Exploring English Learners' Experiences of Using Mobile Language Learning Applications

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Abstract

Mobile language learning applications provide the potential to transform the way language is learned and it has been used for various purposes including language learning improvement. This investigation will contribute to which applications can support and be appropriate for students in learning English and explore more students' experiences in using them. This research aimed to explore English learners' experience of using Mobile Language Learning Applications in an informal learning context. This research employed a descriptive qualitative design with 25 college students. They share their experiences of using Mobile Language Learning Applications to learn English outside the classroom. The instrument used was an interview. The finding of this research showed all the participants confirm that they use mobile language learning to support their learning in English outside the classroom well which involves easy access to the materials, flexible place and time, and sophisticated features of the applications make students explore more and more learning English on the applications and they feel enjoy and fun regulate their learning pattern whenever and where ever, they find progress in learning English after they explore the apps, and students feel free to self-learning with their mobile device. It can be concluded that using Mobile Language Learning Applications outside the classroom allows learners to practice all the areas of English and these applications really supported learners' experience to learn English based on their needs and self-learning.

INTRODUCTION

Technology is taking a part in the revolution of language education in its accessibility for language learners and this may enable people to learn a language without disabilities of cost and geographical location. Modern technology expands such an innovative application of methods, tools, materials, devices, systems, and strategies in education (Haleem, et. al., 2022; Lee, 2017; Sari & Sari, 2019, p. 3). The utilization of technology platforms, software, and digital learning empowers students with a new learning experience. The implementation of technology in education is broadly discovered by educators around the world in the process of conducting teaching and learning activities in the classroom. Technology has revolutionized the way teachers evolve multimedia tools in the classroom and creates the learning process more intriguing for students (Kapi Kahbi et al., 2017).

The concepts of mobile language learning applications provide learners to explore sources and learn at any place and at any time. Mobile language learning applications deliver content with sophisticated features such as text-to-speech, engaging teaching videos, quizzes, animation, adaptive testing, and real-time feedback assessment. The tools encompass four main areas of English language skills such as listening, speaking, reading, writing, and additional areas (grammar, pronunciation).Thus, mobile language learning applications are evidence of advanced technology enabling English language learners to discover a vast pool of content in cultivating language skills through the internet (online) (Update, 2017). Mobile language learning applications can be accessed through many devices (e.g smartphones/mobile phones, tablets, iPad, PCs, etc). When it comes to easy access to mobile language learning applications, English language learners can practice their English skills in an informal situation or outside the classroom (e.g home, café, library, etc). Learners can adjust their interests to keep pace with their learning progress. According to Savill-Smith that mobile language learning applications provides more learner-centered. This provokes by the easy access and flexibility time to learning through the internet which makes learners take initiative in learning based on their needs (Savill-smith, 2004).

Mobile technologies have permeated in today's education and become one of the crucial elements that accelerates not only the performances of the students but also boosting the instructional design to be more engaging and meaningful (Rafiq et al., 2020; Mudin, et.al., 2018). The term 'mobile technologies' is defined as the devices that are portable and personal (Rahamat et al., 2018; Hasym et al. 2017). Mobile technologies encourage the students to take control of their self-paced learning. They could use online dictionaries, interactive applications for learning, searching information through Google and reading the e-books without restricting it during the school hours. Moreover, it provides the environment for the students to enhance their writing skills (Agnes, 2016).

Mobile-Assisted Language Learning (MALL) is defined as the use of mobile technology in supported language learning and characterized as a tool for learning a language in the informal learning environment, accessible for material and affordable for learners (Ben-Itzhak, 2021). In using mobile language learning applications, students will have an experience exploring a variety of materials outside of formal learning to foster language skills based on their learning needs (Çakmak, 2019). The meta-analysis study conducted by Sipra & Ahmad investigated the impact of MALL among EFL (English as a Foreign Language) learners the use of MALL has a large effect among EFL learners and mobile Assisted Language Learning helps the teacher complete a learning design and has efficacy in EFL instruction (Sipra & Ahmad, 2016).

