TITLE: Investigation of Preparatory Class Students` Attitudes and Views on English Mobile Learning

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Investigation of Preparatory Class Students' Attitudes and Views on English Mobile Learning

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Article Info	ABSTRACT
	This study was conducted to determine the attitudes of university level EFL learners toward the use of mobile devices in the process of learning English. A total of 170 English preparatory class students participated in the study. The data of the study were collected through a demographic information form, an English Mobile Learning Attitude Scale for Adult Learners, an open-ended survey, and researcher notes from informal conversations between the teacher-researcher and students. The quantitative findings of the study showed that the students had positive attitudes toward mobile learning in English. Most of the students reported that the use of mobile devices for learning English was beneficial and supportive of their language learning process. Similarly, the results of the qualitative analyses revealed that mobile device applications had a positive effect on students' EFL learning process. It was also determined that mobile devices have some disadvantages as well as positive contributions to the language learning process. In light of the findings based on the students' opinions, some suggestions were made regarding the role of mobile devices in the language learning process.

Hazırlık Sınıfı Öğrencilerinin İngilizce Mobil Öğrenme Hakkındaki Tutum ve Görüşlerinin İncelenmesi

Makale Bilgisi	ÖZET
	Bu çalışma İngilizce'yi yabancı dil olarak öğrenen üniversite düzeyindeki öğrencilerin, İngilizce öğrenme sürecinde mobil araç kullanımına dair tutumlarını belirlemek için yapılmıştır. Çalışmaya toplamda 170 İngilizce hazırlık sınıfı öğrencisi katılmıştır. Çalışmanın verileri demografik bilgi formu, yetişkin öğrencilere yönelik İngilizce mobil öğrenme tutum ölçeği, açık uçlu anket ve öğretmen-araştırmacı ve öğrenciler arasındaki resmi olmayan konuşmalardan elde edilen araştırmacı notları yoluyla toplanmıştır. Araştırmanın niceliksel bulguları, öğrencilerin İngilizce mobil öğrenmeye yönelik olumlu tutumlara sahip olduğunu gösterdi. Öğrencilerin çoğu, İngilizce öğrenme amacıyla mobil cihaz kullanımın dil öğrenme süreci için yararlı ve destekleyici olduğunu belirtti. Benzer şekilde, nitel analiz sonuçları, mobil cihaz uygulamalarının İngilizce'yi yabancı dil olarak öğrenen öğrencilerin öğrenme sürecine olumlu katkısının olduğunu ortaya koydu. Ayrıca, mobil cihazların dil öğrenme sürecine olumlu katkısının olmasının yanı sıra bazı dezavantajlarının da olduğu belirlendi. Öğrenci görüşlerine dayalı olarak elde edilen bulgular ışığında, mobil cihazların dil öğrenme sürecindeki rolüne ilişkin bazı önerilerde bulunulmuştur.

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INTRODUCTION

Today, with groundbreaking technological innovations, we are witnessing developments that resonate in education as in many other fields. These developments have been a great source of hope, particularly for their potential to make the foreign language learning process more effective and efficient (see Cakmak, 2019; Ng et al., 2020; Nurutdinova et al. 2021; Phetsut & Waemusa, 2022; Shadiev & Yang, 2020). Technological devices such as smartboards, tablets, smartphones, desktop computers, projectors, laptops, and palmtop computers have become almost an integral part of the foreign language learning process all over the world to accompany learners and teachers throughout the educational process (Ng et al., 2020; Peng et al., 2023). It can be said that the fact that these technological devices, particularly easily portable ones, offer the opportunity to access information wherever and whenever desired makes them more popular and useful for foreign language learners. In other words, mobile devices have made it very easy to access educational materials through various applications and websites anytime anywhere, and they continue to impact the way people learn (Criollo-C et al., 2021; Dias & Victor, 2022; Hoi, 2020; Kukulska-Hulme, 2009; Nurutdinova et al. 2021; Peng et al., 2023). The use of these devices in the learning and teaching process has led to the emergence of the concept of mobile learning, which can be defined as the realization or support of learning through mobile devices such as tablets, mobile phones and other similar handheld technological devices (Traxler, 2009) or as Pieri and Diamantini (2009) put forward, it is a way of delivering learning materials through handheld devices like tablets, mobile phones, and e-books. In their literature review study, Criollo-C et al. (2021) reported that mobile learning has made huge progress in the field of education.

