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**EXPLORING HIGH SCHOOL STUDENTS' ACCEPTANCE AND
USE OF MOBILE APPLICATIONS
FOR ENGLISH LANGUAGE LEARNING**

MASTER OF ARTS

Zelal COŞKUN

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**LİSE ÖĞRENCİLERİNİN İNGİLİZCE DİL ÖĞRENİMİ İÇİN
MOBİL UYGULAMALARI KABUL ETMELERİ VE
KULLANIMLARININ İNCELENMESİ**

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ZELAL COŞKUN tarafından yapılan “ Exploring High School Students' Acceptance And Use Of Mobile Applications For English Language Learning (Lise Öğrencilerinin İngilizce Dil Öğrenimi İçin Mobil Uygulamaları Kabul Etmeleri Ve Kullanımlarının İncelenmesi)” konulu bu çalışma, jürimiz tarafından Yabancı Diller Anabilim Dalında, İngiliz Dili Eğitimi Bilim Dalında YÜKSEK LİSANS tezi olarak kabul edilmiştir

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(MÜHÜR)

DECLARATION OF SCIENTIFIC ETHICS AND ORIGINALITY

I hereby confirm that I am the sole author of this MA thesis entitled" EXPLORING HIGH SCHOOL STUDENTS' ACCEPTANCE AND USE OF MOBILE DEVICES FOR ENGLISH LANGUAGE LEARNING” process of its creation, I have adhered to the principles of scientific ethics and academic regulations. All information and data utilized in this study have been collected and employed in accordance with the scientific ethics and guidelines outlined by Dicle University for thesis writing. Furthermore, I have diligently referenced all direct and indirect quotations, as well as all sources consulted, both within the main body of the thesis and in the references section. The work of art in this thesis is original. I hereby acknowledge all possible loss of rights in case of a contrary circumstance. (in case of any circumstance contradicting with my declaration)

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ÖZ

LİSE ÖĞRENCİLERİNİN İNGİLİZCE DİL ÖĞRENİMİ İÇİN MOBİL UYGULAMALARI KABUL ETMELERİ VE KULLANIMLARININ İNCELENMESİ

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Bu araştırma, Yabancı Dil Olarak İngilizce öğrenen lise öğrencilerinin mobil dil öğrenme uygulamalarına yönelik algı ve tutumlarını incelemeyi amaçlamıştır. Ayrıca, cinsiyet, yaş, okul türü, akıllı telefon sahipliği ve düzenli internet erişimi gibi faktörlerin bu uygulamaların lise öğrencileri arasında kullanımını nasıl etkilediğini araştırmayı amaçlamıştır. Son olarak, çalışma lise öğrencilerinin dil öğrenimi için tercih ettikleri spesifik mobil uygulamaları belirlemeyi ve analiz etmeyi amaçlamıştır. Bu hedefler doğrultusunda araştırmanın amacı, lise düzeyinde İngilizce öğrenenler arasında mobil dil öğreniminin dinamikleri hakkında önemli bilgiler sağlamaktır.

Araştırma, Türkiye'de Yabancı Dil Olarak İngilizce (EFL) kapsamında yürütülmüştür. Katılımcılar, Diyarbakır'da 9, 10, ve 11. sınıflara kayıtlı, %56,5'i kız ve %43,5'i erkek olmak üzere yaşları 15 ile 17 arasında değişen 650 lise öğrencisinden oluşmaktadır. Nicel ağırlıklı bir yaklaşıma sahip karma yöntemli bir araştırma tasarımı kullanılmış, anketler ve yarı yapılandırılmış görüşmelerden yararlanılmıştır. Anketler dört farklı devlet lisesinde dağıtılmış ve 30 gönüllü öğrenci ile yarı yapılandırılmış görüşmeler yapılmıştır. Veriler, öğrencilerin dil öğrenimi için mobil uygulamaların kullanımına ilişkin algı ve tercihlerini incelemek amacıyla hem nicel hem de nitel olarak analiz edilmiştir.

Bulgular, katılımcılar arasında mobil uygulamalara yönelik güçlü bir olumlu tutum olduğunu ortaya koymuş, çeşitli boyutlarda yüksek ortalama puanlara yansımış ve mobil uygulamaları kullanmaya yönelik önemli bir eğilimi göstermiştir. UTAUT ölçeği boyutları açısından, katılımcılar motivasyon, zenginleştirilmiş deneyimler ve etkin kullanımı vurgulayarak dil öğrenimi için mobil araçları kullanmaya yönelik güçlü bir eğilim göstermişlerdir. Bulgular ayrıca kız öğrenciler ve düzenli internet erişimi olanlar arasında sürekli olarak daha yüksek skorlar olduğunu göstermiştir. Bununla birlikte, yaş, okul türü ve

akıllı telefon sahipliği karşılaştırmaları, anketin yalnızca belirli boyutlarında önemli farklılıklar ortaya koymuştur. Özellikle, Duolingo lise öğrencileri arasında en popüler mobil uygulama olarak ortaya çıkmış, onu diğer uygulamalar izlemiş, çeşitli seviyeleri ve alıştırmaları ile kelime bilgisi ve dilbilgisi geliştirmeye odaklananlara hitap etmiştir. Genel olarak, çalışmanın bulguları, lise düzeyindeki İngilizce öğrencilerinin genel olarak mobil dil öğrenme uygulamalarına yönelik olumlu algı ve tutumlara sahip olduklarını ve bunları İngilizce dil pratiği ve gelişimi de dahil olmak üzere çeşitli amaçlar için kullandıklarını göstermiştir. Bu sonuçlar, özellikle mobil uygulamaların devlet liselerindeki İngilizce derslerine entegrasyonu ile ilgili olarak İngilizce Öğretmenleri, alan yetkilileri ve politika yapıcılar için çıkarımlar taşımaktadır. Çalışma, bu çıkarımları tartışarak ve daha sonraki araştırma alanlarını önererek son bulmaktadır.

Anahtar Kelimeler: *Yabancı dil olarak İngilizce, Mobil Destekli Dil Öğrenimi, mobil uygulamalar, Lise öğrencileri*

ABSTRACT

EXPLORING HIGH SCHOOL STUDENTS' ACCEPTANCE AND USE OF MOBILE APPLICATIONS FOR ENGLISH LANGUAGE LEARNING

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This study aimed to explore the perceptions and attitudes of high school English as a Foreign Language (EFL) learners towards mobile language learning applications. Additionally, it sought to investigate how factors such as gender, age, school type, smartphone ownership, and regular internet access influence the utilization of these applications among high school EFL learners. Finally, the study aimed to identify and analyze the specific mobile applications that high school students prefer for language learning. Through these objectives, the goal of the research was to provide valuable insights into the dynamics of mobile language learning among high school EFL learners.

The research was conducted in the Turkish context of English as a Foreign Language (EFL). The participants included 650 high school students aged between 15 and 17 years old, with 56.5% females and 43.5% males, enrolled in the 9th, 10th, and 11th grades in Diyarbakir, Türkiye. A mixed-methods research design with a quantitative-dominant approach was employed, utilizing questionnaires and semi-structured interviews. The questionnaires were distributed in four different public high schools, and semi-structured interviews were conducted with 30 volunteer students. The data were analyzed both quantitatively and qualitatively to examine learners' perceptions and preferences regarding the use of mobile applications for language learning.

The findings revealed a strong positive attitude among participants towards mobile applications, reflected in high mean scores across various dimensions, indicating a significant inclination towards using mobile apps. In terms of the UTAUT scale aspects, participants demonstrated a strong inclination toward using mobile tools for language learning, emphasizing motivation, enriched experiences, and effective utilization.

The findings also indicated consistently higher scores among female students and those with regular internet access. However, age, school type, and smartphone ownership comparisons revealed significant differences across only certain dimensions of the questionnaire. Notably, Duolingo emerged as the most popular mobile application among high school students, followed by other apps, with its various levels and exercises appealing to those focusing on vocabulary and grammar enhancement. Overall, the study's findings suggested that high school EFL learners generally held positive perceptions and attitudes toward mobile language learning applications, utilizing them for various purposes, including English language practice and development. These outcomes carry implications for English Language Teaching teachers, field authorities, and policymakers, particularly regarding the integration of mobile apps into English lessons within state high schools. The study concludes by discussing these implications and suggesting further research avenues.

Key Words:*English as foreign language, Mobile-Assisted Language Learning, mobile applications, High school students*

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ABBREVIATIONS

EFL	: English as a Foreign Language
MALL	: Mobile-Assisted Language Learning
MoNE	: Ministry of National Education
UTAUT	: The Unified Theory of Acceptance and Use of Technology
ŞMMYAHS	: Şehit Mehmet Mecit Yalçın Anatolian High School
FVTAHS	: Farabi Vocational and Technical Anatolian High School
RISHS	: Rekabet Institution Science High School
YGRVAHS	: Yenişehir Girl Religious Vocational Anatolian High School
DRVAHS	: Diyarbakır Religious Vocational Anatolian High School

CHAPTER I

INTRODUCTION

The twenty-first century world has witnessed several technological developments. Education, in particular, has undergone significant changes, with mobile applications playing a crucial role in the evolving landscape of learning tools. Mobile learning applications have become an integral part of modern language classrooms. Therefore, it is essential to investigate their influence on English as a Foreign Language (EFL) learning, specifically examining their impact on language learning.

This chapter sheds light on the examination titled "Exploring High School Students' Acceptance and Use of Mobile Devices for English Language Learning". Additionally, the chapter explores the limitations of the study and provides the operational definitions that were employed.

1.1. Background of the Study

Over the past few decades, technology has evolved into a mobile and web-connected form (Baran, 2014). This transformation has resulted in the widespread adoption of mobile devices, such as mobile phones, MP3 players, podcasts, PDAs, and digital voice recorders, among others, as potential tools for language learning and teaching (Hsu, 2013).

The utilization of mobile devices as a learning environment has the potential to foster a collaborative approach among students. However, it is important to recognize that the efficacy of this approach relies more on the users' engagement and interactions rather than solely on the attributes of the devices themselves. O'Malley et al. (2003) states that mobile learning, or m-learning, is any form of learning facilitated by mobile technology that occurs when the learner is not in a stable condition. Geddes (2004) characterizes mobile learning as a flexible process that can occur at any location and time, while Traxler (2005) offers a definition of mobile learning as any educational provision centered around handheld or palmtop devices as the primary technologies employed.

According to Baleghizadel and Oladrostam (2010), mobile learning includes using a variety of transportable learning resources, including CDs, radios, DVD players, and audio cassettes, with an emphasis on the newest technology, particularly digital tools. The core feature of mobile learning is its reliance on these digital tools, making the portability of the

device a crucial consideration for an effective learning process. Portable digital devices facilitate learner-centered education by promoting collaborative learning through ubiquitous interaction beyond the confines of face-to-face classroom interactions (Wu, 2015). Nariyati et al. (2020) state that these devices are easy to move around, which allows teachers and students can use these devices to learn anywhere, anytime. According to Kuru Gönen and Zeybek (2022), these mobile applications assist students in discovering learning environments that are more accessible and user-friendly. They enable learners to adapt to the digital environment by taking into account their cognitive abilities and limitations (Magal-Royo et al., 2011). The attractive features of mobile devices as educational tools have led to an increased interest in their use.

Mobile learning transforms the educational landscape by making learning flexible and mobile, going beyond the confines of traditional, stationary teaching resources. With the support of mobile devices, individuals can access information beyond the formal education setting, tapping into a vast reservoir of knowledge. This expansion enhances language exposure for learners in a given language (Li, 2008). Sandberg et al. (2011) further elaborate that mobile learning, or m-learning, involves the use of omnipresent and compact devices for learning and knowledge construction, overcoming the limitations of traditional instruction. Tatal (2016) emphasizes the inadequacy of in-class activities due to various reasons such as time constraints, overcrowded classes, or the structured flow of the curriculum. To effectively learn a language, students need exposure to the target language outside the classroom. However, many students are generally unmotivated to learn beyond the classroom setting, showing a reluctance to use books and computers. The integration of mobile phone technology may motivate students by sparking curiosity in language learning. Çakmak (2019) underscores that mobile learning fosters learning through social participation, interaction, and collaboration. Puebla et al. (2022) assert that m-learning holds significant potential to cater to learners' diverse needs. It not only facilitates informal 'anytime, anywhere learning' but also empowers learners to construct their own learning experiences through access to multimedia materials, interactive and collaborative learning, research, and multitasking, regardless of time and space (Jin et al., 2019). Moreover, the availability and connectivity of contemporary mobile devices enhance people's opportunities and motivation to learn. This, in turn, helps reduce marginalization and isolation by promoting social participation in the learning process.

In the context of language learning, mobile learning has further evolved into the term Mobile-Assisted Language Learning (MALL), indicating its application and support specifically in language education. MALL has the potential to empower students to be more active, autonomous, and supportive in shaping their own learning paths. This approach allows students to learn at their own personalized speed (Elaish et al., 2019; Şad et al., 2022). MALL provides multimedia content (Booton et al., 2021) and incorporates interactive touchscreen devices for a more engaging learning experience (Booton et al., 2021). Additionally, it integrates an online dictionary, offering support and guidance to students in their language learning journey (Ma, 2017; Şad et al., 2022). In the educational context, MALL takes various forms, including social networking websites (e.g., Facebook), mobile applications (e.g., Duolingo) podcasts (e.g., Spotify), learning management systems (LMS) (e.g., Google Classroom), and automatic speech recognition (ASR) or voice recognition software (e.g., Google Assistant).

The distinctive features of MALL, according to Pingmuang and Koraneekij (2022), include flexibility in time and place, mobility, individualization and interactivity (Persson and Nouri, 2018; Şad, et al., 2022). MALL's flexibility (Önal et al., 2019) allows for its use both within and outside the classroom setting (Ma, 2017). Furthermore, MALL's mobility (Booton et al., 2021) is facilitated by a simple wireless internet connection (Elaish et al., 2019; Şad et al., 2022), enabling students to study at their own personalized pace (Elaish et al., 2019; Şad et al., 2022) with multimedia input and touchscreen devices providing an interactive learning experience (Booton et al., 2021).

MALL enables students to extend their learning beyond the classroom using personal mobile devices, representing an innovative method of language teaching (Wang & Higgins, 2006). Moreover, MALL is perceived to create an environment where students' learning methods are personalized, realistic, and independent (Kukulska-Hulme, 2009). Additionally, MALL offers a dynamic and engaging learning environment and is equipped with an online dictionary, serving as a valuable aid and scaffold for students in their language learning journey (Ma, 2017; Şad et al., 2022). The amalgamation of these features positions MALL as an effective tool in language learning, promoting self-paced study and interactivity while allowing learners to access diverse resources with ease. The flexibility and accessibility of the MALL environment provide students with more opportunities for authentic learning, making

it easier for them to adapt to new learning situations. In summary, MALL enhances learning experiences, boosts motivation, and facilitates collaborative learning environments.

MALL (Mobile-Assisted Language Learning) presents various advantages however, but it also comes with drawbacks for both teachers and students. One criticism of mobile phones, a common MALL device, is their small screen size and keyboarding issues, especially with the one-finger data entry function (Chimnery, 2006). These features make mobile phones unsuitable for developing certain skills, such as writing. Thornton and Houser (2002) argue that smartphones should only be used for practice and review, not as effective learning tools due to their limited screen size. However, Thornton et al. (2007) contend that MALL can serve as a powerful tool for encouraging active learning, teamwork, and innovation among disengaged and unmotivated university students. The use of mobile devices may also require additional support, as some students feel uncomfortable discussing information with unfamiliar internet users (Sari & Sulistyo, 2022). Additionally, reading on small screens poses challenges due to limited information storage and battery life (Miangah & Nezarat, 2012).

As an evolving aspect of mobile learning, mobile applications (apps) have emerged as versatile tools for language learning, serving as both extracurricular activities and complementary aids in traditional EFL contexts. A wide range of mobile apps have been developed to strengthen various language learning aspects, encompassing vocabulary, grammar, listening, speaking, writing, and reading. In addition to enhancing language skills, these applications contribute to the development of critical thinking abilities among students. To illustrate, research by Lee et al. (2016), highlighted the effectiveness of a mobile learning game that utilized GPS and Google Maps to foster critical thinking students. Furthermore, Karasimo's study (2022) found that language learning applications can be as effective as face-to-face teaching across various levels of the Common European Framework of Reference (CEFR). Additionally, well-designed mobile apps that incorporate social networking and crowd-sourcing concepts enable learners to generate language learning content, fostering creative language use in conversations (Ghorbani & Ebadi, 2020). Koutromanos and Avraamidou (2014) emphasize that the convenience of using mobile apps allows students to access language resources anywhere and anytime. Furthermore, mobile apps are typically free, easy to download, and can be quickly updated. Application stores provide detailed information, including icons, descriptions, user reviews, and ratings, assisting

students in selecting the most suitable app to learn or practice specific language skills and structures.

The advantages of mobile applications extend beyond autonomous language learning. They also provide an alternative reality for teachers and students seeking to integrate these apps into the classroom (Chen, 2013). Mobile apps offer functionalities similar to PC software, streamlining language learning experiences (Quinn, 2011). Language learners can find various apps for practicing pronunciation, vocabulary, and other linguistic areas (Rosell-Aguilar, 2009). These apps enable students to engage in speaking exercises, listening exercises, collaborative writing tasks, multi-perspective reading activities, and more. Therefore, teachers and curriculum designers should consider students' perceptions and preferences of using mobile applications in language learning, determining appropriate mobile applications and assignments that align with students' needs and interests.