Students are essentially encouraged to pursue their preferred learning strategies outside of the classroom or conventional learning with the MALL approach regardless of time or place using portable mobile devices and mobile technologies. (Hockly, 2013) & Ahmad, 2016); (Kim & Kwon, 2012); (Kukulska-Hulme & Shield, 2008) ; (Miangah & Nezarat, 2012; Silva, et al., 2019). As a result, students are able to thoroughly practice and improve their targeted language skills, such as listening, reading, and vocabulary, without relying entirely on learning resources at school. For instance, people might seek to improve their language

abilities by watching films about language training on an internet video-sharing platform like YouTube in an informal learning setting. They are even capable of independent language learning using other mobile applications. (Godwin & Jones, 2017). Although learning English on your own can be difficult, it is attainable and simple if you have the right resources. Everyone can now independently learn English. There are various strategies you can employ to enhance your reading, speaking, and listening abilities, even while no one is around to assist you in your practice. One of the finest ways to learn English is via an app. You will save time by using a language learning apps to study other languages because you will always have everything at your fingertips. The teaching of English is no longer restricted to the classroom thanks to the development of English language learning apps, and practically anyone may now learn languages online.

There are some benefits of mobile applications as Wang (2017) said that Mobile apps are available to users 24 hours a day, allowing them to learn languages without being limited to formal or traditional learning contexts. Kukulska-Hulme (2010) stated that Students have the option of using mobile applications in place of formal learning settings or in place of formal learning environments alone. In this regard, mobile technologies are an effective tool for enabling learning for everyone who might otherwise be left on the periphery of education. And (Hsu (2013) said that Apps for mobile language learning combine academic and casual learning settings. Castañeda and Cho (2016) stated that Additionally, at the conclusion of each exercise, mobile language learning apps provide rapid feedback so that students may internalize the proper forms more quickly.

However, previous studies had discovered the implementation of mobile language learning applications in the classroom toward students' speaking performance (Almarshadi, 2020; Tonekaboni, 2019). Furthermore, mobile language learning applications benefited students in many areas of English language skills. Mobile language learning application aid to improve students' vocabulary in blended classrooms, the learning tools could help learners easily access information (Polakova, 2022) and It could increase students' motivation (Alioon, 2017; Bamidele, 2022). Mobile language learning applications also promote innovative tools for learning and ensure effective results for learners, especially in students' language performance (Dash, 2022; Demir & Akpinar, 2018; Farahah et al., 2020). In this rearch the researcher focus on mobile application for language learning, learning achievement, and self-study: difficulty and experiences.

The use of mobile applications also have some problems that are faced by students in running them. Kamandhari (2015) said that the shift of responsibility to the learner and states that When the learners bear responsibility, mobile language learning gives fluidity, provisionality, and instability. As there is no teacher to guide them, it may cause some problems. Moreover, as Kukulska-Hulme (2009) Such self-initiated mobile learning is frequently hampered in practice by difficulties with cost and usability. ParejaLora et.al (2013) point out that Some apps that MALL users find appealing a priori may not necessarily provide quality linguistic materials suitable for consistent language learning. Moreover, users may feel disturbed due to social media, text message notifications while using apps and this may lead to partial and fragmented learning (Rosell-Aguilar, 2016) . And (Park et al. (2011) indicated that students are more likely to use mobile devices for entertainment uses,

such as listening to music, texting other friends and checking social networks rather than for educational purposes. Therefore, it is important to make the students aware of the advantages of using mobile device for learning particularly for EFL learners.

Mobile language learning application has potential tools for a learner to learn outside the classroom in an informal context. Adult learner tends to take an initiative in learning something and explore new thing based on their preference (Loeng, 2020). When learning outside the classroom using mobile applications, most of the applications do not require teachers to facilitate the learning process. This indicates that learners need to take the learning process independently. According to Beaven there are three benefits to the implementation of self-directed learning in language learning, 1) learners enable to learn languages online anytime and anywhere without requiring teacher's instruction, 2) learners able to set goals and prioritize the skill they want to work on, 3) the learning process is more relevant for learners cause they able to connect their learning needs to the learning materials (Beaven, 2019).

Self-directed use of mobile devices for language learning beyond the classroom" investigates the use of mobile devices toward language learners' self-directed learning outside the classroom. The finding exposed that mobile devices help them in increasing vocabulary for the most part and other areas of language skills (grammar, listening, reading, writing, speaking). The research shows that mobile devices can be used in the informal learning context. Most of the participants perceived mobile devices use more for personalized learning than self-directed in authenticity of learning and social connection. Personalized learning in this research defines as how the tools supporting participant in the language learning process, helps learner learn at any time and any place without limitation across them. However, personalized learning benefited learners to have independent learning in achieving the goals in their target language and recognizing self-paced learning as well as the strengths and weaknesses (Lai & Zheng, 2018).

The purpose of this research is to determine the types of mobile language learning application explore, term students' learning achievement explore and explore their self-study.