Many researchers (e.g. Chen et al., 2020; Cheon et al., 2012; Criollo-C et al., 2021; Dias & Victor, 2022) emphasize that mobile learning has a supportive function in the formal education process. As a matter of fact, mobile tools contribute to the learning process both outside and inside the school with the following features it has: 1) flexibility and convenience (i.e. providing the opportunity to access information regardless of time and location; being small enough to be easily carried everywhere), 2) enabling access to a wide range of online resources instantly, 3) supporting individual learning (addressing the specific learning needs of each student) (Ally, 2009; Cheon et al., 2012; Criollo-C et al., 2021; Dias & Victor, 2022). In addition to the previously mentioned positive features, Criollo-C et al. (2021) listed some other positive features of mobile learning as follows: Mobile learning increases motivation in the learning process and makes learning more fun, permanent, and successful, supports autonomous learning, enables lifelong learning, offers free access to many educational platforms and resources, and has a supporting role in formal or non-formal education.

In addition to the field of general education, interest in the impact of mobile technology on language learning is growing day by day (Chen et al., 2020). In the language learning process, mobile phones can contribute to the development of students' language skills with the opportunities it offers such as remote communication, note taking, dictionary use and web browsing (Stockwell, 2022). Since mobile devices can take learning outside the classroom due to their ease of access, they contribute to students' autonomous learning and provide them with more exposure to the target language (Demir, 2024; Jeong, 2022; Godwin-Jones, 2018). Mobile devices allow students to work effectively with both spoken and written forms of the target language (Godwin-Jones, 2018). In addition to the opportunities such as note taking, web browsing, recording, and video playback, mobile devices also enable easy access to various applications, which makes them more popular learning tools than traditional technological tools like desktop computers (Godwin-Jones, 2018). Furthermore, many studies have reported that the use of mobile devices in the language learning process leads to improvement in different areas of language such as grammar knowledge (e.g. Baleghizadeh, & Oladrostam, 2010; Ghorbani, & Ebadi, 2020); vocabulary knowledge (e.g. Basal et al., 2016; Li, &

Hafner, 2022); listening (e.g. Al-Shamsi et al., 2020; Rahimi, & Soleymani, 2015); reading (e.g. Li, 2022; Naderi, & Akrami, 2018); pronunciation (e.g. Berry, 2021; Tseng et al., 2022); speaking (e.g. Wu, & Miller, 2020; Zhou, 2021), and writing (e.g. Abd Karim, & Abu, 2018; Hwang et al., 2014; Le, 2021).

Understanding and knowing the effects of technological innovations and developments on students, one of the most important elements of the education process, is of great importance for the active inclusion of technology in the language learning process and the development of necessary strategies for it. As educators and researchers, although we witness that students often use their mobile devices to help them learn languages in daily life, unfortunately, we do not have enough information about students' attitudes and views about mobile learning in the foreign language learning process. In addition, there is little published research on this subject. Moreover, there is a need for more information on how mobile devices are used by people for learning purposes (Hoi, 2020; Kukulska-Hulme, & Pettit, 2009; Pham & Lai, 2022). Based on these issues, it was decided to conduct this study in order to fill the gap on this subject and contribute to the studies in the literature by searching the attitudes of the students in terms of the use of their personal mobile devices in their English language learning process. To accomplish the abovementioned goals, the study sought answers to the following main research question (RQ) and two sub-research questions (SRQ):

RQ: What are the attitudes and views of university-level preparatory class students towards English mobile learning?

SRQ1: How much time do preparatory class students spend using their mobile devices daily for English learning?

SRQ2: What applications and websites on mobile devices are part of the English learning process of preparatory class students?

METHOD

Participants

The study employed a convenience sampling strategy that refers to "the selection of sample members based on easy availability or accessibility" (Swanson, & Holton, 2005, p. 50). The participants of this study consisted of 170 preparatory class students who were studying English as a foreign language (EFL) at a state university in Turkiye. These participants were students who had received one year of English language education (thirty hours per week) prior to starting their programs (e.g. department of international trade, department of political science and international relations, department of industrial engineering, department of psychology, etc.) at the university. At the time of data collection, the participants were studying English with a B1 level coursebook. The average age of the participants, 96 of whom were girls and 74 of whom were boys, was 19.05 years. Table 1 presents the number of participants in the study.

Table 1
Descriptive Information about the Participants

	Number	Percentage (%)
Female	96	56.5
Male	74	43.5
Total	170	100

Research Design

This study, which uses both quantitative and qualitative data collection tools, has a mixed-methods research design. Questionnaires were used to collect quantitative data, and both an open-ended surveys and informal conversations between the teacher-researcher and participants were used to collect qualitative data. In this way, it was thought that the study would provide more detailed, valid, and reliable results by adopting different data collection methods (see Creswell, 2012).

Data Collection Instruments

The data collection form comprised of the following parts: 1) Demographic information form, 2) English Mobile Learning Attitude Scale for Adult Learners, 3) an open-ended survey. The demographic information form includes questions about the students' age, gender, and department. Additionally, the form requested students to answer how much time they spend on their mobile devices per day for learning English: a) Less than 1 hour, b) 1–2 hours, c) 3–4 hours, and d) 5 or more hours.