An important aspect of research exploring mobile applications is attitudinal studies, particularly focusing on students' and teachers' attitudes and perceptions regarding the impact of using mobile apps for language learning. To Çavuş's study (2011), for example, delved into the views and experiences of students concerning the integration of mobile devices and learning management systems (LMS) in higher education. The findings demonstrated that students generally held positive perceptions of integrating mobile devices and LMS in higher education. The results emphasized the importance of considering students' perspectives and preferences when implementing mobile learning initiatives. The study also underscored the need for institutional support and addressing potential challenges to ensure the successful integration and utilization of mobile devices and LMS in the educational setting. In another study, Ozdamlı and Uzunboylu (2015) focused on evaluating the adequacy of m-learning and exploring the perceptions of students and teachers in secondary schools regarding this educational approach. The findings indicated that both students and teachers generally perceived m-learning as a suitable and effective educational tool. They recognized the potential benefits of using mobile devices for learning, such as increased motivation, engagement, and flexibility in accessing educational content. However, some participants expressed concerns about the limited availability of resources and infrastructure to fully support m-learning in their schools.

Teachers' attitudes toward mobile technology play a crucial role in the successful integration of Mobile-Assisted Language Learning (MALL) in language education as well.

Some teachers may feel uncomfortable using mobile devices in the classroom, perceiving them as alienating tools (Baek et al., 2017). Teachers who take on the responsibility of implementing these apps in their classrooms are a critical component of MALL's success in language learning and teaching (Vota, 2011). To enhance their teaching activities and meet the needs of their learners, instructors should be trained in the efficient use of MALL. In a study conducted by Şad et al., (2022), the perceptions of 1087 pre-service teachers about usage mobile phones and laptops as mobile learning tools were explored. The findings showed that pre-service teachers considered laptops to be relatively more powerful MALL tools than mobile phones. The findings suggest a need to increase awareness and positive perceptions about MALL among pre-service teachers, especially with regard to MALL through mobile phones. In another study, Oz (2015) explored the attitudes and beliefs of pre-service English teachers toward the use of mobile devices for language learning. Using a qualitative research design and gathering data through interviews and observations, the findings revealed that most preservice English teachers acknowledged the potential of Mobile-Assisted Language Learning (MALL) to enhance language acquisition. They recognized the convenience, accessibility, and personalized nature of mobile devices, allowing learners to engage in language learning anytime and anywhere. Consequently, the study emphasized the importance of providing preservice English teachers with appropriate training and support to effectively utilize MALL in their future classrooms. It highlighted the potential benefits of MALL while recognizing the need to address the challenges and concerns associated with its implementation.

In conclusion, the convergence of technology and education through mobile learning has the capacity to innovate the way individuals acquire knowledge, making education more comprehensive, adaptable and responsive to the dynamic needs of 21st century learners. Puebla et al. (2022) argue that m-learning has substantial potential to meet the diverse requirements of learners. It not only facilitates informal learning at any time and place but also empowers learners to shape their own educational experiences by providing access to multimedia materials, interactive and collaborative learning opportunities, research capabilities, and the ability to multitask, regardless of temporal and spatial constraints (Jin et al., 2019). More specifically, Mobile-Assisted Language Learning (MALL) and mobile apps have the capacity to encourage students to take a more active, autonomous role in shaping their learning trajectories. They serve both as extracurricular activities and complementary aids in traditional EFL settings thanks to a diverse array of mobile apps, which has been

created to assist with various aspects of language learning, covering vocabulary, grammar, listening, speaking, writing, and reading. Beyond improving language skills, these applications also contribute to the cultivation of critical thinking abilities among students. Therefore, the objective of this research is to investigate the viewpoints and attitudes of high school students towards the utilization of mobile applications for language learning. Additionally, the study aims to explore their preferences and motivations behind using these applications. The findings of this study can be used to provide preliminary findings for further research on high school students' perceptions and attitudes towards the use of mobile applications in the Turkish context and thus, with these outcomes, teachers can explore the extent to which students are using mobile applications to learn languages and encourage them to continue to use mobile applications for learning English.

1.2. Purpose of and Significance of the Study

The primary objective of this research is to examine the perspectives and attitudes of high school students when it comes to utilizing mobile applications for language learning purposes, as well as to explore their preferences and reasons behind them. The results of this study can be used to provide baseline data for further research on high school students' perceptions and attitudes towards mobile applications uses in the Turkish context. While most studies conducted in Türkiye have focused on teachers' perceptions and attitudes towards using mobile applications (e.g., Oz, 2015; Serin, 2012; Şad et al., 2022) the present study specifically examines high school students' preferences of using mobile applications in learning English. This constitutes a value-added aspect to the study for researchers and teachers in the Turkish context as well as other English as a foreign language (EFL) settings. Furthermore, this study holds significance as it focuses on the mobile applications frequently used by participants, as indicated in the questionnaires and semi-structured interviews. Additionally, the study aims to present comprehensive understanding of the preferences and attitudes of high school students studying in four different types of school (Anatolian HS, Science HS, Religious Vocational Anatolian HS, Vocational and Technical HS). The inclusion of these diverse schools offers a broader perspective on the use of mobile applications for language learning by students in each setting, making this variable particularly valuable.

To sum up; the primary objective of this research is to offer valuable suggestions to educators and students on how to improve the efficiency and achievements of integrating

mobile learning practices into language education. The research results are projected to delve into the effectiveness of mobile-assisted language learning, thereby enhancing our understanding of this approach. Furthermore, it aims to create awareness among learners and teachers about the diverse opportunities it presents in various contexts.

1.3. Research Questions

This study aims to achieve the objectives by addressing the following research questions:

1. What are the perceptions and attitudes of high school English as a Foreign Language (EFL) learners towards mobile phone applications?
2. Do factors such as gender, age, type of school, smartphone ownership, and regular internet access have an impact on the utilization of mobile applications for language learning among high school EFL learners?
3. Which specific mobile applications do high school students utilize for language learning purposes?

1.4. Limitations of the Study

There are certain limitations to this study. Firstly, this study relies on the honesty of the students' self-reported data. As the research findings are based on qualitative data, it is not easy to be completely objective for all participants. While the students were completing the survey, the answers might have been influenced by their current mood or they might have preferred not to express their own opinions in order not to be seen by the researcher as reluctant learners.

Another limitation of this study can be said that the target population consists of 650 high school students studying in various types of schools within a specific context, namely a city in southeastern Türkiye. Therefore, the findings may not be generalizable to learners in other regions of the country. Additionally, it should be noted that the students' interest, attention, and mood during class time may have influenced the results as they completed the questionnaires.

The research methodology employed in this study involved the use of a questionnaire comprising 31 items. However, it was recognized that the presence of such a comprehensive questionnaire may potentially distract students during the administration process. To address

this concern and ensure the validity and reliability of the study, semi-structured interviews were also conducted. By incorporating this additional research method, the limitations associated with the exclusive use of the questionnaire were effectively mitigated.

1.5. Operational Definitions

In this study, the following terms are defined as follows:

Mobile device: According to Rick et al. (2014), a mobile device is defined as a compact portable device that is either equipped with a touch screen or a Qwerty keyboard.

M-learning: M-learning, or mobile learning, is a learning model that enables learners to access information and learning materials regardless of time and place utilizing mobile technology (Ally, 2009).

Mobile application: A mobile app, in this study, refers to a type of software program designed to specifically designed to run on mobile devices such as iPhones, tablets and other devices (Godwin-Jones, 2011).

Mobile-Assisted Language Learning: Mobile-Assisted Language Learning (MALL) is a language learning approach that utilizes portable electronic devices like smartphones, tablets, laptops, and PDAs(Kukulska-Hulme, 2005).

CHAPTER II

LITERATURE REVIEW

In this chapter, a comprehensive review of the literature on mobile learning and mobile-assisted language learning is presented. The chapter begins by exploring the convergence of technology and language teaching, highlighting their interconnectedness. Subsequently, a clear definition of mobile learning is provided, shedding light on its conceptual framework. The chapter then proceeds to discuss the various types of mobile devices available for learning purposes. Furthermore, an in-depth analysis of mobile applications is presented, emphasizing their significance in language learning. The concept of Mobile-Assisted Language Learning (MALL) is introduced, followed by an examination of its impact on the development of language skills. Lastly, the chapter encompasses a discussion of relevant studies that focus on students' perceptions of mobile applications both internationally and specifically in Türkiye.

2.1. Technology and Language Teaching

Since its inception, the computer has become a ubiquitous element in many areas of human existence. Among its many applications, education stands out. Computers provide interactive and engaging environments that have attracted considerable interest from both educators and learners. Their pragmatic utility in education has catalyzed the development of Computer-Assisted Language Learning (CALL), a specialized form of learning described by Levy (1997, p.1) as "the study and analysis of computer applications in language pedagogy and language acquisition". Hubbard (2021) further defines CALL as the integration of computers and related technologies-desktops, laptops, tablets, smartphones, mp3 players, interactive whiteboards, and others-into the field of language learning and teaching.

The evolution of information technologies has profoundly reshaped traditional language learning, ushering in the era of mobile learning (m-learning). According to Geddes (2004), mobile learning refers to the process of acquiring information or skills by utilizing mobile technologies, which ultimately leads to changes in behavior. Traxler (2005) presents an alternate viewpoint, describing mobile learning as the creation of training content using tools that can be utilized independently or primarily held in hand. Bernacki et al. (2020) view mobile learning as the learner's ability to access information from any location, capitalizing

on the benefits offered by mobile technologies. Quinn (2011) characterizes mobile learning as the fusion of mobile computing and e-learning. E-learning, known for its independence from specific times and places, provides access to resources from any location, boosts robust search capabilities, and fosters high levels of interactive engagement. Additionally, e-learning supports effective learning and relies on performance evaluation (Ataefar et al. 2019).

Mobile technologies offer a plethora of functions and advantages. Several of the most notable benefits of mobile learning include the flexibility to learn anywhere, anytime, the ability to connect with underserved children and schools, the potential to enhance higher-order thinking skills, and the provision of diverse learning environments. Mobile technology has successfully incorporated the features of portability, individuality, social connectivity, and context sensitivity into language learning, resulting in a dynamic and personalized learning experience (Chinnery, 2006). The portability aspect allows learners to effortlessly access language resources and practice opportunities at any time and from any location, utilizing mobile applications such as Google or YouTube, taking full advantage of the convenience offered by mobile devices (Sung et al., 2015). By embracing the individuality aspect, mobile technology empowers learners to personalize and tailor the learning process according to their specific needs and interests. By leveraging the potential of social connectivity, individuals have the opportunity to make use of mobile applications such as Skype and Hello Talk to actively participate in collaborative efforts, exchange personal experiences, and interact with fellow language learners and native speakers in the desired language. This interaction can take place in real-time or at different times, providing flexibility and convenience (Crompton & Burke, 2020).

Mobile and location-based learning present numerous advantages, with suitable MALL applications granting learners access to reading, speaking, listening, and writing materials in the target language. Consequently, m-learning transcends the confines of traditional English as a Foreign Language (EFL) education. This evolution has led to the introduction of the term "Mobile-Assisted Language Learning" (MALL). MALL is the utilization of mobile and pervasive devices in the language domain, particularly in contexts where the mobility of these devices offers certain advantages. Bezircilioğlu (2016) describes MALL as "the integration of mobile devices into the language learning process"(p.9). MALL encompasses language learning activities conducted on mobile devices, reshaping education and language acquisition (Gonulal, 2019).

The ubiquity of mobile phones has facilitated the seamless integration of Mobile-Assisted Language Learning (MALL) into daily life, establishing it as one of the most widely adopted learning methods in recent years. Yudhiantara and Saehu (2017) assert that students expressed a positive reception toward using their phones for class-related activities. These activities included reading e-books on phonology, utilizing audio and video files for visualizing topics, and employing offline dictionaries to augment classroom engagements. Wu (2015) suggests that individuals exhibit a greater inclination to seek solutions using their mobile phones, especially when equipped with appropriate applications. In his study, he developed a mobile application aimed at enhancing learners' vocabulary acquisition. The experimental group utilizing this application outperformed the control group in terms of vocabulary knowledge, attributed by the researcher to the application's usability, usefulness, and accessibility.

Previous studies (e.g., Bernacki et al. 2020; Crompton & Burke, 2020) have extensively explored the use of MALL (Mobile-Assisted Language Learning) in foreign language education. MALL has proven to be effective in enhancing linguistic abilities such as listening, speaking, reading, and writing. However, a detailed analysis of this topic will be presented in a subsequent section.

2.2. Theoretical Frameworks for Technology Models

Several theoretical frameworks are available to assist educators in effectively incorporating technology into education. Davis's Technology Acceptance Model (TAM) (1989), for example, helps understand how teachers and learners in educational settings embrace technology. Koole's Framework for the Rational Analysis of Mobile Education (FRAME) model (2006) is specifically designed for technology implementation in distance education, while Puentedura's Substitution, Augmentation, Modification, and Redefinition (SAMR) model (2013) ranges from using technology to enhance existing tasks to transforming educational approaches and enabling new activities. Additionally, Koehler et al.'s Technological, Pedagogical, and Content Knowledge (TPACK) framework (2014) outlines the necessary knowledge for teachers to effectively integrate technology.

2.2.1. The Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT), proposed by Venkatesh et al. (2003), serves as an integrated framework that consolidates eight acceptance models. This comprehensive model has shown greater effectiveness in explaining behavioral intention compared to individual technology acceptance models (Marchewka et al., 2007). UTAUT synthesizes elements from various theories, including the Theory of Reasoned Action, Technology Acceptance Model (TAM), Motivational Model, Theory of Planned Behavior (TPB), TAM and TPB combined, Model of Personal Computer Utilization, Innovation Diffusion Theory, and Social Cognitive Theory. It has been employed to gauge acceptance across diverse domains such as websites, podcasts, blogs, wikis, Facebook, as well as in mobile learning scenarios within higher education and developing countries. While gaining popularity in educational settings, the utilization of UTAUT in the literature remains limited.

The UTAUT model encompasses six pivotal components directly influencing user acceptance and usage behavior: Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Behavioral Intention, and Attitude.

- The concept of **Performance Expectancy** revolves around an individual's belief that utilizing a system will improve their job performance. This factor has been identified as a highly reliable predictor of intention, as stated by Venkatesh et al. (2003). Although some studies have found a non-significant relationship between performance expectancy and behavioral intention, the majority of research emphasizes its crucial role in predicting the acceptance of technology, particularly in educational environments, as highlighted by Bernacki et al. (2020).
- **Effort Expectancy**, on the other hand, pertains to the perceived ease associated with using a system. While Venkatesh et al. (2003) emphasize its significance in the initial usage of technology, other studies underscore its ongoing importance, particularly in the realm of mobile learning, as mentioned by Lashari et al. (2023).
- **Social Influence** pertains to how an individual perceives the support or approval of significant others towards the adoption of the new system (Hsu & Lin, 2008). Context plays a role, with social influence being more substantial in

mandatory contexts compared to non-mandatory ones. Additionally, limited experience with technology amplifies the impact of social influence.

- The concept of **Facilitating Conditions** refers to the notion that the organizational and technical infrastructure play a crucial role in supporting the utilization of a system. Although Venkatesh et al. (2003) argue that facilitating conditions may not have a substantial impact on predicting intention, alternative research indicates a positive association between facilitating conditions and the adoption of technology (Rahmanu & Santosa, 2022).
- **Behavioral intention** is the user's intention and motivation to utilize a specific gamified vocabulary application (Zhang & Yu, 2022). This intention positively correlates with usage behavior, supported by theoretical and empirical studies in Mobile-Assisted Language Learning (MALL) and online learning.
- **Attitude Towards Behavior** encompasses an individual's inclination towards either positive or negative sentiments when it comes to engaging in a specific behavior. This psychological construct reflects the individual's subjective evaluation of the behavior and can greatly influence their likelihood of performing it. While not included in the resulting UTAUT, attitude remains a crucial factor in technology acceptance models. Studies indicate its positive relationship with various UTAUT components, such as performance expectancy, effort expectancy, social influence, facilitating conditions, and behavioral intention. However, the role of attitude in technology acceptance models remains subject to research methodology and contextual nuances.

2.2.2. The Technology Acceptance Model (TAM)

Davis (1989) formulated the Technology Acceptance Model (TAM) based on the Theory of Reasoned Action (TRA) which is shaped by the individual's attitude towards the behavior and the subjective norms associated with it. TAM suggests that the perceived ease of use and perceived usefulness of technology serve as predictors for user attitude towards adopting the technology, subsequent behavioral intentions, and actual usage. Additionally, TAM proposes that the perceived ease of use can influence the perceived usefulness of technology.

In the context of the current study, e-learning is defined as a system that utilizes Internet and web technology to effectively deliver information to students and facilitate interaction through a computer interface. In the Technology Acceptance Model (TAM), Masrom (2007) explains that perceived usefulness refers to the users' belief in the technology's ability to enhance their job performance. On the other hand, perceived ease of use is associated with the perceived simplicity of operating the technology. These two factors are recognized as separate elements that influence the user's attitude towards adopting the technology. Moreover, it is hypothesized that perceived ease of use affects perceived usefulness and the overall attitude towards technology adoption. Ultimately, the user's attitude towards technology adoption plays a crucial role in determining their intention to actually use it.