METHODS

This research employed qualitative descriptive research. Qualitative descriptive research involves an interpretation of participants' experience of a certain issue or problem. The participants of this research are twenty-five English learners. The participant aged around 18-22 years old. The participant who takes part in this research must require these two points; 1) the participant is an English learner, 2) the participant had experience in utilizing any kind of mobile language learning applications in the process of learning English. John W. Creswell draws that in qualitative research the participants suggest multiple perspectives on the topic of research and arise diverse views. Hence, each participant can be utilizing

different learning applications, which provide different perspectives and points of view on their experiences (Creswell, 2007). The data taken used interview to have a deep understanding of students' experiences while they use mobile language learning applications and the data were presented in the form of narrations taken from interview results, tables, and diagrams. There are 7 questions given related to terms mobile application for language learning, learning achievement, and self-study: difficulty and experiences. The data from the recorded interview were transcribed manually and elaborated in good structure and some data percentage is used to be more understood about them. The data collected and analysed using descriptive analysis which using explanation and elaboration after having interview with participants. Here are some questions which had been given to the students in interview session.

1. Mobile application for language learning
    a. What kinds of Mobile Language Learning Applications used in learning
    b. English?
    c. What features do students like most about the application?
    d. Why do students prefer using Mobile Language Learning Applications to take English course or private with real teachers?
2. Learning achievement
    a. What do positive effects have students experienced after using the apps?
    b. Which areas of English skills do students want to practice in using the applications?
3. self-study: difficulty and experiences
    a. What are the difficulty and challenges that are found while using the apps?
    b. What are the benefits of learning English using Mobile Language Learning Applications compared to learning English in the classroom?

RESULTS & DISCUSSION

Results

The research question is to explore English learners' experience in using mobile language learning applications outside the classroom or informal learning context. In this section the researcher exposed the findings. There three aspects asked to the learners in terms of mobile application for language learning, learning achievement, and self-study: difficulty and experiences. The researcher wrote the description of findings based on students' responds.

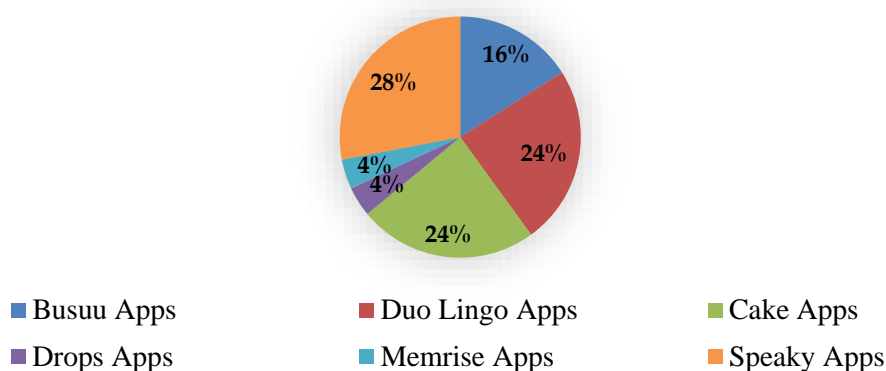### A. Mobile application for language learning
1. What kinds of Mobile Language Learning Applications used in learning English?

The participants give the answer by mentioning the application they used in learning English. The table below is for displaying kinds of application used by the learners after interviewed. The table below is about applications used:

Table 1. Types of Mobile Language Learning Applications used by students

Types of Application	Frequency	Percentage
Busuu	4	15%
Duo Lingo	6	24%
Cake	6	24%
Drop	1	4%
Memrise	1	4%
Speaky	7	28%
Total	25	100%

It can be seen through the diagram below

Figure 1. Mobile Language Learning Applications used by students

There are 5 applications used by the learners to do self-study in learning English, they are *Busuu* apps, *Duo Lingo* apps, *Cake* apps, *Drops* apps, *Memrise* apps and *Speaky* apps. 25 students in English Study Program respond that 16 % or 4 students prefer to use *Busuu* apps to learn English, 24% or 6 students prefer to use *Duo Lingo* apps, 24 % or 6 students prefer to use *Cake* apps, 4% or 1 student prefer to use *Drops* apps, 4% or 1 student prefer to use *Memrise* apps, 28% or 7 students prefer to use *Speaky* apps. From 25 students interviewed can be concluded that 100% used mobile applications to practice or learn English. And so far *Speaky* apps was a popular applications among the students followed by *Duo Lingo* and *Cake* apps.