As a quantitative data collection tool, the current study used the English Mobile Learning Attitude Scale for Adult Learners, which was originally developed by Liu (2017), and adapted to Turkish by Onal and Tanik-Onal (2019). The 5-point Likert scale consists of 21 items and is rated from strongly disagree (n=1) to strongly agree (n=5). The scale is composed of four dimensions: a) perceived usefulness (items 1-9, learners' beliefs regarding mobile devices' positive effects on people), b) affection (items 10-12, learners' concerns and feelings on mobile device use), c) perceived control (items 13-16, learners' confidence level in their control and management of mobile devices independently), d) behavior (items 17-21, the way in which learners use mobile devices or how they use mobile devices) (Liu, 2017). Scale ranges were determined in order to evaluate arithmetic means by Onal and Tanik-Onal (2019) as follows: strongly disagree (1.00-1.80), disagree (1.81-2.60), undecided (2.61-3.40), agree (3.41-4.20), and strongly agree (4.21-5.00). As suggested by these researchers, the interpretation of the data obtained from the survey was made by taking these mean score ranges into account. Onal and Tanik-Onal (2019) found the reliability coefficient of the whole scale to be .90. The present study found the Cronbach's Alpha reliability of the scale to be .75, which is an acceptable value.

Qualitative data for the study were collected using an open-ended survey and informal conversations. In the process of preparing open-ended questions, a detailed literature review on mobile learning was made and the questions were formed based on this. The open-ended survey consisted of three open-ended questions: 1) to obtain information about learners'opinions related to the advantages of using mobile devices for learning English in and out of school, 2) to find out the English learning applications and websites that the learners use through their mobile devices to improve their language skills, and their thoughts about how and to what extent these mobile learning applications contribute to their English learning process, and 3) to get information about learners' opinions about the disadvantages of using mobile devices in the English learning process. Also, to enrich the qualitative data (see Creswell 2012), informal conversations for two weeks were held with the students as the researcher of the study was also the instructor who attended the lessons of five of the seven classes from which data were collected. As complementary data sources, note-taking was employed during the conversations, and the researcher noted important points that were thought to contribute to the understanding and answering research questions of the study.

Data Collection Process

The data of the study were collected towards the end of the first semester of the 2023-2024

academic year. Firstly, the researcher verbally informed the participants about the study. Subsequently, the participant consent form was distributed to the participants and they were informed that participation in the study was voluntary. Both the verbal information given to the participants and the information given in the participant consent form ensured that the identity of the participants would remain confidential. After the necessary information was provided, the surveys of the study were distributed to the participants. In addition, informal conversations took place both after the surveys completed and during class breaks for two weeks, and every significant piece of information was noted by the researcher.

Data Analysis

To analyze the quantitative data obtained from the English Mobile Learning Attitude Scale, descriptive statistics (e.g. mean, standard deviation) were used. According to Ho (2018), descriptive statistics allow researchers to present data in a more understandable format, making the data easier to interpret. In addition, similar to many previous studies involving qualitative data analysis (see e.g. Onal et al., 2022; Yilmaz, 2019), the open-ended questionnaire and informal conversation data were analyzed using content analysis. In this process, the steps suggested by Cresswell (2009) were followed. First, the researcher read the entire qualitative data in order to understand and become familiar with the students' thoughts about mobile English learning. Seven participants who did not give any answers to the open-ended questions were excluded. Subsequently, after reading the whole papers, the researcher started the coding process, which refers to the identification of important concepts within the text to create broad thematic domains (Creswell, 2012). The researcher assigned codes to the qualitative data, i.e., responses to each individual question. During this process, the researcher re-read the data many times to find salient themes and categories. Then, the findings were interpreted. Also, the researcher quantified some of the data from the open-ended survey to find the number of the mobile applications used. To ensure reliable analysis of the qualitative data, a different expert in the field other than the researcher of the study was asked to independently code the data based on the examples given by the researcher. Later, the codes and emerging themes were compared by the two raters, some discrepancies were discussed, and the most appropriate theme categories were decided together (see Gibbs, 2007).

RESULTS

Quantitative Results

This section reports the findings of the quantitative analysis. The time students spent on their mobile devices for learning English was as follows: a) less than 1 hour (34 students, 20%); b) 1–2 hours (94 students, 55.3%); c) 3–4 hours (35 students, 20.6%); d) 5 or more hours (7 students, 4.1%). Table 2 demonstrates the descriptive statistics results of the English Mobile Learning Attitude Scale for Adult Learners.