2.2.3. The Substitution Augmentation Modification Redefinition model (SAMR)

Numerous frameworks aid educators in effectively integrating technology into K-12 education, with one prominent model being the Substitution Augmentation Modification Redefinition (SAMR) framework. Puentedura (2013) developed SAMR, dividing technology integration into four levels: Substitution, Augmentation, Modification, and Redefinition.

In *Substitution*, technology merely replaces a task that could be done without it. *Augmentation* enhances learning with additional benefits. *Modification* entails significant task redesign through technology, while *Redefinition* occurs when technology enables learning experiences that were previously impossible.

The SAMR framework is recommended for assessing educational technology integration, particularly in mobile learning contexts.

Critics, such as scholars Arnold (2019) and Crompton & Burke (2020), have highlighted the lack of concrete quantitative or qualitative evidence distinguishing these levels. However, despite this critique, the SAMR framework remains a valuable tool for comprehending and facilitating technology integration within the learning environment (Arnold, 2019).

2.3. Mobile Learning (M-Learning)

Mobile learning, also referred to as M-learning, is the utilization of mobile devices such as mobile phones, PDAs, tablet PCs, podcasts, MP3 players, digital voice recorders, mini camcorders, DVD players, audio CDs, and similar technologies for the purpose of

language learning and teaching, as stated by Nariyati et al. (2020). The concept of mobile learning revolves around the portability and wireless nature of personal devices like smartphones, personal digital assistants (PDAs), iPods, palmtops, and laptops, which are employed in language learning, as highlighted by Gangaianmaran and Pasupathi (2017).

Another perspective on M-learning, as defined by Park et al. (2012), characterizes it as any instructional setting primarily reliant on handheld or palm-sized devices. Additionally, Kinash et al. (2012) describe mobile learning as the utilization of handheld devices connected to the internet within educational contexts.

Mobile devices provide unique benefits including ease of access, customization, and mobility (Saran & Seferoglu, 2010). These advantages encompass various physical attributes such as size and weight, input options like keypads or touchpads, output capabilities such as screen size and sound capacities, as well as features like file storage, retrieval, processor speed, and minimal error rates (Alzu'bi & Sabha, 2013). However, mobility is often regarded as the distinctive feature of M-learning, making it a unique educational platform (Alrasheedi & Capretz, 2015). El-Hussein and Cronje (2010) emphasize the importance of mobility and accessibility in enhancing English language learning through mobile technology. It is further argued that mobile learning empowers L2 students to engage with the learning content at their own pace and to tailor the difficulty level to their individual proficiency (Rosell-Aguilar, 2018). Burston (2015) states that MALL promotes self-directed and pervasive learning in casual environments. Puebla et al. (2022) underscore its potential for meeting the diverse needs of older learners by offering anytime, anywhere informal learning experiences, fostering engagement with multimedia materials, collaborative learning, and multitasking. For students, mobile learning offers several advantages; obtaining the most recent information instantaneously, receiving assistance, obtaining time, being independent of location and time, boosting motivation, supervising students, disseminating knowledge swiftly, and interacting with the surroundings are a few of them (Polat, 2016).

Notwithstanding its evident advantages, M-learning has inherent drawbacks as well. Small screen sizes, often cited as a significant limitation, can make learning activities challenging (Kukulska-Hulme & Shield, 2008). Additionally, laptops and similar devices suffer from issues like their heavy weight and short battery life, posing practical challenges (Şad et al., 2022). Increased use of M-learning technologies in classrooms might lead to disruptions and distractions (Martin & Ertzberger, 2013). Moreover, in economically

challenged regions, the high cost of functional gadgets, limited accessibility, and attitudinal concerns serve as discouraging factors (Hockly, 2012).

In summary, Mobile-Assisted Language Learning (MALL) does have several drawbacks in language education, including technical issues, weighty or bulky devices, short battery life, and economic challenges due to the high cost of functional devices. Consequently, educators should consider and address these challenges in their teaching strategies.

2.3.1. Mobile Devices

The proliferation of available mobile devices has markedly increased during the 2000s, making them an integral part of everyday life. Klopfer et al. (2002) delineate several key characteristics of mobile tools:

- I. Portability, owing to their compact size and lightweight nature.
- II. Social interactivity, enabling data sharing and collaboration among students.
- III. Context sensitivity, allowing information to be tailored to specific times and locations.
- IV. Connectivity, fostering networks with other devices, data collection tools, or broader networks.
- V. Individualization, enabling personalized activities for each learner.

Researchers such as Kukulska-Hulme (2009), Kukulska-Hulme and Bull (2009), and Stockwell (2010) have noted a discernible surge in mobile device usage. This has led to expanded research endeavors in mobile language learning to aid educators in comprehending its scope within second language learning. The concept of mobile devices being instrumental in learning and teaching has gained popularity, as highlighted by Khaddage et al. (2016). In his publication, Trinder (2007) presents an extensive compilation of m-learning and mobile-enhanced language learning resources. These resources encompass a wide spectrum, ranging from basic and specialized devices like audio players to advanced and versatile tools such as smartphones and personal digital assistants (PDAs). Trinder's catalog provides a comprehensive overview of the diverse range of tools available for language learning in the mobile and digital era.

Ekinci and Ekinci (2017) emphasize that while the extensive use of mobile tools and computers facilitates learning, the judicious and appropriate utilization of mobile devices is critical in our increasingly interconnected society. The utilization of mobile devices is anticipated to significantly extend learning opportunities beyond traditional classroom settings, catering to student objectives, and potentially enhancing memory (Kukulska-Hulme, 2009). Motiwalla (2007) and Chen and Chung (2008) echo the idea that language learners can store recordings on their mobile devices for anytime, anywhere access—even during travels (Kukulska-Hulme, 2009).

Mobile phones are among the most widely used devices for language learning. Kukulska-Hulme et al. (2007) note that the majority of Mobile Assisted Language Learning (MALL) activities predominantly involve mobile phones. These devices offer various features such as SMS, MMS, and video services that serve as valuable learning tools (Kukulska-Hulme et al., 2007). Ekinci and Ekinci (2017) highlight the ease of use and quick accessibility of mobile phones, making them optimal for students aiming to enhance language skills. Mospan (2018) points out that mobile phones offer numerous advantages for educational purposes, allowing for customizable curriculum design and study schedules. Furthermore, Kukulska & Hulme (2009) emphasize the advantage of utilizing mobile devices for out-of-classroom learning, efficiently utilizing learners' spare time regardless of their physical location. However, integrating mobile devices into classrooms raises concerns about potential disruptions (Martin & Ertzberger, 2013) and battery life issues (Şad et al., 2022). Overcoming these challenges may involve ensuring adequate access to power sources in classrooms, yet the high cost, particularly in developing countries, remains a significant consideration (Hockly, 2012).

PDA's (Personal Digital Assistants) represent another example of mobile devices. They are argued to offer enhanced flexibility and comprehensiveness in language learning due to features such as personalization, localization, and mobility (Ataeifar et al. 2019). Studies highlight positive student attitudes towards using PDA's for learning, especially for vocabulary acquisition and creating vocabulary learning exercises. In order to find out how advanced undergraduates at a university in Hong Kong utilized their Personal Digital Assistants (PDA's) for vocabulary learning, Song and Fox (2008) carried out multiple-case research. They discovered that several mobile devices were utilized for this activity.

In several instances, the usage of mobile devices and computers was combined, which influenced students' vocabulary-learning activities. Podcasts, though not conventional mobile devices, can be downloaded or played on digital devices and serve as authentic and mostly free learning and teaching tools (Chinnery, 2006; Gromik, 2008; Kukulska-Hulme, 2009; Rosell-Aguilar, 2013). They provide genuine content, such as radio programs or news, and offer teaching materials and language courses for learners through audio transcriptions, quizzes, feedback, and vocabulary (Rosell-Aguilar, 2007).

In summary, mobile devices, including mobile phones, podcasts, PDAs, and mp3 players, have been employed in language learning. Consequently, previous research indicated that students have shown positive attitudes toward mobile-assisted learning, attributing their success to this approach.

2.4. Mobile Assisted Language Learning (MALL)

Mobile Assisted Language Learning (MALL) pertains to the utilization of handheld mobile devices to support or facilitate language learning (Chinnery, 2006). In order to ensure the efficacy of mobile learning, Kukulska-Hulme (2009) emphasizes the significance of possessing an adequate number and variety of devices. It primarily focuses on using portable electronic devices, such as tablets and smartphones, to accommodate unique learning preferences (Miangah & Nezarat, 2012). Research in MALL focuses on content-based and design-based approaches. Content-based research evaluates mechanisms and exercises for students while design-based research concentrates on improving materials specifically for mobile tools (Rahmanu & Santosa, 2022).

MALL employs various devices like smartphones, tablets, and laptops, emphasizing their portability and mobility, enabling learning anytime and anywhere (Sutrisna et al., 2018). Commonly used devices in MALL include PDAs, mobile phones, tablets, and pocket electronic dictionaries (Lashari et al. 2023). These devices empower users due to their portability and mobility, enabling learning anytime, anywhere. These tools support language learning and collaborative resources, enhancing ways to learn a target language (Kukulska-Hulme, 2010). By incorporating mobile learning into education, constraints related to physical space are overcome, providing individuals with the freedom to learn. Moreover, mobile learning fosters interaction among students by utilizing additional tools like wireless short messaging, mobile internet access, and voice communication, thereby enabling unrestricted access to information through wireless technology (Rysbayeva et al., 2022). The emphasis on

mobility in the learning process highlights the interaction between students and content, teachers. It expands exposure to various languages, moving beyond conventional teaching methods (Ekinci & Ekinci, 2017) and aims to extend language practice beyond the classroom, offering learning opportunities 'out in the world' (Kukulska-Hulme, 2012). Furthermore, it enables learning beyond classrooms, offering opportunities for real-world learning experiences (Kukulska-Hulme, 2012). The adoption of the MALL strategy has been recommended not only for enhancing students' speaking skills but also for showing positive effects across various aspects of speaking abilities (Setiyanti et al., 2022). This approach serves as a motivational tool, capable of shifting students' perspectives and fostering active participation in classroom activities (Murugan & Teoh, 2022). By transcending the limitations of traditional classroom instruction, MALL creates opportunities for engaging in real-world learning activities (Karunasri et al., 2022).

Mobile-Assisted Language Learning (MALL) offers key features such as individualized learning, extended practice beyond classrooms, and collaborative learning experiences (Abdelraheem & Ahmed, 2015; Dehkordi & Taki, 2018). Studies consistently demonstrate its positive impact on language acquisition, enabling learning anytime and anywhere (Krivoruchko et al., 2015). MALL fosters autonomy, collaboration, and student motivation (Dehkordi & Taki, 2018) but faces challenges in teacher implementation (Vota, 2011), as some educators encounter discomfort in integrating mobile technology (Baek et al., 2017). Polakova and Klimova (2019) indicate that Mobile-Assisted Language Learning (MALL) represents a student-centered approach grounded in constructivist theory. Its primary objectives involve fostering critical thinking skills, boosting motivation for learning, and improving overall learning outcomes. Additionally, MALL promotes cooperative learning, enhances peer relationships, and facilitates valuable teacher feedback within the cognitive apprenticeship paradigm (Sandberg et al., 2011). Scholars like Fisher and Baird (2007) advocate for MALL as an ideal tool to foster active learning, teamwork, and innovation among disengaged university students. Romero et al. (2010) stress its role in strengthening language skills and providing real-world learning opportunities (Al Shehri, 2011). Likewise, Davie and Hilber (2015) asserted that MALL holds the potential to support English Language Learners (ELLs) in autonomously and self-directedly acquiring English proficiency. The utilization of MALL for English learning is feasible both with and without the direct involvement of an English teacher. Its application in teaching pronunciation not only enhances students' skills but also reduces teacher anxiety by providing valuable feedback

(Sufi & Shalmani, 2018; Abduh, 2019). In terms of outcomes, MALL significantly aids pronunciation improvement and encourages autonomous learning (Sufi & Shalmani, 2018). Mobile-Assisted Language Learning (MALL) encompasses language learning activities conducted on mobile devices, reshaping education and language acquisition (Gonulal, 2019). Both teachers and students greatly benefit from MALL due to its portability, accessibility, and collaborative nature, significantly enhancing engagement and facilitating immediate feedback (BenMoussa, 2003; Goodison, 2001).

In classroom settings, researchers have implemented the MALL strategy, integrating smartphones into language learning activities (Pebiana & Pratiwi, 2023). The utilization of MALL resources can aid teachers in delivering learning materials and boosting students' motivation to learn the English language. The study conducted by Pebiana and Pratiwi (2023) discovered that MALL facilitated the transmission of lesson information and heightened students' motivation by visualizing instructional materials via a microsite. While Mobile-Assisted Language Learning (MALL) presents a plethora of educational advantages, it confronts several challenges. Chief among these is the issue of unreliable internet connectivity, posing a significant obstacle for students in English language classrooms (Nuraeni et al., 2020). Additionally, MALL's perceived limitations due to certain constraints contribute to its reduced appeal (Harwati Hashim, 2017). Learners also express reservations concerning potential damage or loss of devices when used outdoors, adding to their hesitancy in embracing MALL (Welsh et al., 2015). Technical hurdles, such as screen readability issues, financial constraints regarding data services, and teachers' discomfort with mobile technology in classrooms, further impede its seamless integration (Baek et al., 2017; Miangah & Nezarat, 2012; Vota, 2011). Challenges like technical glitches during sessions and inadequate device utilization by learners exacerbate the difficulties associated with MALL (Ganapathy et al., 2016; Wu, 2015). Despite the advantages it offers, persistent challenges persist, including limited battery life, small screen sizes, and concerns regarding teacher discomfort and distractions (Baek et al., 2017; Chimnery, 2006; Kim & Kim, 2012; Miangah & Nezarat, 2012).

In summary, MALL has many advantages such as flexibility, mobility, portability, enhancing students' motivation, developing cooperating learning and peer relationships, however it has some disadvantages such as small screen sizes, limited battery life, and financial constraints for data services.

2.4.1. MALL in Developing Language Skills

The following section investigates the correlation between Mobile-Assisted Language Learning (MALL) and various language skills, including listening, speaking, reading, writing, as well as grammar and vocabulary sub-skills. It thoroughly examines the influence and efficacy of Mobile-Assisted Language Learning when utilized as a tool for language acquisition within the classroom environment.

2.4.1.1. Listening

MALL serves as a platform for acquiring language skills, including listening, speaking, reading, and writing. Within language acquisition, MALL particularly shows promise in improving learners' listening comprehension, a pivotal aspect. Mobile devices enable easy access to radio programs and audiobooks, presenting learners with unique listening opportunities (Chang & Millet, 2014). The integration of reading skills with audiobooks, mobile e-books, and multimedia functions contributes not only to enhancing listening abilities but also to improving reading comprehension and aiding in correct pronunciation (Çakir, 2012).

In a study by Kim (2013), research focused on specific mobile applications and their impact on the listening skills of Korean university learners, generally revealing positive effects on language learning. However, it is crucial to acknowledge that the integration of mobile learning hasn't consistently succeeded across all educational settings. In a separate study, Azar et al. (2014) explored learners' perspectives on using mobile phones to boost English as a Foreign Language (EFL) listening comprehension, examining the influence of Mobile-Assisted Language Learning (MALL) on EFL students' listening abilities. The survey highlighted respondents' appreciation for MALL's mobility and easy access, emphasizing increased opportunities for interaction with instructors and peers. Furthermore, participants using mobile phone-based audiobooks displayed superior listening comprehension compared to those employing traditional methods. The study also investigated the English Listening Test App as a teaching tool, revealing its positive impact on students' listening skills through experimental research (Handayani & Izzah, 2020).

2.4.1.2. Speaking

Through applications and MALL-based activities, learners have abundant opportunities to enhance their speaking skills. Utilizing the audio and visual recording

features on their mobile devices, they can practice speaking. To illustrate, in a study by Ataeifar et al. (2019), incorporating the Voice Thread app and Twitter into the learning process led to noticeable improvements in speaking skills among 90 female EFL students in Iran. This research showcased that MALL had a positive influence on students' speaking proficiency. Those using Voice Thread and Twitter apps achieved higher post-test scores compared to peers who didn't utilize these applications. Similarly, Akkara et al. (2020) supported the effectiveness of mobile apps in fostering speaking skills. Their study, involving 25 first-year students, implemented a Bring Your Own Devices (BYOD) approach. Students recorded their spoken language using apps and shared these recordings through WhatsApp. The findings revealed substantial enhancements in various speaking aspects. Post-test findings showed a significant increase in Coherence and Fluency scores. The outcomes underscored the positive impact of integrating Mobile-Assisted Language Learning into education, leading to pronounced improvements in students' speaking abilities.

2.4.1.3. Writing

In the realm of education, students are presented with a valuable opportunity to enhance their writing abilities by utilizing mobile applications. A study conducted by Andujar (2016) aimed to investigate the impact of integrating Mobile Instant Messaging (MIM), specifically the WhatsApp application, in the educational process to improve students' writing skills. The research involved a total of 80 participants from a university, who were divided into two groups: an experimental group and a control group, each consisting of 40 students. The experimental group utilized WhatsApp as a means to exchange messages with their peers. Following a seven-day period, all participants underwent a writing assessment using traditional writing tools such as pencils and paper. The findings of Andujar's study revealed that the experimental group achieved higher scores in the assessment, indicating an improvement in linguistic accuracy, particularly in grammatical and lexical aspects.