2. What features do students like most about the application?

Every application has their own features to interact netizen to like it. *Busuu* apps can provide learners to improve their English from any aspect such as vocabulary, grammar and speaking and in this application, you will get feedback from native speaker, and it make learners easy to evaluate what things must be improved. *Duo Lingo* apps, learners can study from basic until fluent. Learners can determine the target of study every day. In *Memrise* apps, this feature provides learners learn English through games. This application help you not only learn English through game, but the learners can answer questions in the game. Students perceived that there are lots of interesting features on mobile language learning applications, they are interested in animations, video materials, and explanations using pictures, especially for vocabulary and its meaning which help students memorize the words easily.

The materials feature on the application are also divided into three categories levels of English skills (beginner, intermediate, and advanced), which helps them in providing suitable materials based on their English levels. There is a beginner to advanced features, and these applications are very suitable for beginners, for example, the material is quite basic and lots of quizzes that can help hone English, and the features are very complete with the stages of different difficulties. The stages of materials increase the understanding of English for students because all the materials, explanations, assessments, and tests are available and complete in a simple way and easy to learn. The next feature that students like the most are the grammar-corrected features. In the conversation, if the grammar is wrong, people in the conversation help to fix it then students will recognize the wrong part as well as find the solution. On *Speaky* apps there is a feature for having a conversation with a native speaker or other English learners from all over the world which makes students more confident to show and practice their English ability. They also perceived that they are experienced meet new people who have the same purpose of learning English only on the internet without going anywhere.

3. Why do students prefer using Mobile Language Learning Applications to take English course or private with real teachers?

Many varieties of applications which offer way to learn English which make students feel save to study freely with their gadget in hand without bounded by classroom setting. In term of flexibility, the students perceive that learning by using mobile language learning application was not bound by place and time they can study anytime and anywhere without limitation and there are many varieties of material in the mobile application. They find mobile language apps to spend tiny periods of their leisure such as coffee breaks at work on those applications (Ekoç, A. (2021). Students can do learning English regardless place and time. It is more easily accessible because they can directly interact with many people and have access to several resources at the same time, they can directly talk to native speakers because in the application there are learning videos that you can watch to practice the language, only using the internet the learners focus browsing everything in the applications freely, for them that the application is the convenient learning environment without someone else disturb. After all, it makes it easier to do something, because it is easy to access and free, because it is more practical, simple, and easy to find, cheaper, and fun and all you want about English is available on the application. the private course is paid in real situation, and they must go out to reach the place of the course after finishing school. And nowadays make students feel lazy to go outside and they prefer choosing better study at home or anywhere freely which not bounded in classroom situation.

B. Learning Achievement

4. What do positive effects have students experienced after using the applications?

Students' answered that they were more active by seeking and browsing individually, more independent in learning, the materials are easy access and simpler, 24 hours access, efficient in time and cost. Learning English through application make students more independent, they can set their time for learning by themselves, they can set the speed of learning by themselves as well. With the

application, there is no more saying students lazy to learn English because all is available in gadget and internet make easy in learning. Get to know and know more new vocabularies, and slang words, sentence structure, grammar, better understand English pronunciation, become more enthusiastic about learning English because they can meet and practice conversations with native speakers which makes English is improving, they feel more confident in speaking English, they can find many friends who have the same interest in learning English, they can control their progress daily by checking on the application, students' listening skill was improved as well. The cost in learning through applications is cheaper because the payment is included when students pay for internet because all in is for doing anything on the internet.

All those answers above supported by Wang Wang (2017) said that Mobile apps are available to users 24 hours a day, allowing them to learn languages without being limited to formal or traditional learning contexts and Kukulska-Hulme (2010) stated that Students have the option of using mobile applications in place of formal learning settings or in place of formal learning environments alone. In this regard, mobile technologies are an effective tool for enabling learning for everyone who might otherwise be left on the periphery of education.

5. Which areas of English skills do students want to practice in using the applications?

They prefer exploring English through mobile with the reason that they want to be more expert in some certain areas that they haven't got from the classroom optimally. The table below is for displaying which areas of English that students want to be improved through the application.