Table 2
Results of the Survey

Item	M	SD
Perceived usefulness component		
1. The use of mobile devices for English learning can help me to attain more ideas.	4.49	.557
2. The use of mobile devices for English learning is helpful for my English learning.	4.49	.557
3. The use of mobile devices for English learning makes the learning material clearly presented.	3.84	.817
4. The use of mobile devices for English learning can enhance my learning motivation.	3.79	.885
5. The use of mobile devices for English learning provides me with another way to	4.23	.662

learn.		
6. The use of mobile devices for English learning can allow me to do more interesting and imaginative work.	3.82	.908
7. The use of mobile devices for English learning makes a great contribution to lifelong learning.	3.62	1.049
8. The use of mobile devices for English learning makes it possible to work more productively.	3.78	.958
9. The use of mobile devices for English learning helps me organize my school work effectively.	3.78	.984
Affective component		
10. I hesitate to use a mobile device for English learning due to the fear of making mistakes I cannot correct.	1.78	.941
11. I am not afraid of using mobile devices for English learning.	4.22	1.123
12. If given the opportunities to use the mobile device I am afraid that I might damage it in some way.	1.67	.862
Perceived control component		
13. I can learn how to use a mobile device by myself.	4.3	.842
14. I am in complete control when I use mobile devices for English learning.	3.77	.955
15. I have confidence in learning new mobile learning skills, such as using new apps or software.	4.17	.822
16. I have confidence in using the Internet for English learning through a mobile device.	4.37	.695
Behavior component		
17. I use mobile devices to extend my learning after class.	4.29	.710
18. I use mobile devices after class to collaborate or communicate with others, such as e-mail.	4.01	1.066
19. I use mobile devices to collect different learning materials.	4.23	.762
20. I use mobile devices to join group discussions, such as Line.	3.7	1.263
21. I use mobile devices to learn English on what I am interested in.	4.42	.650

When the perceived usefulness dimension of the scale was examined, it was identified that most of the students believed that using mobile devices for English language learning is beneficial for their learning and mobile devices are an alternative way for the students' learning (see items 2 and 5). They also believed that using mobile devices for English learning could help them get more ideas (item 1). Looking at the average value of the responses given to each item in this section, it is possible to say that students think that mobile devices have a positive effect on the English learning process such as increasing learner motivation (item 4) and interest (item 6), enabling lifelong learning (item 7), clear presentation of learning resources (item 3). Based on the mean score values of the items here, it is possible to say that most of the students think that mobile devices have a positive effect on their English language learning.

With regard to the affective component part, the most commonly mentioned item was 11, which shows that most of the students do not feel any fear while using mobile phones for learning English. On the other hand, the least commonly mentioned items were that the item related to the students' fear of harming the mobile device while using it (item 12), and item 10 related to the feeling of hesitation while using mobile devices for learning purposes. The mean scores of the items in affective sub-dimension indicate that most students do not experience any anxiety or fear in the use of mobile devices for learning purposes.

In the perceived control component part, the item with the highest average score was "I have confidence in using the Internet for English learning through a mobile device" (item 16), which was followed by "I can learn how to use a mobile device by myself" (item 13). Looking at the mean score of each item in this sub-dimension, it is possible to say that most of the students are confident in using

and controlling mobile devices independently.

As the last sub-dimension of the survey, the behavior component sub-scale showed that many students focused on what they were interested in during the English mobile learning process (item 21). It also showed that most of the students reinforced their learning outside the classroom with mobile devices and access to different learning materials (see items 17, 19). It is also seen that many students use mobile devices for collaborative learning and discussion purposes (see items 18, 20). As a result, when the mean value of each item in the whole scale is considered, it can be inferred that the most of the students have a positive attitude towards English mobile learning.

Qualitative Results

This section presents the themes of the qualitative data obtained from the open-ended survey and informal conversations between the teacher-researcher and students. The findings are presented under three headings.

Results Related to Mobile Applications

The results demonstrated that students utilized a wide range of mobile applications to improve their English language knowledge and skills. Mobile applications and websites that are directly related to foreign language learning and used by students on their mobile devices are given in Table 3.

Table 3
Language Learning Mobile Apps and Websites Used by Students on Their Mobile Devices

Mobile applications& websites	f	Mobile applications& websites	f	Mobile applications& Websites	f	Mobile applications & websites	f
Tureng	74	Cake	4	Test-English	1	YouGlish	1
Duolingo	58	Yandex Translate	3	FluenDay	1	LetMeSpeak	1
Google Translate	32	WordUp	5	Praktika.ai	1	Wordly	1
Cambridge dictionary	24	Lingoclip	3	VOA Learning English	1	Busuu	1
Voscreen	21	WordBit	3	TOEFL English vocabulary cards	1	Talk Fluent	1
Quillbot	16	English Central	3	DailyDictation	1	Falou	1
Speak Pal	14	Open English	3	Dictionary.com	1	English Grammar	1
DeepL	9	ReadingPower	3	English Club TV	1	Blarma	1
British Council	7	Wordismo	2	Mondly	1	LanGeek	1
Readable	8	Simpler	2	Jasmin Academy	1	English Conversation	1
Oxford dictionary	6	Idiom: Learn Languages	2	English Stories with Levels	1	Englishpage. com	1
Grammarly	6	Tandem	2	Reverso Context	1	English Grammar	1