Additionally, Alam and Mizan (2019) highlighted that MALL, exemplified by using Facebook, can significantly enhance English writing proficiency. Involving 96 university students, their investigation explored students' perceptions regarding integrating a Facebook application into the process of acquiring English writing skills. Students were tasked with composing movie or book reviews on Facebook, engaging in peer interactions by commenting on classmates' posts. After four months, interviews and questionnaires showed that students found Facebook highly beneficial for formal writing skills, peer feedback, social interaction

with peers and teachers, and ongoing communication. The research emphasized students' positive perspectives on effectively utilizing Facebook in the learning process.

Teachers and students can utilize mobile devices to aid students in strengthening their writing skills, particularly through journaling, self-editing, and peer editing. Comment sections on photo-sharing websites are also noted to assist students in improving reading and writing skills (Barton & Lee, 2013). The conclusion drawn is that employing MALL in the English learning process benefits students in enhancing their English writing skills.

2.4.1.4. Grammar

Research on MALL also illustrated its significant role in enhancing grammar skills across diverse language learning settings. Moghari and Marandi (2017), for example, found that using MALL through text messaging applications improved the grammar skills of 60 8th-grade English Language Learners (ELLs) in an Iranian school, aged 13-14. The experimental group, receiving 120 grammar lessons via text messages over 12 weeks, showed more significant improvements compared to the traditional paper-and-pencil method used by the comparison group. The heightened progress was attributed to increased student motivation through mobile applications.

Similarly, Khodabandeh et al. (2017) supported the effectiveness of MALL in ESL/EFL education with 90 Iranian junior high school students, aged 14 to 16. The experimental group, using the Telegram application for grammar lessons, outperformed the comparison group, which used photocopied textbooks. Results showed the experimental group scoring 20 points in the post-test compared to the comparison group's highest score of 12. These studies suggest that integrating MALL significantly enhances L2 learners' grammar skills in ESL/EFL education.

2.4.1.5. Vocabulary

The acquisition of target vocabulary using mobile tools has been extensively studied in language learning as well. Learners employ diverse mobile features like audio, video, SMS, emails (Aslan, 2023), and platforms such as WhatsApp (Başal et al., 2016). Various tools like quizzes, pronunciation guides, and vocabulary aids are utilized by both students and instructors (Ducate & Lomicka, 2009; Godwin-Jones, 2008; Lu, 2008; Saran & Seferoglu, 2010).

In their study, Alemi et al. (2012) made an observation regarding the impact of integrating Mobile-Assisted Language Learning (MALL) on academic vocabulary acquisition among students. The researchers found that those who utilized MALL showed enhanced vocabulary knowledge and retention compared to their counterparts who did not use this technology. This suggests that incorporating MALL into language learning can be beneficial for students in terms of expanding their vocabulary skills and retaining the acquired knowledge. They studied forty-five university students in Iran, finding that MALL users scored higher in post-tests and displayed better performance in delayed tests compared to non-MALL users. This research solidifies the idea that MALL integration enhances vocabulary knowledge and retention. Similarly, Polakova and Klimova (2019) delved into enhancing students' vocabulary skills through a mobile application in the learning process. Twenty second-year vocational students, dedicating three hours weekly to learning English, were divided into experimental and control groups. The experimental group used the Kahoot mobile app for vocabulary learning, while the control group relied on traditional dictionary-based practice. The experimental group showed notable improvement in their post-test scores compared to the control group. Based on the previous research, it can be argued that integrating MALL in the learning process enhances grammar skills, vocabulary knowledge, and retention among L2 learners.

2.4.1.6. Reading

MALL serves as a tool for developing reading skills in language learning as well. To illustrate, Hazaea and Alzubi (2016) highlighted the positive impact of MALL tools like WhatsApp and Google search on L2 learners' reading abilities. Involving 30 male students at a university, the study focused on utilizing online materials via Google search and peer feedback. Interviews after 14 weeks revealed heightened motivation in reading among learners due to the freedom to select materials of personal interest.

Integrating MALL in learning enhanced internal motivation, making the process more enjoyable. These studies highlight the beneficial impact of integrating MALL into the learning process, benefiting both students and parents and ultimately improving English receptive skills.

2.5. Mobile Applications in Language Learning

Applications, commonly known as apps, are software programs installed on mobile devices. Assessing their usability, adaptability, and sharing capabilities is crucial. These apps can serve as supplemental tools in higher education for extracurricular language activities or as complements to traditional EFL training (Oreški et al., 2018). Their accessibility allows students to use them anywhere, anytime, and as frequently as needed. Additionally, most apps are free, easily downloadable, and regularly updated. If an app does not meet a student's needs, it can be swiftly removed. Students can access detailed information about an app, including its description, icon, user reviews, and ratings. Rysbayeva et al. (2022) states that mobile applications, offering the flexibility to learn independently regardless of time and location, are becoming essential learning resources in our lives. Additionally, mobile applications not only make learning enjoyable through online games but also facilitate experiential learning through simulations and animations. Students can engage in practical application and reinforce their understanding through simulators, bridging the gap between theoretical knowledge and real-life scenarios with ease and practicality (Cheon et al., 2012).

According to Petersen et al. (2012), well-designed mobile apps that blend social networking and crowd-sourcing concepts enable learners to create language learning content shared within the group. This sharing fosters the creative use of language in conversation. Mobile applications dominate the landscape of mobile language learning environments. For specific language skills or structures, a wide array of apps is available for students to choose from and utilize for learning or practice. Numerous mobile apps aid in vocabulary, grammar, listening, speaking, writing, and reading in English. These applications not only enhance language skills but also foster critical thinking among students. However, as Heil et al. (2016) observed in their study, the majority of mobile applications emphasize vocabulary development. Notably, 84% of the top commercial language learning apps evaluated focused on training vocabulary as isolated units and 53% evaluated the words in context, emphasizing the crucial role of repetitive exposure to unfamiliar words for enhancing students' lexical competence. In a subsequent study, Rosell-Aguilar (2018) found that the mobile app 'Busuu' effectively improved the language skills of thousands of students, with vocabulary being the primary area of improvement. The app was regarded by students as a dependable tool for acquiring language skills. Conversely, in research conducted by Lee et al. (2016), a mobile game for language learning on the Android platform, which incorporated GPS and Google Maps, successfully enhanced students' capacity for critical thinking.

Mobile applications, as highlighted by Quinn (2011), are efficient tools capable of managing daily tasks similar to PC software. These applications offer a multitude of opportunities for language learners, providing resources to practice various linguistic aspects like pronunciation and vocabulary (Rosell-Aguilar, 2009). Moreover, students can engage in diverse speaking exercises, encompassing listening tasks, collaborative writing, multi-perspective reading, and a range of other exercises as suggested by Karasimo (2022). Interestingly, research by Karasimo indicates that the effectiveness of language learning applications rivals face-to-face teaching across different proficiency levels in the Common European Framework of Reference (CEFR).

In their 2017 study, Costa and Han examined the ways in which EFL learners' perceptions of language acquisition were impacted by using a mobile application. The results showed that students' opinions about language learning changed as a result of their favorable attitudes regarding using mobile devices and applications in the classroom. In a similar vein, Kashanizadeh and Shahrokhi (2021) concentrated on helping Iranian EFL learners with their grammar understanding by using a mobile application. The experimental group's much superior performance on the post-test, as demonstrated by the findings, demonstrated the efficacy of the grammar learning program. When Ebadi and Rahimi (2018) used the mobile learning software WebQuest, they saw gains in the critical thinking and academic writing abilities of their pupils.

In a similar vein, Yang et al. (2013) investigated the effects of incorporating Moodle, a virtual learning environment, and discovered that students' critical thinking skills were positively influenced. Moreover, Prahani et al. (2020) evaluated a mobile-based learning application available for web and Android platforms and observed an improvement in students' critical thinking abilities. Furthermore, multiple research studies have documented students' favorable responses towards the integration of mobile learning applications (Azar & Nasiri, 2014; Fujimoto, 2012; Sung et al., 2016).

In summary, students have shown positive perceptions toward using Mobile-Assisted Learning activities during class. Additionally, MALL aids students in developing language skills encompassing listening, speaking, reading, and writing.

2.6. Related Studies Conducted in the World

Interest in integrating mobile devices into language learning has primarily stemmed from students' perceptions of these tools. Since its initial publication, researchers have shown

significant interest in mobile-assisted language learning (MALL) studies, consistently aiming to contribute more comprehensive data to the existing literature through further research.

Gromik (2012) conducted a study in Japan using mobile phone video recorders as language learning tools. Over 14 weeks, participants, comprising 9 university students, used their mobile phones' video recording function for weekly 30-second English speaking exercises. The research revealed a 46% increase in word production and a 37% rise in words spoken per second. Furthermore, all students agreed that the weekly smartphone video recordings significantly improved their English-speaking proficiency.

Dashtestani (2013) investigated the opinions of Iranian English learners regarding MALL adoption. The results indicated positive attitudes among participants toward using mobile devices for language learning. However, Iranian English teachers faced several challenges in implementation due to academic restrictions on mobile phone use, small screens and keyboards on the devices, and potential slow internet connectivity without Wi-Fi or packet data.

Researchers noted that while students generally embrace the integration of mobile technology in classrooms, they are also aware of its drawbacks. Kim et al. (2013) explored the perspectives of 53 graduate students using MALL at an American institution. Although only 48% admitted to frequent smartphone usage during the day, over 90% expressed positive opinions about using mobile devices for studying. The authors suggested that limited access to mobile devices in the past and the heavy course load of postgraduate students might explain this. They proposed that increased availability of mobile devices could enhance students' engagement in language learning activities.

In their research, Zou and Yan (2014) carried out a study to explore the perspectives of Chinese learners regarding the utilization of mobile devices for English language learning. The study encompassed a sample of 101 students from 20 different Chinese universities situated in 11 cities. Following the completion of a comprehensive questionnaire, a subset of 20 students were randomly chosen for in-depth interviews. The outcomes of the study revealed that the majority of participants expressed a strong consensus in favor of the notion that Mobile-Assisted Language Learning (MALL) could effectively enhance the efficiency of learning by reducing the time required for pre-learning activities. Additionally, the participants emphasized that MALL did not induce stress and significantly contributed to the improvement of learning efficiency.

Weng and Chen (2015) discovered that students generally held positive attitudes toward using smartphone applications for target language instruction. They believed that employing a smartphone for EFL instruction offered flexibility in terms of timing and location.

In their study, Kim and Lee (2016) conducted research on the utilization of MALL by Korean students and examined the various factors that influenced its usage. The outcomes of their investigation indicated that the reliability of the content, the perceived enjoyment, usefulness, and ease of use all played significant roles in determining the students' acceptance of MALL.

Over the past years, research on various topics has surged, with a significant focus on students' perceptions and experiences with MALL. In their study, Ma (2017) investigated the attitudes of students in mainland China and Hong Kong towards the incorporation of mobile devices in language learning, both within and outside the classroom. The findings revealed that participants generally displayed favorable inclinations towards utilizing mobile devices for language learning, although the extent to which these devices were used for different language skills varied. Furthermore, a notable disparity was observed between students' perceived and actual self-regulation abilities when it came to using mobile devices for language learning, particularly in the context of speaking skills.

In 2018, Mospan conducted a study aimed at investigating the utilization of mobile applications for educational objectives. Using an online questionnaire, 102 participants from four universities in Poland and Ukraine were surveyed. The findings revealed that students extensively use mobile applications for educational purposes both inside and outside the classroom. The majority reported using mobile devices while commuting, at home, and at university. Interestingly, the study highlighted that Duolingo was the most frequently used application among all participants.

Azli et al. (2018) suggested that MALL implementation in classrooms was well-received by respondents and believed it could enhance the teaching process. They emphasized its potential for improving the effectiveness of EFL instruction. In the investigation conducted by Dehkordi (2018), comparable results were obtained, indicating that there were no significant differences in the perspectives of male and female students regarding technology-enhanced education, specifically Mobile-Assisted Language Learning (MALL), within the realm of learning English as a Foreign Language (EFL). In another study, Widian et al.

(2018) found that 10th-grade students generally favored MALL for learning English, especially those who had access to mobile technology.

Caldwell's research (2018) focused on Japanese EFL university students' perceptions of mobile learning after using mobile apps for twelve weeks. Despite some disruptions in class, students held positive attitudes toward mobile learning and appreciated the technology's ease of use. University students in Hong Kong and teenagers from Vietnam also reported positive attitudes toward utilizing technology for studying English (Pham & Lai, 2022).

In Bangladesh, Seraj et al. (2020) discovered that EFL university students showed high readiness to use smartphones due to their usability, availability, and positive attitudes. Similarly, a study involving Vietnamese higher education language learners found that attitudes toward mobile learning significantly influenced their intention to use mobile technologies (Vo, 2023).

Mutiarasari et al. (2020) investigated Indonesian learners' perceptions of using mobile applications for writing skills. The study involved 30 senior high school students where researchers collected data through a closed-ended questionnaire and used descriptive data analysis. The findings revealed several advantages of mobile apps in learning English, including ubiquitous learning, engaging in various activities, error analysis, and explanations for correct answers. Implementing mobile apps for Indonesian high school students not only increased their motivation but also facilitated their English learning process.

Wagner (2021) proposed introducing Mobile-Assisted Language Learning (MALL) through Instagram, suggesting that students could use the platform for literacy exercises and creating posts. This approach aims to provide students with creative and enjoyable digital immersion experiences outside the traditional classroom setting.

In a study conducted by Losi (2022), the focus was on investigating the perceptions of students regarding the use of Mobile-Assisted Language Learning (MALL) in the English as a Foreign Language (EFL) classroom in Indonesia. The research utilized the Altissia mobile application as a tool for language learning. Interestingly, despite the fact that a majority of students did not actively utilize or access Altissia during their learning process, the findings of the study revealed that students generally held positive perceptions towards the use of this application. It was observed that Altissia had a notable impact on improving students' listening skills and vocabulary knowledge, thus making it a valuable option for enhancing their overall EFL learning experience.

In a five-month pilot study by Luo and Watts (2022) among university students in China using smartphones for English language learning, participants appreciated smartphones' availability, facilitating personal, sociocultural, formal, and informal learning processes.

2.7. Related Studies Conducted in Türkiye

MALL has become increasingly prevalent in Turkey as technology continues to advance. Numerous research studies have highlighted the potential benefits of mobile technologies for language learning. These studies indicate that mobile-assisted learning boosts student motivation, fostering positive perceptions toward using MALL for language learning. Therefore, this section will examine studies conducted in Turkey regarding this topic.

Çavuş's (2011) study explored student perspectives on integrating mobile devices and learning management systems (LMS) in higher education. Surveying 204 undergraduates, the study found that most owned mobile devices and used them for course materials, peer communication, and online activities. Students generally favored mobile device-LMS integration, viewing it as beneficial for learning. The study highlights the importance of considering student preferences and institutional support for successful mobile learning implementation. Consequently, it is argued that students actively engage in acquiring knowledge.

One study by Ekinçi and Ekinçi (2017) involved 20 students from a preparatory class at a Turkish state university. The researchers assessed the advantages and disadvantages of specific mobile applications such as Memrise, Acobot, Voscreen, Duolingo, and English Central over 10 weeks. Students used these applications for two weeks each. The study used questionnaires and logs and found that participants had a predominantly positive view of vocabulary learning apps and held generally favorable attitudes toward each application.

In their study, Şad et al., (2022) investigated the perceptions of 1087 pre-service teachers regarding the utilization of mobile phones and laptops as tools for mobile learning. The results of the study indicated that pre-service teachers considered laptops to be more effective as mobile learning tools compared to mobile phones. The attitudes towards incorporating laptops in education were more positive in comparison to the attitudes towards using mobile phones. Furthermore, the study revealed that factors such as program/department, grade, gender, and possession of a laptop did not have a significant impact on the views of pre-service teachers regarding m-learning devices. These findings

suggest the necessity of increasing awareness and fostering positive attitudes towards m-learning among preservice teachers, particularly in relation to mobile phone-based learning.

In a separate study conducted by Oz (2015), the focus was on exploring the attitudes and beliefs of pre-service English teachers towards the use of mobile devices for language learning. The research aimed to gain an understanding of how future teachers perceived the advantages and challenges associated with integrating mobile technology into language instruction. Employing qualitative research methods such as interviews and observations, the study discovered that the majority of pre-service English teachers acknowledged the potential of mobile-assisted language learning (MALL) in enhancing language acquisition. They acknowledged the convenience, accessibility, and personalized nature of mobile devices, emphasizing their positive impact on motivation and engagement in language learning activities. Consequently, the study emphasized the importance of providing appropriate training and support to pre-service English teachers to effectively use MALL in their future classrooms, acknowledging its potential benefits while addressing implementation challenges and concerns.

Ozdamli and Uzunboyly (2015) assessed the suitability and perceptions of m-learning in secondary schools. Both students and teachers generally viewed m-learning favorably, acknowledging its potential to enhance motivation, engagement, and accessibility. However, limited resources and infrastructure posed challenges. Teacher expertise is crucial for effective m-learning implementation, and additional training is needed to enhance their confidence and competence. Overall, the study highlights the positive reception of m-learning while emphasizing the need for adequate resources and support to ensure successful implementation.