Table 2. English Areas Improved

English Areas	Frequency	Percentage
Listening	4	16 %
Speaking	6	24 %
Reading	3	12 %
Writing	1	4 %
Vocabulary	5	20 %
Grammar	2	8 %
Pronunciation	4	16 %
Total	25	100 %

It can also be seen through the picture below
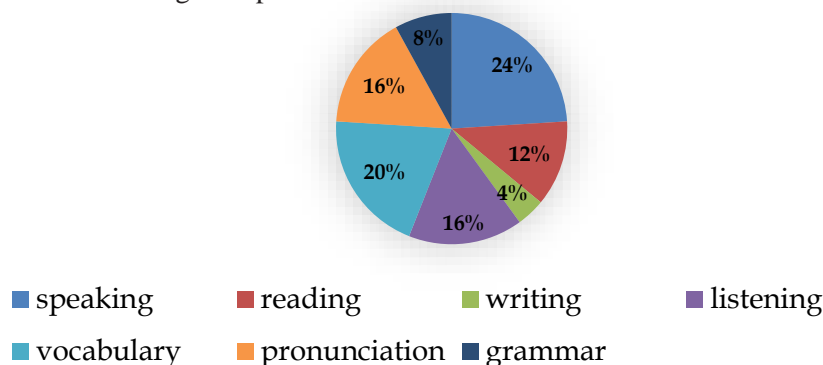
Figure 2. English Areas Improved

The use of mobile application by students is one of the strategies used by the foreign students to improve English. 25 students in English Study Program that 24% or 6 students want to practice their speaking skills, 12% or 3 students want to practice reading, 4% or 1 student wants to practice writing, 16% or 4 students want to practice listening, 20% or 5 students want to practice their understanding of English vocabulary, 16% or 4 students want to practice English pronunciation, 8% or 2 students want to practice their grammar skills. As Hao et. al., (2019) et al., (2018) found that mobile language learning applications may have a positive effect on student vocabulary learning by routinely reviewing the learning content daily and decreasing student learning anxiety. The participants agreed that mobile language learning apps helped them to enhance their listening skills (Kim and Kwon's; 2012). In Azar and Nasiri (2014) said that mobile devices had a positive effect on learners' listening skills. it could not be denied anymore that mobile language learning applications really help students in learning English.

C. Self-Learning: difficulty and experiences

6. What are the difficulty and challenges that are found while using the apps?
    a. The Internet is sometimes slow, Bugs occur because we need to update the application to a more recent version, most of the applications are online so sometimes a bad internet connection, sometimes bad internet connection, You can't use the application when the connection is bad and sometimes you may not be able to save your progress due to system error, most of these apps are online. sometimes internet disconnections can cause trouble in the learning process.
    b. Difficulty in how to read English, forgetting previous material, sometimes sentences are used in the application still rarely used in communicating in everyday life, not all users have a serious intention to learn English in the application.
    c. When the lazy condition is coming, no one can motivate you except yourself and in this case, learners must keep in good mood to be consistent in doing self-study.
    d. The application that is used has a paid feature, so the material is limited, the application is paid so the material is limited, Many paid applications.
    e. Self-preparation is very challenging for the students since doing self-study learners must prepare themselves to prepare special time to follow the course on applications.
    f. Learners do self-study by themselves and repeat all the materials by themselves, do exercises by themselves and they must practice the materials in daily life to be better. All of them need self-awareness and strong goals to change self be better in learning through applications. It is not easy to build self-study except students know the goals of learning.

Rahamat et al., (2018) in term of the gadget itself, the screen size, battery life, and limited storage have been considered as some constraints encountered the students when using the mobile technologies. In addition, the limited internet connection or unavailable internet access together with distractions such as social media and games are among the challenges faced by the ESL learners when using

mobile technologies in teaching and learning session (Hashim et al., 2017). In addition, difficult words and complex sentences were also the issues highlighted by the students when using mobile technologies (Rahamat et al., 2018). It is difficult for them to understand the tasks or instructions that appears via mobile technologies, and it leads to negative perspective towards the usage of mobile technologies in learning (Hashim et al., 2017). The barriers can be reduced well if students have a great willingness to learn English and know many advantages from mobile language apps.

7. What are the benefits of learning English using Mobile Language Learning Applications compared to learning English in the classroom?
    Students' answer is as follow:
    1. Learning on the applications is more fun and entertaining. There are kinds of Quizizz, gamification, puzzle, guessing about materials. In other words, they are designed as a kind of playing with points, scores, and levels. Learning is more enjoyable and even addictive sometimes.
    2. Flexibility; Possibly one of the key benefits. Students can practice or learn the language anywhere, anytime because the apps are accessible anytime.
    3. Availability is a crucial element to consider. If you wish to learn an uncommon language, it could be challenging to locate language schools with instructors qualified to teach that language or that have the requisite number of students to start a group.
    4. Practice a broad range of skills; It enables you to practice a wide range of abilities, including grammar and pronunciation as well as listening, reading, and writing. Several of the apps available today let you view the same word in a variety of contexts, including writing, hearing, and context, which makes learning much simpler.
    5. Expand vocabulary; This is an effective way to acquire new words. Learning endless lists of words to remember is quite boring. These apps allow you to practice with a variety of vocabulary tasks, which makes it simple for you to pick up new terms practically subconsciously.