						Test	
News in Levels	5	EWA English	2	HelloTalk	1	RealLife English	1
Cambly	5	Lingua	2	VocaGarden	1	Nowa akademi	1
BBC Learning English	4	FunEasyLearn	2	LearnEnglish Podcasts	1	Enwa Language Academy	1

Note: f=frequency (number of students using the application)

As shown in Table 3, the top three mobile applications most used by students were Tureng, Duolingo, and Google Translate, respectively. In addition to the mobile applications that specifically focus on foreign language or L2 teaching, students also stated that various mobile applications such as social media platforms, games, movie, music and podcast streaming platforms, general education applications, story and scientific sites and apps, and multi-purpose mobile applications and websites also contribute to their language learning process as listed in the following: YouTube (n=25), Instagram (n=7), ChatGPT (n=20), Netflix (n=14), Spotify (n=11), TED talks (n=5), Padlet (n=4), Quizlet (n=3), Amazon prime video (n=3), Wattpad (story reading/writing app, n=2), Kahoot (n=2), Slowly (platform for exchanging letters, n=2), Photo Translator (n=2), Snapchat (n=2), Whatsapp (n=1), Todist (n=1), Storytel (n=1), Popular Science (n=1), Genshin Impact game (n=1), Disney (n=1), Webtoon (storytelling platform, n=1), Pinterest (n=1), Discord (instant messaging platform, n=1), X (n=1), Udemy (n=1), Academia.edu (n=1). These findings clearly show that students actively use their mobile devices to improve their language skills.

Also, some sample excerpts of the participants are presented below. (Here, S stands for student. Thus, for example, label S2 means that the utterance belongs to the second student in the sample.)
S27: "I use Duolingo to improve skills such as vocabulary, grammar and pronunciation. For reading and listening, I use the app Voscreen."
S31: "I use DeepL and Tureng. Tureng helps with vocabulary. DeepL helps me with how to construct sentences and alternative sentences."
S69: "I use Google translate and DeepL. I can say that especially DeepL has helped me a lot in learning English. It is very helpful in finding the meaning of words and pronunciation."
S48: "YouTube is very useful for me. I use it for level-appropriate videos, listening tracks and grammar practice. I use the WordBit app for vocabulary practice. I use the Readable app for reading. I can access and read many books and texts for free. I can find words I don't know. Thanks to mobile devices, I have free and easy access to many resources. I think this is very useful."

Results about the Advantages of Mobile English Learning

The following categories were obtained as a result of content analysis regarding the question of the positive contributions and advantages that mobile devices offer to the process of learning English as a foreign language.

Access to Information Anytime, Anywhere
Most of the students stated that they could easily and instantly access the information whenever and wherever they want on their mobile devices during the language learning process. They also stated that the easy portability of mobile devices makes them very practical. The following excerpts are representative answers.
S13: "It allows us to easily access the information we want. I can easily look up the meaning and usage of unfamiliar words. I can access it from everywhere."
S15: "It is both practical and can be carried everywhere. All information can be easily accessed on

mobile phones. I think we need to give up using books and switch to digital."

S22: "The biggest advantage is that they (mobile devices) are small and portable. When I want to learn anything, I can access it easily."

S31: "The biggest advantage is that it can be used anywhere and anytime."

S34: "Thanks to its easy portability, it provides ease of use in every setting."

S67: "The benefits are that we can always learn English every second, every minute. It is very useful and very practical. So, we improve ourselves more easily."

S108: "I can also use it at almost any time and I don't have to wait for class times or try to reach my teachers."

S150: "We may not always be able to reach our teacher. When we have a question, we can easily learn the information we want from our mobile device. This is one of the biggest advantages of the mobile device."

S160: "You can turn on your mobile device and start learning and practicing English whenever and wherever you want. I think this is the biggest advantage."

Providing Different and Content-Rich Resources

Many students underlined that mobile devices make it easy for them to access variety of online English language learning resources, applications and content. Here are the sample opinions of the participants:

S27: "Access to more resources and content through mobile devices provides an advantage in terms of learning."

S44: "There are many (mobile) applications. Each of them encourages learning, and even half an hour a day helps us learn."

S99: "Thanks to mobile devices and the internet, we have access to an unlimited number of language learning materials. This makes language learning more active and faster."

S80: "Quick access and a wide range of useful resources and materials are very useful in terms of diversity."

S88: "I can access many effective and free resources. There are a variety of resources suitable for my own learning style."

S104: "There are many learning methods and no material limitations. I don't have to depend on a book or a person. Mobile devices provide freedom."

S145: "The biggest contribution of mobile devices in my English language learning is that they make it easier for me to access educational materials such as English films, series, documentaries, etc. that teach English more easily."