Elçiçek and Bahçeci (2017) examined the impact of a mobile LMS on university students' academic success and attitudes. Students using the mobile LMS showed higher academic achievement and more positive attitudes towards learning compared to the control group. The study suggests that mobile LMS integration can enhance learning outcomes and motivate students.

In their study, Özer and Kılıç (2018) sought to analyze the influence of the Mobile-Assisted Language Learning (MALL) environment on the academic performance, cognitive load, and adoption of mobile learning tools among students learning English as a Foreign Language (EFL). The primary aim of the research was to investigate the impact of integrating

mobile-assisted learning on the academic achievement, acceptance of mobile learning tools, and cognitive load experienced by EFL students. Through the utilization of both quantitative and qualitative data collection methods, the investigation delved into the effects of mobile learning within the context of foreign language education. The findings of the study demonstrated a noteworthy improvement in academic achievement and acceptance of mobile learning tools among students in the experimental group, in comparison to the control group. These results suggest that mobile learning tools possess the potential to exert a positive influence on language learning, motivation, and academic accomplishment.

The utilization of mobile devices, including mobile phones, PCs, PDAs, apps, and social networking platforms like Instagram, Facebook, Telegram, and Twitter, plays a significant role in mobile-assisted language learning (MALL). In a study conducted by Gonulal (2019), the focus was on exploring the role of Instagram as a learning tool in MALL. The research involved the participation of ninety-seven Instagram users, and the findings indicated that Instagram has the capability to enhance language skills, particularly in terms of vocabulary and communication. The learners displayed positive attitudes towards utilizing Instagram for informal language learning, emphasizing its effectiveness as a valuable tool in this context.

Yıldız (2020) conducted a study examining the usage of mobile language learning applications among Turkish-speaking adults. The research delved into their experiences, reasons for using or not using foreign language teaching apps, perceived effectiveness, strengths, weaknesses, and suggestions for improvement. The findings suggested that mobile language learning applications possessed the potential to address limitations present in traditional language learning methods, such as constraints related to time, space, and access to linguistic resources. Overall, the study emphasized the promise of mobile language learning apps while highlighting the necessity for further research in instructional design and learning outcomes within informal learning environments.

Tanrikulu (2021) studied the effectiveness of face-to-face and mobile-assisted peer tutoring in improving the language skills of Syrian refugees. Both methods showed positive effects, with mobile-assisted tutoring particularly helpful in boosting motivation and engagement. The study suggests that combining face-to-face interaction and mobile applications can effectively address language barriers and promote language acquisition for vulnerable populations.

Dağdeler and Demiröz (2022) conducted a study to explore teachers' perceptions as to using of MALL in the classroom. The research aimed to identify how instructors in higher education perceive the utilization of MALL. Using a qualitative research design, the study examined responses from 24 English Language Teaching (ELT) instructors in Turkey through content analysis. The findings revealed that instructors defined MALL as employing mobile technologies for language learning and expressed positive perceptions about its advantages. These included features such as flexibility for learning anytime and anywhere, heightened student engagement, increased motivation and autonomy, as well as opportunities for both individualized and collaborative learning. However, the study also highlighted several challenges, including issues with weak internet connectivity, time-consuming content preparation, difficulties in managing the classroom, and a lack of digital literacy among both students and instructors.

Türker's (2022) study explored Syrian refugees' acceptance and usage of mobile learning tools during the COVID-19 pandemic. The majority of refugees positively accepted mobile learning tools, valuing their flexibility and accessibility. The study revealed widespread use of mobile learning tools, highlighting their convenience and portability. The findings emphasize the positive role of mobile learning in supporting education for displaced individuals.

Overall, numerous research studies in Türkiye have highlighted the potential benefits of mobile-assisted language learning (MALL) in boosting student motivation, engagement, and accessibility and fostering positive perceptions towards using mobile technologies for language learning. Teachers expressed concerns about distractions and classroom control, limited resources and infrastructure posed challenges, and additional teacher training is needed for effective implementation.

Pre-service English teachers acknowledged the potential benefits of mobile-assisted language learning (MALL) in enhancing language acquisition, emphasizing the convenience, accessibility, and personalized nature of mobile devices. Providing appropriate training and support to pre-service English teachers is important for effective use of MALL in future classrooms.

Student perspectives on integrating mobile devices and learning management systems (LMS) in higher education were generally favorable, with students viewing it as beneficial for learning. Institutional support and considering student preferences are important for

successful mobile learning implementation. The integration of a mobile learning management system (LMS) in university settings showed higher academic achievement and more positive attitudes towards learning among students. Mobile LMS integration can enhance learning outcomes and motivate students.

Instructors in higher education generally have positive perceptions about the advantages of using mobile-assisted language learning (MALL) in the classroom, including flexibility, increased student engagement and motivation, and opportunities for individualized and collaborative learning. However, challenges such as weak internet connectivity, time-consuming content preparation, and a lack of digital literacy need to be addressed.

The use of mobile-assisted language learning (MALL) tools among students learning English as a Foreign Language (EFL) resulted in improved academic achievement and acceptance of mobile learning tools. Mobile learning tools have the potential to positively influence language learning, motivation, and academic accomplishment.

CHAPTER III

METHODOLOGY

In this chapter, the research methodology is presented in a different manner. It commences by providing an explanation of the research design, followed by a discussion on the participants involved in the study. To offer a clear understanding of the data collection tools, two instruments employed in the research are described. Furthermore, the data collection procedure and subsequent analysis of the data are thoroughly elucidated.

3.1. Design of the study

The research was carried out in the Turkish context of English as a Foreign Language (EFL) during the academic year of 2022-2023. The participants consisted of high school students in the 9th, 10th, and 11th grades in Yenisehir, Diyarbakir. To obtain more comprehensive results, a mixed-methods research design with a quantitative-dominant approach was employed, which involved the use of questionnaires and semi-structured interviews (Table 1). The questionnaires were administered in public high schools to gather information about the perceptions and attitudes of EFL learners towards the use of mobile applications in language learning. In addition, semi-structured interviews were conducted with students in the 9th, 10th, and 11th grades. Both quantitative and qualitative data were analyzed to examine learners' perceptions and preferences regarding the use of mobile applications for language learning.

Table 1. Research Questions and Methodology Of The Study

<i>Research Question</i>	<i>Method</i>	<i>Instrument</i>
1. What are the perceptions and attitudes of high school English as a Foreign Language (EFL) learners towards mobile phone applications	Quantitative and Qualitative	Questionnaire (Likert-type) and Semi-structured interviews
2. Do factors such as gender, age, type of school, smartphone ownership, and regular internet access have an impact on the utilization of mobile applications for language learning among high school EFL learners?	Quantitative	Questionnaire (Likert-type)

3. Which specific mobile applications do high school students utilize for language learning purposes?	Quantitative and Qualitative	Questionnaire (Likert-type) and Semi-structured interviews
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3.2. Participants of the Study

The sample of this research consists of 650 high school students from four different types of public high schools located in Yenişehir, Diyarbakir during the 2022-2023 academic year (Table 2). The high schools included in the sample are Şehit Mehmet Mecit Yalçın Anatolian High School, Rekabet Institution Science High School, Farabi Vocational And Technical Anatolian High School, Yenişehir Girl Religious Vocational Anatolian High School and Diyarbakır Religious Vocational Anatolian High School. These schools were chosen given that each type of school was located in Yenişehir. Şehit Mehmet Mecit Yalçın Anatolian High School was the school that researcher has worked since 2019. The inclusion of diverse schools offers a broader perspective on the use of mobile applications for language learning by students in each setting and it aims to provide a comprehensive understanding and broader perspective regarding using of mobile apps for language learning.

The participants are high school students aged between 15 and 17 years old, with 56.5% being female and 43.5% male participants.

Table 2. Demographic Features of Participants

		F	%
Gender	Female	367	56.5
	Male	283	43.5
Age	15	253	38.9
	16	193	29.7
	17	204	31.4
	9	253	38.9
Grade of students	10	193	29.7
	11	204	31.4
School type	Anatolian HS	150	23.1
	Science HS	152	23.4

Vocational and Technical Anatolian HS	188	28.9
Religious Vocational Anatolian HS	160	24.6

*HS: High School

Table 2 displays an examination of the distribution of participants based on their demographic characteristics. The data indicates that 56.5% of the participants are female, while 43.5% are male. Upon analyzing the age distribution, it was discovered that 38.9% of the participants were aged 15, 29.7% were aged 16, and 31.4% were aged 17. Regarding the distribution by grade level, the study determined that 38.9% were in the 9th grade, 29.7% were in the 10th grade, and 31.4% were in the 11th grade. Furthermore, the study examined the participants' school affiliations, revealing that 23.1% attended Anatolian High School, 23.4% were enrolled in Science High School, 28.9% were at Vocational and Technical Anatolian HS, and 24.6% were at Religious Vocational Anatolian HS.

The participants were selected from four different governmental high schools to ensure a diverse range of perceptions and preferences regarding the use of mobile applications. It was expected that students from each school would contribute to the diversity of the group with respect to their demographics, background, interest in learning English, and adoption mobile technologies for language learning purposes.

Furthermore, apart from the survey respondents, a group of 30 students volunteered to partake in semi-structured face-to-face interviews. These interviews aimed to gather insights into the students' attitudes, perceptions, and thoughts on the utilization of mobile applications for language learning. The semi-structured interviews consisted of a series of questions that were directly linked to the objectives of the study. Notably, the majority of volunteers were students in the 9th and 10th grades, as they exhibited a higher level of enthusiasm to engage in the interviews compared to their counterparts in the 11th grade.

3.3. Research Instruments

The utilization of two research instruments, a questionnaire and a face-to-face semi-structured interview, played a pivotal role in gathering data for this study. Further elaboration on these instruments and their relevance to the study will be presented in the subsequent sections.

3.3.1. The Questionnaire

The questionnaire comprised of two section. The first section of the questionnaire aimed to gather demographic data from the respondents, encompassing details such as gender and age. grade, type of school, smartphone ownership, regular internet access, the mobile device used by the participants, duration of internet access, and preferences of mobile applications. These variables were essential for understanding the profile of the participants.

The questionnaire's second section consisted of 31 items, formulated based on a 6-point Likert scale questionnaire adapted from Hoi's (2020) research. This section was subdivided into six primary segments: performance expectancy, effort expectancy, social influence, facilitating conditions, behavioral intention, and attitude sections. Each of these segments aimed to explore different aspects of utilizing mobile devices for language learning. The questionnaires included sample questions that were specifically crafted to gather information on the students' attitudes, performance expectancy, effort expectancy, social influence, facilitating conditions, and behavioral intention regarding the use of mobile applications (see Appendix 1). To ensure effective data collection and obtain honest responses from high school students, the Turkish version of the questionnaire was employed during the research (see Appendix 2).

Items 1 to 5 addressed performance expectancy, exploring participants' motivation and interest in utilizing mobile devices both inside and outside the classroom. Items 6 to 12 pertained to effort expectancy, specifically targeting the improvement of language skills through mobile devices in listening, speaking, reading, and writing domains. Participants' views on using mobile devices to enhance language skills could be inferred from their responses.

Items 17 to 22 covered facilitating conditions, highlighting the circumstances available to participants for using mobile devices and applications in foreign language learning. Items 23 and 26 were associated with behavioral intention, providing insights into participants' perspectives and intentions regarding the utilization of mobile devices in language learning. The last section, comprising items 27 to 31, focused on participants' attitudes towards the use of mobile devices in language learning during class.

The Statistical Package for the Social Sciences (SPSS) software (Version 21) was employed to analyze the data gathered from the questionnaire.

3.3.2. Semi-structured Face-to-Face Interview

The collection of secondary data in this study involved conducting face-to-face semi-structured interviews, which were utilized as a qualitative approach to complement the primary data collection method.

Kvale (1996) explains that interviews can be defined as a discussion between individuals on a shared topic of interest. Kvale emphasizes the importance of human interaction in generating knowledge and highlights the influence of social context on research data. In this study, semi-structured interviews were employed to explore the subject matter in greater depth and to obtain a comprehensive understanding of how the Internet is utilized for personal and professional development. Semi-structured interviews allow for flexibility, where participants can be asked additional questions or prompted to elaborate on their responses to uncover patterns and insights. Kajornboon (2005) also notes that it provides an opportunity for the researcher to rephrase questions in case of misunderstandings. Patton (2002) recommends this interview approach to foster a conversational atmosphere within a specific subject area, enabling spontaneous formulation of questions while maintaining focus on predetermined topics.

The interviews involved posing sample questions (see Appendix 3), which were designed to gather the students' perceptions, attitudes, and ideas regarding the use of mobile applications for language learning. While some questions aimed to collect general information about the respondents, the interviews delved deeper into the participants' intentions, particularly concerning the use of mobile applications for learning English. Turkish versions of semi-structured interview questions (refer to Appendix 4) were utilized to collect data from high school students, with the aim of gaining a better understanding of participants' perceptions and attitudes toward the entire process. Students' responses were recorded, translated into English, and investigated using the thematic analysis. The overarching objective of the interviews was to explore and evaluate the students' perspectives, ideas, attitudes, and intentions regarding the utilization of mobile applications for language learning.

3.4. Data Collection Procedure

The current research employs a mixed-method approach to investigate students' perceptions and attitudes towards the use of mobile applications in language learning. The study utilizes both a questionnaire and face-to-face interviews to collect data. The

questionnaire serves as a quantitative method, while the semi-structured face-to-face interviews provide qualitative insights.

Data collection took place during the 2022-2023 academic year, following the necessary permissions obtained from the district office of the Ministry of National Education (MoNE). A total of 650 questionnaires were distributed to participants who willingly volunteered from Anatolian High School, Science High School, Vocational and Technical High School, and Religious Vocational Anatolian High School. Initially, the questionnaires were administered to the participants, and the final question inquired about their willingness to participate in a face-to-face interview on Mobile-Assisted Language Learning. This question helped identify students who were interested in taking part in the interviews. Subsequently, the volunteer participants from the four different types of schools were contacted via telephone to obtain their consent and arrange the face-to-face interviews.

After distributing questionnaires, a series of semi-structured face-to-face interviews were carried out with willing participants who were enrolled in different educational institutions.

In the subsequent phase of data collection, a group of 30 students voluntarily participated in the semi-structured face-to-face interviews. This group consisted of 9 students from Anatolian High School(ŞMMYAHS), 5 students from Vocational and Technical Anatolian High School(FVTAHS), 11 students from Religious Vocational Anatolian High School(YGRVAHS and DRVAHS), and 5 students from Science High School(RISHS). The interviews were scheduled during the participants' break time and were conducted in a suitable setting such as a quiet classroom or the vice-principal's office.

At the beginning of each interview, the interviewer introduced herself and explained the objectives of the research in general, as well as the specific content of the interview. Verbal consent for recording the semi-structured interviews was obtained from the interviewees prior to the start of the interviews. The interviews were recorded using a smartphone with a recording function. Each interview lasted between 10 to 15 minutes and was later transcribed. The researcher also took handwritten notes throughout the interviews.

3.5. Data Analysis

The SPSS program (Version 21.0 for Windows) was used to analyze the quantitative data obtained through questionnaires. This involved computing means, standard deviations,

percentages, and frequency rates to describe the participants' demographic characteristics, smartphone ownership, regular internet access, and preferences for using mobile applications.

In this research, two main tests were utilized: the independent samples t-test and the one-way ANOVA test. The t-test was used to analyze the relationship between the questionnaire items and variables such as smartphone ownership, regular internet access, and gender. The t-test helps determine if there is a significant association between the questionnaire items and the mentioned variables. On the other hand, the one-way ANOVA test was employed to identify significant differences in the results for the questionnaire items related to school types, age, grades of participants, and preferences for using mobile apps for language learning. The one-way ANOVA test is used to compare means across different groups and determine if there are any significant differences. Both the t-test and one-way ANOVA test are statistical methods used to analyze data and draw conclusions about relationships and differences between variables.

In summary, the t-test was used to examine the relationship between questionnaire items and variables like smartphone ownership, regular internet access, and gender. The one-way ANOVA test, on the other hand, was used to identify significant differences in the results based on school types, age, grades, and preferences for using mobile apps for language learning. These statistical tests help analyze data and provide insights into the relationships and differences between the variables being studied.

As for the qualitative data collected through interviews, qualitative thematic analysis procedures were conducted. The interviews were conducted in Turkish and later translated into English by the researcher. The transcriptions were reviewed by another experienced English teacher to ensure accuracy. The interviewees' responses were then categorized based on similar themes and statements, specifically focusing on preferences for using mobile applications in language learning. This approach allowed for a logical and clear presentation of the qualitative data.

CHAPTER IV

FINDINGS

This section provides an overview of the data analysis results. The research involved a comprehensive investigation that incorporated both quantitative and qualitative data collected through surveys and interviews. The quantitative data was obtained through surveys and analyzed using SPSS 21.0 software to generate statistical information reflecting the survey outcomes. Specifically, a total of 650 high school students participated in the surveys, while 30 students were interviewed, addressing 9 questions related to Mobile-Assisted Language Learning (MALL). The subsequent section presents the findings obtained from these data sources.