Discussion

The first is about mobile language learning apps. These apps are frequently used by students in informal learning context. students choose the mobile apps because they prefer learning English by their own ways through gadget without bounded by time and place, from them, they can explore English materials which are provided in feature of apps. They enjoy browsing learning English. According to Savill-Smith that mobile language learning applications provides more learner-centered. This provokes by the easy access and flexibility time to learning through the internet which makes learners take initiative in learning based on their needs (Savill-smith, 2004). Students did not have to go to course place anymore after various applications available on internet, they only need willingness to study by themselves and explore English with their own ways depend on the application they downloaded. This also supported by Wang (2017) said that Mobile apps are available to users 24 hours a day, allowing them to learn languages without being limited to formal or traditional learning contexts. By unlimited time on internet,

students do not need to worry about the learning, they can browse the materials anytime they want as long as they have credit on their mobile.

When it comes to easy access to mobile language learning applications, English language learners can practice their English skills in an informal situation or outside the classroom (e.g home, café, library, etc). Learners can adjust their interests to keep pace with their learning progress. According to Savill-Smith that mobile language learning applications provides more learner-centered. This provokes by the easy access and flexibility time to learning through the internet which makes learners take initiative in learning based on their needs (Savill-smith, 2004). Mobile language learning applications benefited English learners by supporting personalized learning. Lastly, the participant considers the features of the app as one of the things to look up in choosing the learning applications. The quality of material available on the app and the features providing all the areas of the English language are considered.

The second is about students' achievement in using mobile language learning applications, students will have an experience exploring a variety of materials outside of formal learning to foster language skills based on their learning needs (Çakmak, 2019). Students need to increase their English skill by not relying on to the teacher. Mobile language learning applications promote innovative tools for learning and ensure effective results for learners, especially in students' language performance (Dash, 2022; Demir & Akpinar, 2018; Farahah et al., 2020). Students can develop their language performance by exploring the application they need. Lai & Zheng found that mobile devices help them in increasing vocabulary for the most part and other areas of language skills (grammar, listening, reading, writing, speaking). The research shows that mobile devices can be used in the informal learning context. Most of the participants perceived mobile devices use more for personalized learning and how the tools support and help learner learn at any time and any place without limitation across them. However, personalized learning benefited learners to have independent learning in achieving the goals in their target language and recognizing self-paced learning as well as the strengths and weaknesses (Lai & Zheng, 2018). Mobile language learning application give a guarantee to students in learning English, if they can manage those apps and run well they will have benefits from them by having improvement on their English skills.

The third is about self-learning through applications is very suitable for learners who have independent character in learning, they can manage study time freely, the result can be seen directly by students in the features weather they have progress or not and it is very effective for learners. Learners can choose what skills or aspect of language they want to learn that suit to their learning need. self-study by using the application is more interesting because there are many better features than learn in the classroom. The learners can save time and budget well in having learning English in applications. The learners feel focus on materials learned and they can change to various applications according to students' needs, it is easier to change apps when they don't find helpful anymore in learning, they learn at their own pace and speed. If the students don't understand, they can review the learning material and repeated it many times freely different from when learners study in the classroom if they don't understand the materials, learners sometimes awkward, shy,

fear to ask questions to teacher, but in application students can rewind the materials they want to. Doing learning English in application is more relaxed, there is no pressure from other people, the application is easy to run and understand. According to Beaven there are three benefits to the implementation of self-directed learning in language learning, 1) learners enable to learn languages online anytime and anywhere without requiring teacher's instruction, 2) learners able to set goals and prioritize the skill they want to work on, 3) the learning process is more relevant for learners cause they able to connect their learning needs to the learning materials (Beaven, 2019). By self-learning, students can set all their goals in learning English independently.

CONCLUSION

25 participants confirm that they use mobile language learning apps to support their learning in English and they perceived Mobile Language Learning Applications benefited learners' by providing accessibility and flexible learning tools for improving English language skills. The most participants' experience in using Mobile Language Learning was a positive result. Also, the participants found the app aided in supporting personalized learning. The learners are free to set their learning goals and learning strategies. However, personalized language learning directs the worth of learning for learners and the learning activity to be more relevant to learners' needs.