Supporting In- and Out-of-School Learning

Some students emphasized that mobile devices have supported their English learning processes both in and out of school. For instance, S33 stated that if they feel worried about asking questions to the teacher or when they want to learn more, they get information from their mobile devices inside and outside the school. The following example excerpts present other comments:

S50: "Learning English with mobile devices is useful both in and out of school because, for example, when I don't know a word, I can immediately look up its meaning on mobile devices. I can also look up sentences related to that word so that I can learn where that word is used."

S52: "Mobile devices make it easier for me to practice English in and out of school. I can easily listen to and read English anytime and anywhere through the applications I download to my mobile device. I can study grammar topics that I do not understand at any time."

Helping Improve Language Skills

Many participants stated that mobile devices positively contributed to their knowledge of English grammar, vocabulary, and pronunciation, as well as the four basic language skills. For instance, S61 stated that they can learn English through applications downloaded to mobile devices and can improve their pronunciation and grammar through videos. The other sample comments were as follows:

S65: "It is much easier to listen, speak, read and write on mobile devices. It has many advantages, such as communicating with native speakers and learning the language and pronunciation correctly from them."

S68: "It contributes to mastering English and language rules. It enables us to speak fluently. We can use it whenever we want. We can get fast and correct answers to questions we don't know the answer to."

S25: "It helps us more than we realize when we are studying, learning a language or trying to communicate. It is really advantageous for us when we translate words or sentences, when we learn grammar."

S100: "Mobile devices are very important for me because they help me a lot when I learn English. For example, if I don't understand in class, I can come home and study that subject again."

S137: "Thanks to the Internet, we can access information whenever we want, so we can easily access the questions we have in our minds or the subjects we do not understand through mobile devices, and we even have the opportunity to talk to native speakers of English. I think these are great advantages in language learning."

Effective and Engaging Learning

The qualitative findings showed that many students agreed that mobile devices provide effective and fun learning. Some students claim that the visual and content-rich nature of mobile learning increases their learning motivation and provides them with effective and engaging learning. Sample comments were:

S8: "I think using mobile devices in learning English makes language learning more effective and fun. Thanks to this, students can learn without getting bored."

S27: "Mobile devices help us to reach more effective methods in language learning and make the knowledge more permanent."

S103: "It provides a freer environment for learning English and everyone can improve their English with the most suitable method for themselves."

S108: "Mobile devices make most learning paths easier and more engaging."

Access to Different Tutors

Some participants stated that they had the opportunity to listen to a subject related to language from different lecturers thanks to mobile devices as in the following:

S66: "On mobile devices, especially for grammar, we can learn topics that we do not understand from different teachers and various websites."

S163: "It provides the opportunity to listen to the course topics from different instructors."

Feedback

Some participants stated that thanks to mobile devices, they had the chance to see the mistakes they made regarding the use of the language and receive feedback. Some sample comments are as follows:

S19: "We can interact and get feedback quickly."

S66: "If we are not sure about the sentence, we can check its correctness."
S147: "We can access the right information and find our mistakes at any time. That's why mobile devices give us so many advantages."

More Practical than a Book

Some students argued that a mobile device could be a more effective learning resource than the separate books that they have to carry for their classes. Here are representative excerpts from the qualitative data:
S80: "It is convenient to use and carry a single mobile device instead of carrying many separate books."
S140:" I think that mobile devices will save you from constantly carrying a dictionary or a book. In addition, since there is no limit to the information that we can access with the help of mobile devices (e.g. pdfs of English course-based books, lecture videos with English content), I think that mobile devices increase the quality and standard of teaching."

Time Saving

Some students also stated that mobile devices help them save time. Some representative answers were as follows:
S26: "I think that using the phone to learn English has a great advantage like using a digital dictionary in school. The quick and easy use of such applications saves us time."
S29: "Mobile devices help us learn something we have in mind quickly and efficiently. We both save time and learn in more detail."
S81: "It (a mobile device) helps us to get a lot of information in a short time."

Results about the Disadvantages of Mobile English Learning

In addition to the students stating that mobile devices have no negative aspects as long as they are used correctly, some students underlined some problems that may be experienced while learning with mobile devices. According to the results of the qualitative content analysis, the following categories show the problems experienced by students.

Distraction (Lack of Focus)

While some students use mobile devices to learn English, they emphasized that social media, notifications and messages, games, and advertisements on the phone make it difficult for them to focus on studying and maintain their attention. The following answers are examples of students' views regarding this:
S85: "There are too many applications and websites, so it is easy to get distracted."
S90: "The most critical disadvantage of learning English with mobile devices is the distraction of incoming notifications and calls and the inability to return to studying with the same level of focus. Even if we put the devices in silent mode, it may not work most of the time."
S5: "When you study on a mobile device, you constantly come across advertisements. Sometimes you are interested in that advertisement, and when you want to take a look, you don't realize that hours have passed. Since there are things like this and similar ones that distract the student's attention, I think we shouldn't study only through mobile devices."
S74: "The biggest disadvantage is not being able to focus because of incoming notifications and messages."
S13: "While studying English on mobile devices, I can easily get distracted and switch to another application or any incoming notification."

