooms. *Research in Learning Technology*, 21. <https://doi.org/10.3402/rlt.v21i0.19061>

- Lawrence, D. (2014). Students' experiences of using SMS for vocabulary development: A case study. *Conference proceedings of ICT for language learning*, pp.310-314.
- Loewen, S., Crowther, D., Isbell, D. R., Kim, K. M., Maloney, J., Miller, Z. F., & Rawal, H. (2019). Mobile-assisted language learning: A Duolingo case study. *ReCALL*, 31(3), 293–311. <https://doi.org/10.1017/S0958344019000065>
- McCarthy, M. (1990). *Vocabulary*. Oxford: Oxford University Press.
- Nazari, M., & Xodabande, I. (2020). *L2 teachers' mobile-related beliefs and practices: Contributions of a professional development initiative*. Computer Assisted Language Learning. Advance online publication
- Pourhossein, G. A. (2017). A review of the literature on the integration of technology into the learning and teaching of English language skills. *International Journal of English Linguistics*, 7(5), 95–106.
- Rasool, U., Aslam, Z. M., Qian, J., Barzani, S. H. H. (2022). The effects of online supervisory feedback on student-supervisor communications during the COVID-19. *European Journal of Educational Research*, 11(3), 1569-1579. <https://doi.org/10.12973/eu-jer.11.3.1569>
- Raba, A. Qadous, S., & Itemize, M. (2023). Using WhatsApp in Teaching Vocabulary: A Case Study from Palestine. *Journal of Palestine Ahliya University for Research and Studies*, 2(3), 14–25. <https://doi.org/10.59994/pau.2023.3.14>
- Shadiev, R., Liu, T., & Hwang, W. Y. (2020). Review of research on mobile-assisted language learning in familiar, authentic environments. *British Journal of Educational Technology*, 51(3), 709–720. <https://doi.org/10.1111/bjet.12839>
- Sivabalan, K., & Ali, Z. (2022). The Effectiveness of WhatsApp in Vocabulary Learning. *Innovative Teaching and Learning Journal*, 6(2), 16–23. <https://doi.org/10.11113/itlj.v6.82>
- Song, Y. (2008). SMS enhanced vocabulary learning for mobile audiences. *International Journal of Mobile Learning and Organization*, 2(1), 81-98. <https://doi.org/10.1504/IJMLO.2008.018719>
- Solanki, D., & Shyamleel, M, P. (2012). Use of technology in English language teaching and learning: An analysis. *International Conference on Language, Medias and Culture IPEDR* 33(1), pp. 150–156. Singapore: IACSIT Press.
- Sweeny, S. M. (2010). Writing for the instant messaging and text messaging generation: Using new literacies to support writing instruction. *Journal of Adolescent & Adult Literacy*, 54(2), 121-130. <https://doi.org/10.1598/JAAL.54.2.4>
- Taylor, G. (2005). Perceived processing strategies of students watching captioned videos. *Foreign Language Annals*, 38(3), 422-427. <https://doi.org/10.1111/j.1944-9720.2005.tb02228.x>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wilkins, H. (1974). The effects of glosses on incidental vocabulary acquisition in reading. School of Foreign Languages. *Journal of Language Teaching and Research*, 1(2), 117- 120.
- Yeboah, J., & Ewur, G. (2014). The Impact of WhatsApp Messenger Usage on Students Performance in Tertiary Institutions in Ghana. *Journal of Education and Practice*, 5(6), 157-164.