The sophisticated apps features allow English learners to have a great experience involved in a large online learning community and value their language outcome. Using Mobile Language Learning Applications outside the classroom allows learners to practice all the areas of English and have access to the vast pool of content that cannot be done in the classroom. The participants show the mobile application outperformed their listening skills, increasing vocabulary and learning enthusiasm. Self-learning by using mobile device help them much in which they are more independent in learning English with accessible in 24 hours by setting their time, place, and needs.

REFERENCES

Agnes, K.-H. (2016). Personalization of language learning through mobile technologies. 0–20.

Alioon, Y. (2017). The effect of authentic m-learning activities on student engagement and motivation. 00(00). https://doi.org/10.1111/bjet.12559.

Almarshadi, A. (2020). The Application Of M-Learning In Improving Speaking Skills. July *2019*, 0–15. https://doi.org/10.5281/zenodo.3372503.

Azar, Ali Sorayyaei, and Hassan Nasiri. "Learners' Attitudes toward the Effectiveness of Mobile Assisted Language Learning (MALL) in L2 Listening Comprehension." Procedia - Social and Behavioral Sciences, vol. 98, 2014, pp. 1836-1843.

Bamidele, A. (2022). The Use of Mobile Learning to Improve Students ' Motivation

and the Achievement of Learning Outcomes The Use of Mobile Learning to Improve Students ' Motivation and the Achievement of Learning Outcomes. May 2021.

Beaven, A. (2019). Learning without a teacher. *2021*, 43–47. https://doi.org/10.14705/rpnet.2021.50.1234

Ben-Itzhak, S. (2021). On the Varying Effectiveness of Computer/Mobile-Assisted Language Learning. International Journal of Education and Development Using Information and Communication Technology (IJEDICT), 17(3).

Çakmak, F. (2019). Mobile Learning and Mobile Assisted Language Learning in Focus. 2009, 30–48.

Castañeda, Daniel A., and Moon-Heum Cho. (2016). Use of a Game-like Application on a Mobile Device to Improve Accuracy in Conjugating Spanish Verbs." Computer Assisted Language Learning, vol. 29, no. 7, 2016, pp. 1195-1204.

Creswell, J. W. (2007). Qualitative Inquiry & Research Design (Third Edit). Sage Publication.

Dash, B. B. (2022). Digital Tools for Teaching and Learning English Language in 21 st Century. October. https://doi.org/10.47311/IJOES.2022.4202

Demir, K., & Akpinar, E. (2018). The effect of mobile learning applications on students ' academic achievement and attitudes toward mobile learning. 6(2), 48–59.

Ekoç, A. (2021). Mobile Language Learning Applications from the Perspectives of Adult Language Learners in Turkey. *Shanlax International Journal of Education*, *9*(4), 259-64.

Farahah, N., Halim, A., Nincarean, D., & Phon, E. (2020). Mobile Learning Application Impact Towards Student Performance in Programming Subject Mobile Learning Application Impact Towards Student Performance in Programming Subject. https://doi.org/10.1088/1757-899X/769/1/012056.

Godwin-Jones, R. 2017. Smartphones and language learning. Language Learning & Technology, 21(2), 3–17. https://scholarspace.manoa. hawaii.edu/bitstream/10125/44607/21_02_emerging.pdf.

Haleem, A., Javaid, M., Asim, M., & Suman, R. (2022). Understanding the role of digital technologies in education : A review. *Sustainable Operations and Computers*, *3*(February), 275–285. https://doi.org/10.1016/j.susoc.2022.05.004.

Hao, Yungwei, et al. "An Evaluative Study of a Mobile Application for Middle School Students Struggling with English Vocabulary Learning." Computers in Human Behaviour, vol. 95, 2019, pp. 208-216

Hashim, H., Yunus, M., Amin, M., Azwa, N., & Ozir, M. (2017). Sains Humanika Mobile-assisted Language Learning (MALL) for ESL Learners : A Review of Affordances and Constraints. 5, 45–50.

Hockly, N. 2013. Mobile learning. ELT Journal, 67(1), 80–84. https://doi.org/10.1093/elt/ccs064.

Hsu, Liwei. (2013) English as a Foreign Language Learners' Perception of Mobile Assisted Language Learning: A Cross-National Study." Computer Assisted Language Learning, vol. 26, no. 3, pp. 197-213.

Kamandhari, Helen. 2015. Mobile Language Learning: Challenges and

Opportunities for English Language Learning and Teaching.

Kapi Kahbi, A. Y., Osman, N., Ramli, R. Z., & Taib, J. M. (2017). Multimedia education tools for effective teaching and learning. *Journal of Telecommunication, Electronic and Computer Engineering*, *9*(2–8), 143–146.