S153: "I get distracted very quickly, I find myself accessing social media applications without realizing it. This is the disadvantage."

Health Problems

Some participants emphasized that using mobile devices for learning purposes for a long time causes some health problems. Sample comments were as follows:

S43: "The biggest disadvantage of mobile devices is the radiation emitted by mobile devices, which tires the human brain."

S56: "The small screen is harmful to eye health."

S110: "Constantly using headphones while using a mobile device irritates my ears after a while. Constantly looking at the screen also tires my eyes."

Most Mobile Apps Require Internet and Payment

Most of the students stated that many applications on mobile devices require internet access or are paid, which is a significant disadvantage. Representative excerpts from the qualitative data are presented below:

S48: "Some apps charge too much, which prevents me from using them. I think this is a disadvantage."

S79: "Many applications work with internet support. If you don't have internet or if it doesn't work, this is a disadvantage."

S35: "The biggest disadvantage of using mobile devices is that some apps require internet and internet may be insufficient."

S29: "Most of the documents we use to learn English usually work with the internet, but in my opinion this is a disadvantage. People who do not have internet connection cannot benefit from the application."

S44: "I think the biggest disadvantage is that most of the applications are paid."

S19: "As a limitation, a slow internet connection or a sudden (internet) disconnection disrupts most things."

Small Screen Size

The limited screen size of mobile phones was identified as another disadvantage. For instance, S54 stated that due to the small screen size of mobile phones, transition between pages becomes difficult, which limits the practicality of mobile devices. Another student's comment was as follows:

S31: "For example, I try to look at the translation of a long sentence or text, but because of the screen size, it becomes slower and more burdensome."

Technical Problems (Glitches)

Lack of internet connection or electricity, internet outages, battery problems, some devices being unable to support all applications were among the problems mentioned by the participants. For example, S80 reported that s/he sometimes experiences difficulties and disruptions in places with limited Wi-Fi access. Charging problems or deletion and loss of information on mobile devices is another problem for them. The following sentences from the participants explain this problem better.

S133: "Sometimes, due to technical problems, information cannot be accessed on time and time is wasted."

S22: "Mobile devices sometimes do not support the applications and extensions we want."

S93: "It can be difficult to download large gigabyte-sized applications.

Misinformation/Information Pollution

Some students stated that the applications or websites they use via mobile devices contain too much and confusing information, and sometimes contain incorrect information, as shown in the following extracts:

S57: "I might learn some things wrong because not every source on the internet is one hundred per cent correct."

S42: "Since we are faced with more than one answer, it becomes more difficult to reach accurate and reliable information."

S12: "Since some words have more than one meaning, sometimes words can be translated incorrectly or with other meanings."

S33: "There is a lot of different and wrong information about the same subject, word and sentence on the social media platforms I frequently use."

S66: "Applications sometimes translate incorrectly or do not get the exact meaning you want."

S49: "I came across a lot of junk content, very unnecessary and useless applications or websites, which I consider as a disadvantage. I hope there is some guidance on this."

DISCUSSION AND CONCLUSION

This study was conducted to determine EFL students' attitudes and opinions toward English mobile learning. Both qualitative and quantitative findings of the study showed that students generally had a positive attitude toward learning English using mobile devices. This finding is consistent with previous research (e.g. Alkhudair, 2020; Garcia Botero et al., 2018; Hashim et al., 2016; Jeong, 2022; Pengnate, 2018; Thedpitak & Somphong, 2021; Wu, 2019), which also found that students' attitude toward the use of mobile devices for L2 learning is mostly positive. Based on this, it is possible to infer that there are many reasons behind this positive attitude towards mobile learning such as being useful and convenient, providing rich content resources, supporting in and out of class language learning. Additionally, in this study, most of the students stated that mobile devices have a positive contribution to their English learning process. This result is in agreement with Alkhudair's (2020) findings which reported that mobile learning has the role of complementing and supporting traditional EFL learning process and increasing learning motivation and interest. These results are also consistent with those of Dashti and Aldashti (2015) who found that EFL college students believed that mobile devices were both beneficial and enjoyable tools that contribute to and supplement the language learning and teaching process.

In this present study, similar to the findings of many previous research (e.g. Al-Shamsi et al., 2020; Berry, 2021; Ghorbani, & Ebadi, 2020; Hwang et al., 2014; Jeong, 2022; Le, 2021; Li, & Hafner, 2022; Naderi, & Akrami, 2018; Thedpitak & Somphong, 2021; Tian et al., 2022; Wu, 2019; Wu, & Miller, 2020), students emphasized that mobile devices are important and useful tools in developing their basic language skills such as listening, writing, reading, speaking as well as vocabulary, pronunciation and grammar. This result also supports the findings of Dashti and Aldashti (2015). In their study, many EFL students stated that mobile devices contribute to their vocabulary gain and help them with their grammatical mistakes. The results are also in line with Thedpitak and Somphong's (2021) findings in which EFL learners reported that smartphone mobile apps help their language skills improve.