4.1. Questionnaire Findings

The primary focus of this study is to explore the perceptions and engagement of high school students with language-learning mobile applications. It aims to examine their perspectives, attitudes, preferences, and motivations. The first research question investigates how various factors such as gender, age, school type, smartphone ownership, and consistent internet access influence the utilization of language-learning mobile apps among high school students studying English as a Foreign Language (EFL).

Table 3. Characteristics of the participants in terms of smartphone ownership, regular internet access and preferences for using mobile apps.

		F	%
Ownership of smartphone	Yes	398	61.2
	No	252	38.8
Regular internet access	Yes	455	70.0
	No	195	30.0
Mobile app use for language learning	Yes	198	30.5
	No	452	69.5

Table 3 demonstrates characteristics of the participants in terms of smartphone ownership, regular internet access and preferences for using mobile apps. The analysis of mobile phone ownership revealed that 61.2% of participants owned a mobile device, and interestingly, 70% of participants consistently accessed the Internet. Furthermore, the study explored the use of mobile applications for language learning purposes and found that 30.5% of participants utilized these applications for educational purposes.

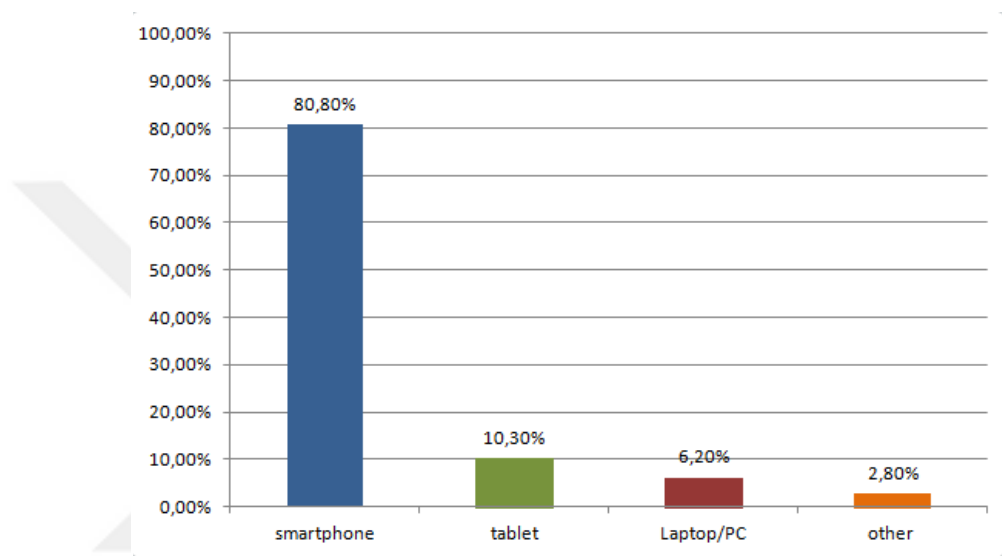


Figure 1. Mobile Devices of Internet Access of the Participants

The analysis of the methods through which individuals connect to the internet reveals a clear pattern: a significant majority of 80% prefer to use mobile phones as their primary device, followed by 10% who rely on tablets. A smaller percentage of 6% opt for laptops and computers, while a mere 3% choose alternative methods to access the internet.

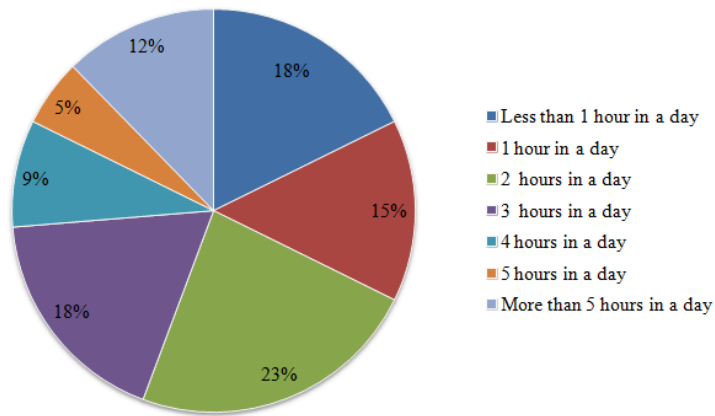


Figure 2. Duration of Connecting to the Internet

Figure 2 illustrates the distribution of participants based on their internet connection duration. Approximately 18% of participants access the internet for less than 1 hour daily, 15% for 1 hour, 23% for 2 hours, and another 18% for 3 hours. Notably, 12% of participants are connected for over 5 hours daily.

This study explores high school students' perceptions and preferences through the UTAUT model. The Unified Theory of Acceptance and Use of Technology (UTAUT), introduced by Venkatesh et al. (2003), combines eight acceptance models into a comprehensive framework. The model comprises six key components that directly impact user acceptance and behavior: Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Behavioral Intention, and Attitude.

Table 4. Descriptive Statistics on UTAUT Points

	<i>n</i>	<i>M</i>	<i>SD</i>
Performance expectancy	650	21.33	5.69
Effort expectancy	650	29.32	6.80
Social influence	650	14.52	4.58
Facilitating conditions	650	24.90	7.37
Behavioral intention	650	15.66	5.14
Attitude	650	21.40	6.17
Unified Theory of Acceptance and Use of Technology (UTAUT)	650	127.14	27.82

When the distribution of the scores of the "Unified Theory of Acceptance and Use of Technology" scale is examined, it is seen that The mean performance expectancy score of the participants was 21.33, the mean effort expectancy score was 29.32 and the mean social influence score was 14.52. In addition, the mean facilitating score was 24.90, the mean behavioral intention score was 15.66 and the mean attitude score was 21.40. It was concluded that the mean UTAUT score of the participants was 127.14. These scores show that the participants' attitudes towards using mobile applications are realized at a high level.

Table 5.Responses of the Participants Regarding Their "Performance expectancy" Scores

Performance expectancy	<i>n</i>	<i>M</i>	<i>SD</i>
1. Using mobile devices helps maintain and enhance my motivation and interest in language learning	650	3.75	1.59
2. Using mobile devices can enhance the language learning environment and experience.	650	4.42	1.37
3. Using mobile devices can improve my language learning performance in class	650	4.44	1.43
4. Using mobile devices can improve the effectiveness of language learning outside the class	650	4.36	1.41
5. I find it useful to use mobile devices for language learning.	650	4.36	1.47

The responses of the participants regarding the "Performance expectancy" scores are analyzed in Table 5. Accordingly, the highest mean score was recorded for Item 3, stating, "Using mobile devices can improve my language learning performance in class" ($M=4.44$). Conversely, the lowest mean score was attributed to Item 1, indicating, "Using mobile devices helps maintain and enhance my motivation and interest in language learning" ($M=3.75$). These findings indicate that participants' responses to performance expectation statements exhibit a high level of inclination. It suggests that students are enthusiastic about leveraging mobile tools for foreign language learning, seeking motivation, enriching language learning experiences, enhancing performance, and utilizing mobile tools effectively within language learning contexts.

Table 6.Responses of the Participants Regarding Their "Effort Expectancy" Scores

Effort expectancy	<i>n</i>	<i>M</i>	<i>SD</i>
6. Using mobile devices to learn a foreign language is easy for me.	650	4.09	1.54
7. I find it convenient to use mobile devices for listening practice.	650	4.28	1.54
8. I find it convenient to use mobile devices for speaking practice	650	4.14	1.57
9. I find it convenient to use mobile devices for reading practice.	650	4.10	1.60
10. I find it convenient to use mobile devices for writing practice	650	3.71	1.64
11. It is easy for me to find and use mobile apps for learning a foreign language	650	4.15	1.57
12. It is easy for me to learn to use a mobile device	650	4.85	1.50

The responses of the participants regarding the "Effort expectancy" scores are analyzed in Table 6. The highest mean score was identified in Item 12, stating, "It is easy for me to learn to use a mobile device" ($M=4.85$). Conversely, the lowest mean score was associated with Item 10, which addressed using mobile devices for writing practice ($M=3.71$). Upon considering the average scores of expressions regarding effort expectancy, the findings suggest that students adeptly acquire the skills to use mobile tools for learning foreign languages.

Table 7.Responses of the Participants Regarding Their "Social influence" Scores

Social influence	<i>n</i>	<i>M</i>	<i>SD</i>
13. People who are influential to me believe that I should use mobile devices for language learning.	650	3.29	1.61
14. People who are important to me believe that I should use mobile devices for language learning.	650	3.40	1.61
15. I use mobile devices for language learning if my instructors support and recommend it.	650	4.55	1.49
16. My friends' recommendation influences my decision to use mobile devices for language learning.	650	3.28	1.63

The responses of the participants regarding the "Social influence" scores are analyzed in Table 7. A moderate level of participation is evident in students' responses to statements

regarding the social impact sub-dimension. Item 15, "I use mobile devices for language learning if my instructors support and recommend it," achieved the highest mean score ($M=4.55$). Conversely, item 16 garnered the lowest mean score ($M=3.28$). These findings highlight the social implications of using mobile devices in language learning. They underscore students' belief in the effectiveness and significance of mobile tools in acquiring foreign languages. Moreover, students often receive recommendations from peers to utilize mobile tools for language learning. Furthermore, students highly appreciate the support they receive from their instructors in using mobile devices for language learning purposes.

Table 8. Responses of the Participants Regarding Their "Facilitating conditions" Scores

<i>Facilitating conditions</i>	<i>n</i>	<i>M</i>	<i>SD</i>
17. I have easy access to a mobile device.	650	4.39	1.74
18. I can have easy and regular access to internet, via Wi-Fi or mobile data, on my mobile devices.	650	4.43	1.78
19. I can have access to many mobile apps to learn foreign languages on my mobile devices	650	3.84	1.71
20. I have the required knowledge and skills to use mobile devices for language learning.	650	4.30	1.59
21. I can get technical support if I have problems learning foreign languages on mobile devices.	650	3.84	1.59
22. I know a convenient place where I can get access to Wi-Fi for language learning on mobile devices.	650	4.11	1.87

The analysis in Table 8 reveals participants' responses regarding "Facilitating conditions" scores. Notably, the highest mean score was achieved in Item 18, stating, "I can have easy and regular access to the internet, via Wi-Fi or mobile data, on my mobile devices" ($M=4.43$). Conversely, both item 21, addressing technical support for language learning issues on mobile devices, and item 19, regarding access to various language-learning mobile apps, obtained the lowest mean scores ($M=3.84$ for item 21 and also the lowest for item 19). These outcomes underscore the significance of internet access for language learning via mobile devices. However, they also point out a notable gap in technical support provision and access to diverse language-learning applications on mobile devices, indicating areas that may require improvement or attention to enhance the learning experience.

Upon examining students' perspectives on facilitating conditions in foreign language learning, they highlighted the advantages, particularly in terms of easy accessibility to mobile devices and access facilitated through tools like the internet or mobile data. However, students also acknowledged encountering occasional technical difficulties while using mobile devices, including login issues. In a broader context, the findings suggest that students generally possess convenient access to mobile tools and perceive them as effective aids in foreign language learning, despite occasional technical hindrances.

Table 9.Responses of the Participants Regarding Their "Behavioral Intention" Scores

<i>Behavioral intention</i>	<i>n</i>	<i>M</i>	<i>SD</i>
23. I intend to use/continue to use mobile devices for language learning.	650	3.80	1.64
24. I guess I would use mobile devices to learn foreign languages more regularly in the future.	650	4.21	1.61
25. I have a plan to use mobile devices to learn foreign languages more regularly.	650	3.90	1.62
26. I will recommend my friends to use mobile devices to learn foreign languages.	650	3.75	1.62

In Table 9, the analysis of participants' responses regarding "Behavioral Intention" scores is outlined. Notably, item 24, stating, "I guess I would use mobile devices to learn foreign languages more regularly in the future," achieved the highest mean score ($M=4.21$). Conversely, Item 26, focusing on recommending mobile devices for language learning to friends, obtained the lowest mean score ($M=3.75$). These findings suggest a generally moderate level of engagement among students in terms of their behavioral willingness. Students express readiness to utilize mobile tools for language learning themselves, indicating a willingness to incorporate these tools into their future language learning experiences. However, the readiness to recommend these tools to friends appears slightly lower in comparison. Overall, students demonstrate a willingness to engage with mobile tools in language learning and are inclined toward planning their usage with friends.

The first research question aimed to understand the perceptions and attitudes of high school English as a Foreign Language (EFL) learners towards mobile phone applications.

Table 10.Responses ofThe Participants Regarding Their "Attitude" Scores

<i>Attitude</i>	<i>n</i>	<i>M</i>	<i>SD</i>
27.Using mobile devices to learn a foreign language is a good idea.	650	4.31	1.51
28. I would like to use mobile devices to learn foreign languages	650	4.12	1.60
29. Using mobile devices to learn a foreign language is fun.	650	4.28	1.59
30. Using mobile devices for language learning in the classroom is a good idea	650	4.31	1.59
31.Using mobile devices for language learning outside the classroom is a good idea.	649	4.40	1.58

In Table 10, item 31, which expresses the idea that *"Using mobile devices for language learning outside the classroom is a good idea,"* achieved the highest mean score ($M=4.40$). However, item 28, stating *"I would like to use mobile devices to learn foreign languages,"* received the lowest mean score ($M=4.12$). Overall, the table indicates students' enthusiasm for using mobile devices beyond the classroom, yet it also reveals their varied usage purposes.

Table 11.Comparison of Students'UTAUT Scores according to Gender Variable

	<i>Gender</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>Sig.</i>
Performance expectancy	Female	367	21.79	5.24	2.37	648	0.01
	Male	283	20.72	6.18			
Effort expectancy	Female	367	29.55	6.28	1.01	648	0.31
	Male	283	29.01	7.42			
Social influence	Female	367	14.79	4.35	1.74	648	0.08
	Male	283	14.16	4.86			
Facilitating conditions	Female	367	24.88	7.36	0.08	648	0.93
	Male	283	24.93	7.40			
Behavioral intention	Female	367	16.13	4.94	2.63	648	0.00
	Male	283	15.06	5.34			
Attitude	Female	366	22.22	5.66	3.85	647	0.00

	Male	283	20.35	6.64			
	Female	366	129.36	26.49			
UTAUT					2.32	647	0.02
	Male	283	124.26	29.25			

The Unified Theory of Acceptance and Use of Technology (UTAUT) scores of the students according to the gender variable were analyzed with the independent sample *t*-test (Table 11).Based on the analysis conducted, it was concluded that there were no notable differences in the scores for Effort expectancy ($t = 1.01$, $p > .05$), Social influence($t = 1.74$, $p > .05$), and Facilitating conditions($t = 0.08$, $p > .05$) Conversely, it was found that there was a significant differences in the scores for Performance expectancy($t = 2.37$, $p < .05$), Behavioral intention($t = 2.63$, $p < .05$), Attitude ($t = 3.85$, $p < .05$), and the overall UTAUT scale scores ($t = 2.32$, $p < .05$).

Upon examining the mean scores, it is evident that women tend to exhibit higher "Unified Theory of Acceptance and Use of Technology (UTAUT)" scores compared to men. Specifically, women showcase higher scores in Performance Expectancy, Behavioral Intention, Attitude, and the overall UTAUT scores. This implies that, on average, women display a greater inclination towards technology utilization concerning performance expectations, behavioral tendencies, attitude, and overall technological adoption compared to men. One of the research questions investigated whether factors like gender, age, type of school, smartphone ownership, and regular internet access impacted the utilization of mobile applications for language learning among high school EFL learners.

Table 12.Comparison of Students' UTAUT Scores According to Age Variable

	Age	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>Sig.</i>
	15	253	21.41	5.75			
	16	193	22.04	5.61			
Performance expectancy	17	204	20.55	5.61	2	3.42	0.03
	Total	650	21.33	5.69			
	15	253	28.99	6.54			
	16	193	30.09	7.02			
Effort expectancy	17	204	28.99	6.88	2	1.79	0.16
	Total	650	29.32	6.80			

	15	253	14.54	4.51			
Social influence	16	193	15.07	4.63	2	2.96	0.05
	17	204	13.96	4.59			
	Total	650	14.52	4.58			
	15	253	24.18	7.07			
Facilitating conditions	16	193	25.91	7.26	2	3.03	0.04
	17	204	24.85	7.76			
	Total	650	24.90	7.37			
	15	253	15.55	5.02			
Behavioral intention	16	193	16.19	5.29	2	1.60	0.20
	17	204	15.29	5.12			
	Total	650	15.66	5.14			
	15	252	21.03	6.27			
Attitude	16	193	22.15	6.07	2	2.00	0.13
	17	204	21.17	6.12			
	Total	649	21.40	6.17			
	15	252	125.67	26.97			
UTAUT	16	193	131.47	28.09	2	3.41	0.03
	17	204	124.84	28.27			
	Total	650	127.14	27.82			

The analysis conducted via the ANOVA test on the "Unified Theory of Acceptance and Use of Technology (UTAUT)" scores across different age groups revealed no significant difference in Effort Expectancy, Behavioral Intention, and Attitude scores ($p > .05$) (see Table 12). However, a significant difference was observed in Performance Expectancy, Social Influence, Facilitating Conditions, and the overall UTAUT scores ($p \leq .05$).