Kim, H., & Kwon, Y. 2012. Exploring smartphone applications for effective mobile-assisted language learning. Multimedia-Assisted Language Learning, 15(1), 31–57. http://doi.org/10.15702/mall. 2012.15.1.31.

Kukulska-Hulme, A., & Shield, L. 2008. An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. ReCALL, 20(3), 271–289. https://doi.org/10.1017/S0958344008000335.

Kukulska-Hulme, Agnes. 2009. Will Mobile Learning Change Language Learning?" ReCALL, vol. 21, no. 2, pp. 157-165.

Kukulska-Hulme, Agnes. (2010) Mobile Learning as a Catalyst for Change." Open Learning: The Journal of Open, Distance and e-Learning, vol. 25, no. 3, pp. 181-185.

Lai, C., & Zheng, D. (2018). Self-directed use of mobile devices for language learning beyond the classroom. *ReCALL*, *30*(3), 299–318. https://doi.org/10.1017/S0958344017000258

Lee, K. (2017). Rethinking the accessibility of online higher education: A historical review. *Internet and Higher Education*, *33*, 15–23. https://doi.org/10.1016/j.iheduc.2017.01.001

Loeng, S. (2020). Self-Directed Learning : A Core Concept in Adult Education Self-Directed Learning : A Core Concept in Adult Education. August. https://doi.org/10.1155/2020/3816132.

Miangah, T. M., & Nezarat, A. (2012). Mobile-assisted language learning. International Journal of Distributed and Parallel Systems, 3(1), 309–319. https://pdfs.semanticscholar.org/2902/cf4ef0284cb 407e986ec2cbed96c7ddbfeb8.pdf.

Mudin, D. K. D., Eng, H. S., Rahman, M., Ibrahim, P., & Jopony, M. (2018). Industrial revolution 4 . 0 : Universiti Malaysia Sabah perspective. 03005, 3–6

Pareja-Lora, Antonio, et al. 2013. Toward Mobile Assisted Language Learning Apps for Professionals that Integrate Learning into the Daily Routine." 20 Years of Eurocall: Learning from the Past, Looking to the Future, edited by L. Bradley and S. Thouësny, pp. 206-210.

Park, S. Y., Nam, M. W. & Cha, S. B. 2011. University students' behavioural intention to use mobile learning: Evaluating the technology acceptance model. British Journal of Educational Technology. http://dx.doi.org/10.1111/j.1467- 8535.2011.01229. [December 2014].

Polakova, P. (2022). Vocabulary Mobile Learning Application in Blended English Language Learning. 13(May). https://doi.org/10.3389/fpsyg.2022.869055

Rafiq, K. R. M., Hashim, H., Yunus, M., & Norman, H. (2020). ìSPEAK : Using Mobile-Based Online Learning Course to Learn ' English for the Workplace.' 14(8), 19–31.

Rahamat, R. B., Shah, P. M., Din, R. B., Bt, J., & Aziz, A. (2018). Students ' Readiness And Perceptions Towards Using Mobile Technologies For

Learning The Rashidah Bt Rahamat. XL, 69–84.

Rosell-Aguilar, Fernando. 2016. User Evaluation of Language Learning Mobile Applications: A Case Study with Learners of Spanish." The International Handbook of Mobile-Assisted Language Learning, edited by Agnieszka Palalas, and Mohamed Ally, Central Radio & TV University Press, pp. 545–581.

Sari, M. I., & Sari, M. I. (2019). The Use of Web 2 . 0 Tools for Learning in EFL. 4(2).

Savill-smith, C. (2004). Mobile learning anytime everywhere Mobile learning anytime everywhere.

Sipra, M. A., & Ahmad, W. (2016). Impact of Mobile Assisted Language Learning (MALL) on EFL : A Meta-Analysis. 7(2). https://doi.org/10.7575/aiac.alls.v.7n.2p.76

Tonekaboni, A. M. (2019). Effects of Mobile Assisted Language Learning (MALL) on Speaking Proficiency (A case of Learn English Daily Mobile App). *2nd International Conference on Advanced Research in Humanities and Art.*, *May 2019*, 1–13.

Update, T. P. (2017). Reimagining the Role of Technology in Education : January.

Wang, Yen-Hui. 2017. Integrating Self-Paced Mobile Learning into Language Instruction: Impact on Reading Comprehension and Learner Satisfaction." Interactive Learning Environments, vol. 25, no. 3, pp. 397- 411.