Another positive feature that students generally underlined is that mobile devices offer a wealth of learning resources and contents. This finding agrees with that of Kukulska-Hulme and Pettit (2009) and Alkhudair (2020), who found that mobile devices offer a wide range of learning resources. Moreover, the findings of the study support previous studies in terms of the convenience that mobile

devices offer, such as accessibility anytime and anywhere (e.g. Alkhudair, 2020; Dashti, & Aldashti, 2015), fast access to information (e.g. Agca & Bagci, 2013; Yurdagul & Oz, 2018), saving time (e.g. Pengnate, 2018).

Additionally, the present study determined that students used a wide variety of language learning mobile applications as supportive. Among these applications, Tureng was found to be the application most used by students to support their English language learning process, which ties well with the findings of Yurdagul and Oz (2018). As also found by the study of these two researchers and Thedpitak and Somphong (2021), the current study found that students used a wide-range of mobile English learning applications for various purposes such as improving word knowledge and grammar, translation, listening to English songs and podcasts, watching English videos and movies, reading stories and news, and improving their speaking skills. The reasons behind students' interest in mobile applications can be explained as the fact that the applications present the target language in an interactive, entertaining and gamified way, as well as allowing for personalized learning.

In this study, in addition to the advantages, participants underlined some of the technological limitations of using mobile devices for L2 learning, which is in line with some previous studies. For instance, in Pengnate's (2018) and Kukulska-Hulme and Pettit's (2009) studies, internet connection and battery problems were reported as negative features of mobile devices. Likewise, in the studies of Agca and Bagci (2013), Wu and Miller (2020), Jeong, (2022), and Tian et al. (2022), the small screen size of mobile devices was underlined as one of the common drawbacks. The findings of the present study corroborates with these findings of these previous studies. Moreover, in the findings, some students stated that most of the mobile language learning applications are paid or require the internet connection, and therefore, it is difficult to access them. Considering this, as some students may be disadvantaged by such impossibilities, providing equality of opportunity is of great importance here (see Kaysili, 2023).

Considering all these results, the present study has some educational and pedagogical implications. First, since most students' attitudes toward the use of mobile devices for language learning are positive, it is important to eliminate or minimize the limitations mentioned in order for students to make full use of mobile devices. Based on this, mobile developers might take into account L2 learners' views to improve mobile devices and interfaces in line with language learners' needs. In addition, mobile application developers can focus on developing more useful, engaging, interactive and pedagogically sound and high-quality mobile language applications, considering the ideas and interests of learners. The result of the study has also implications for overcoming technological challenges related to the access of mobile learning. The findings indicate that it should be ensured that mobile technologies are accessible by all learners. In line with this, it is suggested that school administrators and other education stakeholders might invest in the development of technological infrastructure to support mobile L2 learning, such as improving and strengthening internet access, providing students with advanced educational mobile technology, and high-quality educational apps.

Another implication of the study is that mobile devices are personal and so it is very important for both learners and teachers to know how to include them into their learning and teaching process (Kukulska-Hulme & Pettit, 2009). Here, providing students guidance on how to use mobile devices for language learning seems to be important (Ng et al., 2020). Therefore, it seems crucial for teachers and students to receive training on how to use mobile devices effectively in and out of the classroom in English language learning and teaching process. Teachers' knowledge of both the advantages and challenges of mobile devices will contribute to their ability to support their students more effectively. Considering the motivation and engagement provided by mobile devices, teachers can incorporate mobile learning into their lesson plan, they might enrich some part of their lessons with mobile

learning activities, i.e. mobile L2 vocabulary games; however, they also need to plan adequately on how to mitigate some of the technological disadvantages and distractions.

Finally, this study has some limitations and some suggestions for future research. First, the scope of this study was limited to a sample of university-level English learners, which can limit the generalizability of the findings. Considering this, future studies with a more focus on participants from different educational levels and settings are suggested. Also, this study was conducted using a descriptive approach, further research may use experimental methods to investigate the effects of mobile devices on L2 learning. In addition, in future research, learners can be enabled to use mobile language learning tools in classes in real-time and their opinions can be obtained through pre- and post-surveys. Also, further studies can focus on how to improve mobile devices for foreign language learning based on the findings of this study.

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Ethical approval

Prior to the commencement of the study, ethics committee approval was obtained from Necmettin Erbakan University Ethical Committee of Social and Human Sciences (dated 08.12.2023 and numbered 2023/579).

Conflict of Interest

There is no conflict of interest.

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