Further examination using the Tukey test for intra-group comparisons highlighted that students aged 16 exhibit higher levels of Performance Expectancy, Facilitating Conditions, and total UTAUT scores compared to both 15-year-old and 17-year-old students. This suggests that, on average, 16-year-old students demonstrate a more positive outlook toward performance expectations, find more facilitating conditions, and showcase higher overall UTAUT scores compared to their peers aged 15 and 17.

Table 13.Comparison of Students' UTAUT Scores According To Class Variable

	<i>Class</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>Sig.</i>
Performance expectancy	9	253	21.41	5.75	2	3.42	0.03
	10	193	22.04	5.61			
	11	204	20.55	5.61			
	Total	650	21.33	5.69			
Effort expectancy	9	253	28.99	6.54	2	1.79	0.16
	10	193	30.09	7.02			
	11	204	28.99	6.88			
	Total	650	29.32	6.80			
Social influence	9	253	14.54	4.51	2	2.96	0.05
	10	193	15.07	4.63			
	11	204	13.96	4.59			
	Total	650	14.52	4.58			
Facilitating conditions	9	253	24.18	7.07	2	3.03	0.04
	10	193	25.91	7.26			
	11	204	24.85	7.76			
	Total	650	24.90	7.37			
Behavioral intention	9	253	15.55	5.02	2	1.60	0.20
	10	193	16.19	5.29			
	11	204	15.29	5.12			
	Total	650	15.66	5.14			
Attitude	9	253	21.03	6.27	2	2.00	0.13
	10	193	22.15	6.07			
	11	204	21.17	6.12			
	Total	650	21.40	6.17			
UTAUT	9	253	125.67	26.97	2	3.41	0.03
	10	193	131.47	28.09			

11	204	124.84	28.27
Total	650	127.14	27.82

The "Unified Theory of Acceptance and Use of Technology (UTAUT)" scores of the students according to the grade level variable were compared with the ANOVA test (Table 13). The results revealed no significant difference in Effort Expectancy, Behavioral Intention, and Attitude scores ($p > .05$). However, a significant difference was found concerning Performance Expectancy, Social Influence, Facilitating Conditions, and the overall UTAUT scores ($p \leq .05$).

Subsequent intra-group comparisons using the Tukey test indicated that students in the 10th grade exhibited higher levels of Performance Expectancy, Facilitating Conditions, and overall UTAUT scores compared to students in other grade levels. This suggests that, on average, 10th-grade students possess a more optimistic perspective regarding performance expectations, encounter more facilitating conditions, and demonstrate higher overall UTAUT scores compared to their peers in different grade levels.

Table 14. Comparison of Students' UTAUT Scores According To School Type Variable

	<i>School type</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>Sig.</i>
Performance expectancy	Anatolian HS	150	21.79	5.99	3	2.71	0.04
	Science HS	152	22.09	4.65			
	Vocational HS	188	20.47	5.71			
	Religious Voc. HS	160	21.18	6.16			
	Total	650	21.33	5.69			
Effort expectancy	Anatolian HS	150	30.68	6.70	3	3.96	0.00
	Science HS	152	29.65	5.92			
	Vocational HS	188	28.98	6.91			
	Religious Voc.HS	160	28.12	7.35			
	Total	650	29.32	6.80			
Social influence	Anatolian HS	150	14.96	4.85	3	1.65	0.17
	Science HS	152	14.67	4.11			

	Vocational HS	188	14.59	4.73			
	Religious Voc. HS	160	13.86	4.55			
	Total	650	14.52	4.58			
	Anatolian HS	150	26.05	7.00			
	Science HS	152	28.05	6.15			
Facilitating conditions	Vocational HS	188	23.57	7.44	3	20.23	0.00
	Religious Voc. HS	160	22.40	7.47			
	Total	650	24.90	7.37			
	Anatolian HS	150	16.14	5.30			
	Science HS	152	15.82	4.61			
Behavioral intention	Vocational HS	188	15.34	5.37	3	0.80	0.49
	Religious Voc.HS	160	15.45	5.19			
	Total	650	15.66	5.14			
	Anatolian HS	149	22.27	6.17			
	Science HS	152	20.94	5.49			
Attitude	Vocational HS	188	21.40	6.30	3	1.44	0.22
	Religious Voc. HS	160	21.04	6.59			
	Total	650	21.40	6.17			
	Anatolian HS	149	131.86	28.34			
	Science HS	152	131.24	23.47			
UTAUT	Vocational HS	188	124.39	28.05	3	5.00	0.00
	Religious Voc. HS	160	122.06	29.77			
	Total	650	127.14	27.82			

The UTAUT scores of the students according to the school type variable were analyzed with the ANOVA test (Table 14). The results unveiled no significant difference in Social Influence, Behavioral Intention, and Attitude scores. However, it revealed a significant difference in Performance Expectancy, Effort Expectancy, Facilitating Conditions, and the overall UTAUT scores.

Further examination using the Tukey test for intra-group comparisons highlighted that students studying at Science High School exhibited higher levels of Performance Expectancy ($M=22.09$) compared to students at Vocational High School ($M=20.47$). Additionally, Anatolian High School students displayed higher Effort Expectancy scores ($M=30.68$) than Religious Vocational High School students ($M=28.12$). Moreover, Anatolian High School and Science High School students demonstrated higher scores in Facilitating Conditions, with Anatolian High School ($M=26.05$) and Science High School ($M=22.40$) students scoring higher than others in terms of the total UTAUT scores. This suggests that students from Anatolian High School and Science High School perceive greater facilitative conditions and demonstrate higher overall UTAUT scores compared to students from other school types in this study.

Table 15. Comparison of Students' UTAUT Scores According to Ownership of Smartphone Variable

	Ownership of smartphone	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>Sig.</i>
Performance expectancy	Yes	398	21.63	5.53	1.73	648	0.08
	No	252	20.84	5.91			
Effort expectancy	Yes	398	29.82	6.57	2.38	648	0.01
	No	252	28.52	7.09			
Social influence	Yes	398	14.72	4.45	1.42	648	0.15
	No	252	14.19	4.78			
Facilitating conditions	Yes	398	26.35	6.81	6.46	648	0.00
	No	252	22.62	7.66			
Behavioral intention	Yes	398	15.71	5.07	0.31	648	0.75
	No	252	15.58	5.25			
Attitude	Yes	398	21.26	6.29	-0.75	647	0.44
	No	251	21.64	5.99			
UTAUT	Yes	398	129.52	27.07	2.75	647	0.00
	No	251	123.36	28.61			

The UTAUT scores according to the variable of having a smartphone of the students were analyzed with the independent sample *t*-test (Table 15). The analysis revealed no significant difference in Performance Expectancy, Social Influence, Behavioral Intention, and Attitude scores ($p > .05$). However, a significant difference was found concerning Effort Expectancy, Facilitating Conditions, and the overall UTAUT scores ($p \leq .05$). It became evident that participants who owned a smartphone displayed higher UTAUT scores ($M=129.52$) compared to those who did not own a smartphone ($M=123.36$). This suggests that individuals owning a smartphone exhibit higher levels of perceived ease of use, favorable facilitating conditions, and overall UTAUT scores in embracing and using technology compared to those without smartphone ownership.

Table 16. Comparison of Students' UTAUT Scores According to Regular Internet Access Variable

	<i>Regular internet access</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>Sig.</i>
Performance expectancy	Yes	455	21.83	5.25	3.49	648	0.000
	No	195	20.14	6.47			
Effort expectancy	Yes	455	30.27	6.55	5.60	648	0.001
	No	195	27.08	6.87			
Social influence	Yes	455	14.89	4.37	3.23	648	0.001
	No	195	13.63	4.96			
Facilitating conditions	Yes	455	27.41	6.05	15.52	648	0.000
	No	195	19.04	6.84			
Behavioral intention	Yes	455	16.00	4.89	2.60	648	0.009
	No	195	14.86	5.60			
Attitude	Yes	454	21.91	5.74	3.22	647	0.001
	No	195	20.22	6.96			
UTAUT	Yes	454	132.35	25.63	7.59	647	0.000
	No	195	115.01	28.98			

The Unified Theory of Acceptance and Use of Technology (UTAUT) scores of the students participating in the research were analyzed with the independent sample t-test, according to the variable of regular internet access (Table 16). The analysis revealed a significant difference in scores ($p \leq .05$). The results indicated that students who regularly access the internet showcase higher scores across all facets: Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Behavioral Intention, Attitude, and overall UTAUT scores ($M=132.35$). In contrast, those who do not regularly use the internet display comparatively lower scores ($M=115.01$). This discrepancy suggests that students who engage with the internet regularly exhibit heightened perceptions and proficiency levels concerning technology utilization in language learning. Regular internet access appears to positively correlate with enhanced perceptions and adaptability to technology when it comes to language learning.

Table 17. Comparison of Students' UTAUT Scores According to Type of Internet Access Variable

	<i>Type of internet access</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>Sig.</i>
Performance expectancy	Tablet	67	20,9	5.70	3	0.17	0.91
	Smartphone	525	21,4	5.67			
	Laptop/PC	40	21,3	5.57			
	Other	18	21,8	6.73			
	Total	650	21,3	5.69			
Effort expectancy	Tablet	67	28,4	6.66	3	0.59	0.61
	Smartphone	525	29,5	6.76			
	Laptop/PC	40	29,2	6.55			
	Other	18	28,4	9.02			
	Total	650	29,3	6.80			
Social influence	Tablet	67	14,1	4.55	3	0.70	0.54
	Smartphone	525	14,6	4.61			
	Laptop/PC	40	14,9	4.07			
	other	18	13,4	5.20			
	Total	650	14,5	4.58			
Facilitating conditions	Tablet	67	23.41	7.16	3	9.34	0.00
	Smartphone	525	25.07	7.31			
	Laptop/PC	40	28.30	6.19			

	Other	18	18.05	7.22			
	Total	650	24.90	7.37			
	Tablet	67	15.77	5.18			
	Smartphone	525	15.63	5.11			
Behavioral intention	Laptop/PC	40	15.55	5.20	3	0.20	0.89
	Other	18	16.55	6.03			
	Total	650	15.66	5.14			
	Tablet	67	21.79	5.30			
	Smartphone	524	21.26	6.27			
Attitude	Laptop/PC	40	21.70	6.27	3	0.97	0.40
	Other	18	23.61	6.03			
	Total	650	21.40	6.17			
	Tablet	67	124.37	27.09			
	Smartphone	524	127.38	28.04			
UTAUT	Laptop/PC	40	130.90	26.37	3	0.69	0.55
	Other	18	121.88	27.95			
	Total	650	127.14	27.82			

In the study, the Unified Theory of Acceptance and Use of Technology (UTAUT) scores of the students were analyzed by ANOVA according to the type of internet access (Table 17). The analysis revealed no significant differences in Performance Expectancy, Effort Expectancy, Social Influence, Attitude, and overall UTAUT scores ($p > .05$). However, a significant difference was found in the Facilitating Conditions scores ($p \leq .05$). Further examination using the Tukey test highlighted that students using Laptop/PC exhibited higher levels of Facilitating Conditions ($M=28.30$) compared to those using tablets ($M=23.41$). This suggests that, among the variables analyzed, the type of device used—specifically, Laptop/PC versus tablets—significantly impacts the perceived facilitating conditions for technology utilization. Students using Laptop/PC seem to perceive a more conducive environment or circumstances for effective technology adoption compared to their counterparts using tablets.

Table 18. *Comparison of Students' UTAUT Scores According to Time of Internet Access Variable*

	<i>Time of internet access</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>df</i>	<i>F</i>	<i>Sig.</i>
Performance expectancy	Less than 1 hour a day	115	20.58	6.46	6	0.82	0.55
	1 hour a day	95	21.30	5.21			

	2 hours a day	152	21.03	6.02			
	3 hours a day	117	21.58	5.61			
	4 hours a day	56	21.66	4.66			
	5 hours a day	35	22.45	4.91			
	More than 5 hours a day	80	21.88	5.50			
	Total	650	21.33	5.69			
	Less than 1 hour a day	115	27.02	7.34			
	1 hour a day	95	28.36	7.54			
	2 hours a day	152	29.15	5.67			
Effort expectancy	3 hours a day	117	30.32	7.03	6	4.63	0.00
	4 hours a day	56	30.57	5.96			
	5 hours a day	35	30.31	6.24			
	More than 5 hours a day	80	31.28	6.58			
	Total	650	29.32	6.80			
	Less than 1 hour a day	115	13.67	5.23			
	1 hour a day	95	14.49	4.52			
	2 hours a day	152	14.50	4.37			
Social influence	3 hours a day	117	14.99	4.21	6	1.59	0.14
	4 hours a day	56	13.85	4.23			
	5 hours a day	35	14.88	4.44			
	More than 5 hours a day	80	15.41	4.77			
	Total	650	14.52	4.58			
	Less than 1 hour a day	115	19.38	7.80			
	1 hour a day	95	24.43	6.85			
	2 hours a day	152	24.88	6.86			
Facilitating conditions	3 hours a day	117	26.70	6.49	6	18.81	0.00
	4 hours a day	56	27.51	6.14			
	5 hours a day	35	26.74	6.43			
	More than 5 hours a day	80	28.20	6.33			
	Total	650	24.90	7.37			
	Less than 1 hour a day	115	15.38	5.52			
	1 hour a day	95	15.74	4.82			
	2 hours a day	152	15.31	5.13			
Behavioral intention	3 hours a day	117	15.88	5.08	6	0.66	0.67
	4 hours a day	56	15.16	4.74			
	5 hours a day	35	16.25	4.91			
	More than 5 hours a day	80	16.42	5.47			
	Total	650	15.66	5.14			

Attitude	Less than 1 hour a day	115	20.44	6.88	6	1.18	0.31
	1 hour a day	95	21.51	5.79			
	2 hours a day	151	21.24	6.20			
	3 hours a day	117	21.81	5.97			
	4 hours a day	56	21.05	5.69			
	5 hours a day	35	23.22	5.20			
	More than 5 hours a day	80	21.85	6.44			
	Total	650	21.40	6.17			
UTAUT	Less than 1 hour a day	115	116.49	30.41	6	5	0.00
	1 hour a day	95	125.86	27.60			
	2 hours a day	151	126.07	27.03			
	3 hours a day	117	131.29	26.59			
	4 hours a day	56	129.82	22.88			
	5 hours a day	35	133.88	21.11			
	More than 5 hours a day	80	135.06	29.03			
	Total	650	127.14	27.82			

The scores of the students from the "Unified Theory of Acceptance and Use of Technology (UTAUT)" scale were analyzed with the ANOVA test (Table 18). The analysis revealed no significant differences in Performance Expectancy, Social Influence, Behavioral Intention, and Attitude scores ($p > .05$). However, significant differences were found in Effort Expectancy, Facilitating Conditions, and the overall UTAUT scores ($p \leq .05$).

Further examination via the Tukey test highlighted that participants who spend 4 hours or more daily on the internet exhibited higher Effort Expectancy scores compared to those using it for less than 1 hour. Additionally, students spending more than 5 hours daily on the internet showed higher scores in Facilitating Conditions compared to those spending less than 1 hour. In terms of the UTAUT scores, participants with a longer daily internet usage time displayed higher overall UTAUT scores ($M=135.06$ for more than 5 hours) compared to those with less usage ($M=116.49$ for less than 1 hour). This suggests that increased daily internet usage correlates with heightened perceptions of effort expectancy, facilitating conditions, and overall acceptance and use of technology among the participants.

Table 19.Examination of the Relationships Between the Scores of the Students from the UTAUT Scale

		<i>Effort expectancy</i>	<i>Social influence</i>	<i>Facilitating conditions</i>	<i>Behavioral intention</i>	<i>Attitude</i>
Performance expectancy	Pearson Correlation	.57**	.50**	.40**	.63**	.67**
	Sig. (2- tailed)	0	0	0	0	0
	N	650	650	650	650	649
Effort expectancy	Pearson Correlation	1	.46**	.54**	.52**	.58**
	Sig. (2- tailed)		0	0	0	0
	N		650	650	650	649
Social influence	Pearson Correlation		1	.38**	.55**	.51**
	Sig. (2- tailed)			0	0	0
	N			650	650	649
Facilitating conditions	Pearson Correlation			1	.41**	.39**
	Sig. (2- tailed)				0	0
	N				650	649
Behavioral intention	Pearson Correlation				1	.73**
	Sig. (2- tailed)					0
	N					650

Relationships between students' UTAUT scores were examined by the Pearson correlation analysis (Table 19). The analysis aimed to measure the strength of the linear relationship between two types of variables: dependent and independent variables. In this study, Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Behavioral Intention, and Attitude served as the dependent variables, while time of internet access acted as the independent variable. Therefore, Pearson correlation was employed to measure the relationship between these dependent and independent variables.

The analysis uncovered moderately positive and significant relationships among the UTAUT scores, with correlation values ranging between .39 and .68. These findings indicate a moderate relationship among the variables, as a Pearson correlation coefficient of 0.4-0.7 is typically considered a moderate positive correlation. For average distinctions among groups, *d* values around .40 are categorized as small, .70 as medium, and 1.00 as large (Plonsky & Oswald, 2014). The positive correlation signifies that the sub-dimensions of the scale are mutually supportive, suggesting that improvements in one aspect might positively influence others. Specifically, a linear relationship was identified between Effort Expectancy scores and Social Influence, Facilitating Conditions, Behavioral Intention, and Attitude. This implies that enhancements in Effort Expectancy might correspondingly impact these aspects positively. Moreover, positive developments in students' attitudes toward foreign language learning are anticipated to correlate with improvements in features such as Effort Expectancy and Behavioral Intentions. This interconnectedness indicates that progress in one area may contribute to advancements in others, underscoring the holistic nature of students' perceptions and tendencies toward utilizing technology in language learning journeys. Another research question aimed to identify the specific mobile applications high school students use for learning English language purposes.

Table 20. The Preferences of High School Students in Using Mobile Apps

	Frequency	Percent	Cumulative Percent
No answer	491	75.5	75.5
Duolingo	144	22.2	97.7
Google Translate	10	1.5	99.2
Other (<i>Hello Talk, Jasmin Academy, Open English, Reverso Context, VoScreen</i>)	5	0.8	100.0
Total	650	100	100.0

High school students' preferences were investigated through a questionnaire and face-to-face semi-structured interviews (see the next section for the interview findings). Table 20 highlights that Duolingo as the most prominent application, encompassing 22.2% of participants, totaling 144 individuals. In contrast, Google Translate demonstrates a response rate of merely 1.5%. Comparatively, Hello Talk, Jasmin Academy, Open English, Reverso Context, and Voscreen each share the lowest percentage at 0.2%, with only one participant

utilizing these applications to enhance their English skills. This indicates a significant preference for Duolingo among participants, while the others have a notably smaller user base for language improvement purposes.

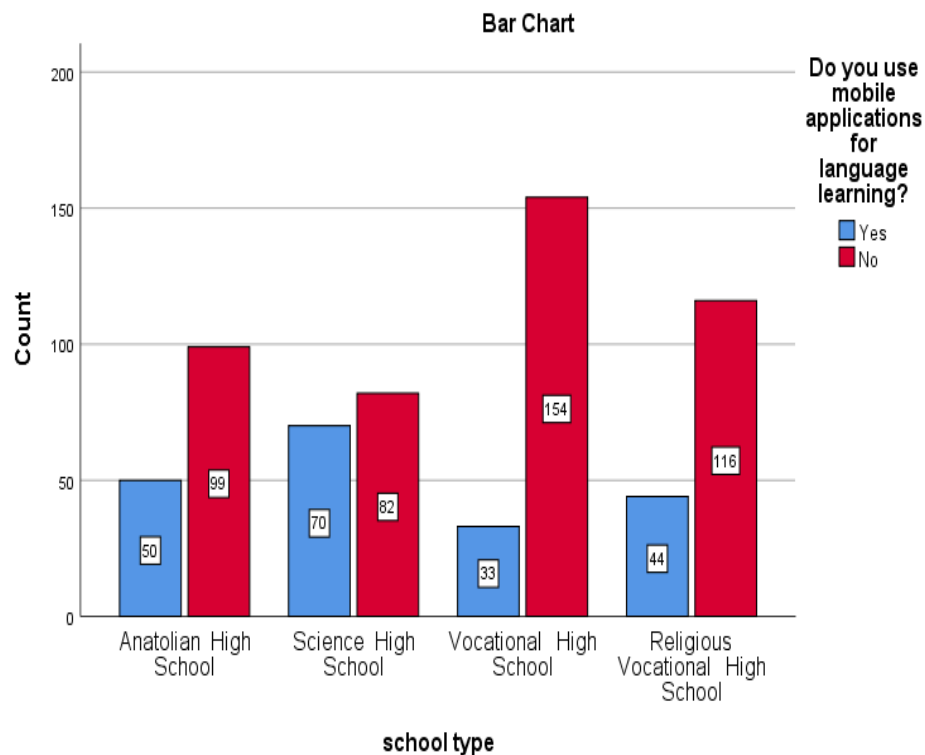


Figure 3. The Relationship Between Learners' School Type and the Use of Mobile Applications for Language Learning

Figure 3 depicts an interesting pattern wherein a considerable proportion of students in Vocational High School provided a negative response when asked about their utilization of mobile apps for language learning. In contrast, Science High School students represent the minority group who responded negatively in relation to incorporating mobile apps into their language learning endeavors. This indicates a contrasting inclination between these two groups, with Vocational High School students displaying a higher reluctance toward using mobile apps for language learning compared to Science High School students, who seem more open to leveraging these apps for language acquisition.

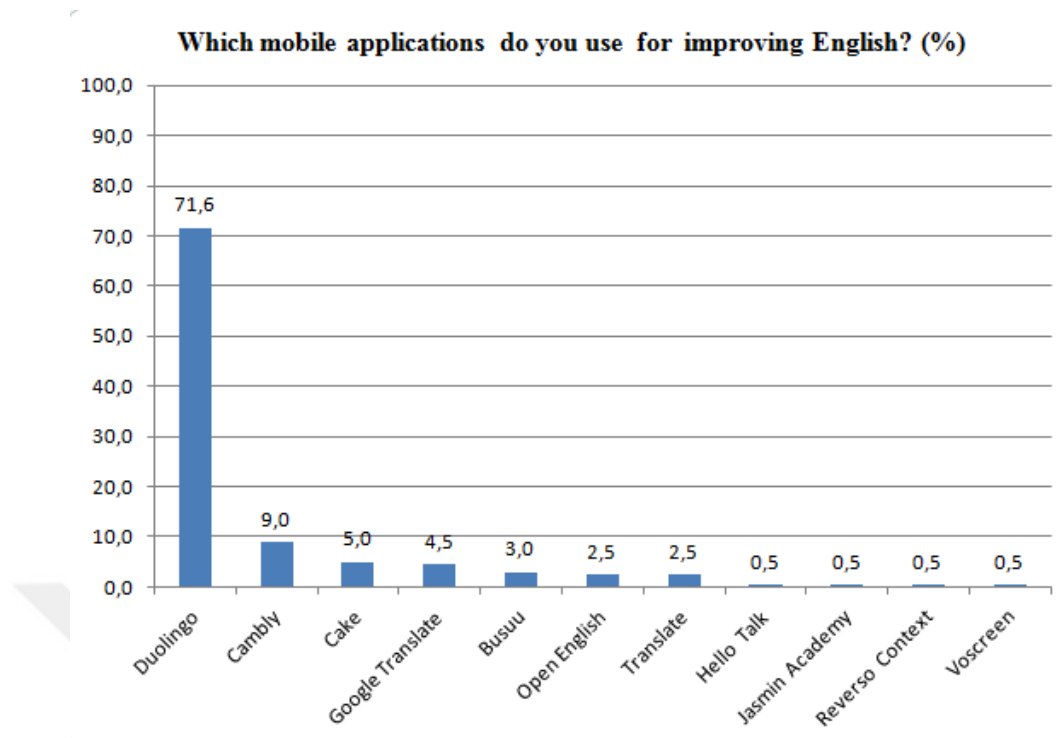


Figure 4. Types of Mobile Applications that Students Utilize for Language Learning

Out of the 201 participants utilizing mobile applications, the distribution of applications used includes Duolingo, Translate, Busuu, Cake, Cambly, Google Translate, Hello Talk, Jasmin Academy, Open English, Reverso Context, and Voscreen (Figure 4). Among these, the most frequently used applications are Duolingo, which constitutes 71.6% of the users, followed by Cambly at 9%, and Cake at 5%. These three applications represent the most prevalent choices among the participants for language learning through mobile apps.

4.2. Interview Results on the Utilization of Mobile Applications by High School Students

A total of 30 number of students participated in the semi-structured interviews following the necessary permissions. The interviews took place at Şehit Mehmet Mecit Yalçın Anatolian High School (ŞMMYAHS), Farabi Vocational and Technical Anatolian High School (FVTHS), Rekabet Institution Science High School (RISHS), Yenişehir Girl Religious Vocational High School (YGRVHS), and Diyarbakir Religious Vocational Anatolian High School (DRVHS) in Yenişehir town, Diyarbakir. The interviews comprised 9 open-ended questions directed at high school students, generating qualitative data. A thematic analysis approach was employed for the qualitative data analysis.

The findings from this analysis were presented in two categories: Utilization of Mobile Applications, the Advantages and Disadvantages of Utilizing Mobile Apps for Language Learning.

4.2.1. Utilization of Mobile Applications

The mobile apps most preferred by students for language learning, based on their responses, were found to be the following: Duolingo, Cake, Cambly, Busuu, Wordbit, Grammarly, Google Translate, British Council, Voice of America, BBC English, and English with Nab.

While prioritizing Duolingo and Busuu for language learning, students highlighted the effectiveness of Duolingo for beginners and appreciate Busuu's suitability for their levels, focusing on improving listening, speaking skills, and vocabulary knowledge through these apps. They noted:

“I use Duolingo and Busuu. Duolingo is a good application for beginner level so if you first utilize mobile app, you should utilize it. Busuu is my favorite app because it is adequate and suitable for my level, but I think, Duolingo is simpler than Busuu.” (Interviewee 5, \$MMYAHS, 10th grade)

“I use Duolingo, Busuu and Cake to do exercises for improving listening, speaking skills and vocabulary knowledge.” (Interviewee 15, DRVHS, 10th grade)

Duolingo, Cake, and Cambly were the most preferred applications among the high school students. Participants mentioned that they aimed to enhance their listening and speaking skills due to their perceived lack of proficiency in these areas. Students expressed:

“I use Duolingo and Voscreen to improve listening, speaking skills and grammar knowledge.” (Interviewee 4, \$MMYAHS, 11th grade)

“I use Duolingo and Cambly to improve speaking, listening skills, pronunciation and grammatical knowledge such as construct a regular sentence.” (Interviewee 6, \$MMYAHS, 9th grade)

“I benefit from Duolingo, Cake and Cambly to enhance listening skill and pronunciation, stress an intonation because I am worried about reading aloud a text in the class, so I try to improve pronunciaiton.” (Interviewee 16, YGRVHS, 10th grade)

Duolingo emerged as one of the most favored mobile applications across all school types, as students highlighted the need to enhance their listening and speaking skills to grasp everyday English patterns. Consequently, Duolingo and Cambly were frequently mentioned during the face-to-face interviews. Learners mentioned:

“I use Duolingo and Cambly for language learning because both of them are useful for me to improve speaking, listening and pronunciation skills” (Interviewee 10, DRVHS, 9th grade)

“I benefit from Duolingo and Cambly to listen new podcasts, records, make activities such as making a sentence, put the components of a sentence in an order so my listening skill and grammar knowledge enhance thanks to mobile apps.” (Interviewee 12, DRVHS, 9th grade)

Wordbit and Cake mobile apps were also preferred, as students aimed to enhance their vocabulary knowledge for reading texts or stories. One student, for example, noted how apps aided with vocabulary, aligning with personal interests like sports and movies:

“I use Wordbit, Duolingo and Cake for improving English skills. I use Wordbit because I need to improve vocabulary knowledge to read a story. In addition, I use BBC English and Voice of America to listen podcasts about my favorite themes such as sports, movies, shopping, so forth and I make activities about my listening text in BBC English which is very useful for me.” (Interviewee 14, DRVHS, 10th grade)

Participants mentioned using websites like British Council, Voice of America, BBC English, and English with Nab, particularly after school, to practice the topics they had learned in class. Some students reported:

“I use YouTube channels and websites English with Nab, BBC English, British Council to improve my listening, speaking, reading, writing, vocabulary knowledge.” (Interviewee 7, ŞMMYAHS, 9th grade)

“I use BBC English and Voice of America to develop my listening and speaking skills because I am not good at speaking, so I listen English podcasts regularly after school.” (Interviewee 13, DRVHS, 10th grade)

Participants mentioned using online dictionaries to search for word meanings and to translate reading passages. They expressed a preference for online dictionaries over traditional ones due to their portability and easy accessibility:

“I use online dictionaries such as Tureng and Google Translate because they are practical, and I do not have to bring a dictionary with me. I can check the word whenever I need to.” (Interviewee 26, FVTHS, 11th grade)

“I use Google Translate to find out meaning of words, BBC English to listen podcasts and make activities about the podcast and Voice of America to improve listening skills” (Interviewee 17, YGRVHS, 10th grade)

A number of students mentioned using YouTube channels and social media for language learning. They expressed watching educational videos on YouTube to develop English skills, particularly focusing on speaking, listening, and pronunciation sub-skills:

“I used social media and Youtube channels such as Tonguç Academy, English with Nab to prepare for my English lesson. I watch educational videos about my topics and listen to podcasts in English with Nab channel to learn how to pronounce words and sentences correctly in daily language.” (Interviewee 27, RISHS, 9th grade)

“I used YouTube because it has a vast source to find suitable videos, shorts, podcasts, documentaries about my topic. I also watch movies, series and videos with Turkish subtitles for fun. I can benefit from YouTube for fun and education. I also used Instagram to follow educational pages for language learning such as BBC English and English with Nab that was created by a native speaker living in the USA” (Interviewee 28, RISHS, 11th grade)

Students mentioned utilizing Duolingo, Cake, and Cambly as mobile apps, along with Tonguç Academy as a website, to enhance their vocabulary and grammatical knowledge, as well as listening and speaking skills. Social media was also highly favored for language learning due to its global popularity. High school students specifically mentioned Instagram, Twitter, and TikTok, expressing their preference for these platforms to watch short videos, reels, stories, and share posts in English. They believed that engaging with these platforms in English allowed for an enjoyable context to learn the language.

“I benefit from Twitter, Instagram, TikTok for language learning and mobile apps such as Cake, Cambly and Duolingo in order to improve English level and skills because I want to go abroad and will need to speak English fluently, so I utilize these mobile apps and social media.” (Interviewee 29, RISHS, 11th grade)

“I use Duolingo, Cake mobile apps and YouTube channels like Tonguç Academy which includes many instructional videos about English, Maths, Science, etc. I like watching Tonguç

videos to make preparations for school subjects, especially for English.” (Interviewee 22, FVTHS, 9th grade)

Overall, Duolingo, Cake, and Cambly were mentioned most during the interviews since they were found to be beneficial for learners to develop their vocabulary and grammatical knowledge, as well as listening and speaking skills.

4.2.2. The Advantages and Disadvantages of Using Mobile Apps for Language Learning

The second theme emerging from the data focused on the advantages of using mobile applications for language learning. Some students found online resources convenient due to avoiding heavy books and using YouTube for lesson reviews. However, they acknowledged drawbacks like internet issues, phone battery, or lack of a smartphone affecting app access and note that some apps may not match their proficiency level. One student highlighted:

“I think, as an advantage I don’t have to carry heavy books and dictionary instead I can use online dictionary so I can save time, too. YouTube is very helpful for me because I can watch educational videos to review my lessons. As a disadvantage, there are a few drawbacks such as internet connection problems, phone’s battery may run out of. I may not have a smartphone, or I may have battery problems or if my phone breaks, I cannot utilize mobile apps. Some apps are not suitable for my level.” (Interviewee 7, ŞMMYAHS, 9th grade)

Some learners found technological devices' English prevalence beneficial for learning, especially mobile apps creating an immersive language environment. They used their PC for subtitled movies and social media to improve English but noted limited app access due to smartphone battery issues. Furthermore, Google Translate was one of the most preferred websites and mobile applications. Students utilized it to translate passages and understand the meanings of unfamiliar words. One learner summarized:

“Many technological devices and applications are English now so as we are exposed to English, we can learn it easily. In this point, mobile applications create an authentic atmosphere, and we see English more and language learning becomes enjoyable. I use my PC to watch movies with subtitles and to use social media to improve my English skills. Google Translate is also a very useful app to translate text whenever I need to. These are advantages of utilizing mobile apps for language learning. As disadvantage, my smartphone doesn’t

always have battery so I cannot access mobile apps by using my smartphone.” (Interviewee 7, ŞMMYAHS, 10th grade)

Students praised the practicality of mobile apps for learning, citing benefits like accessibility to various exercises and podcasts. However, they noted drawbacks such as internet issues, potential addiction, app suitability, and phone breakdowns, highlighting concerns about these limitations in language learning. They specified:

“Mobile apps have many advantages. For example, they help us to improve listening, speaking skills and doing translation so they are very practical to utilize after school. However, they have some disadvantages such as internet connection problems, being addicted to surfing on the internet, advertisements, etc.” (Interviewee 24, FVTHS, 11th grade)

“I can learn whenever I want to learn because mobile apps are portable and practical. I can access lots of listening podcasts, tests, multiple choice exercises, fill in the gaps activities so I can improve myself more easily. However, there are some disadvantages, too. For example, mobile phones can break down. Mobile app’s level may not be suitable for your level. The internet connection may cause problems and you can be addicted to using the internet.” (Interviewee 12, DRVHS, 9th grade)

Some students viewed mobile apps as valuable for improving speaking, listening, and vocabulary skills but noted drawbacks like battery depletion, internet issues, and advertisements affecting the learning experience. One student mentioned:

“Mobile apps are beneficial to improve speaking, listening skills and vocabulary knowledge if we utilize them regularly after school but there are few disadvantages such as running out of mobile device’s battery, internet connection problems, advertisements, so forth.” (Interviewee 18, YGRVHS, 10th grade)

Some learners praised mobile apps for offering diverse topics and convenient, portable study options. They highlighted the flexibility of using apps anywhere but stated technical issues like battery issues, internet problems, and the potential for internet addiction as drawbacks. One learner expressed:

“Mobile apps offer you many topics that I can choose whatever I am interested in because there are a lot of podcasts, activities, exercises to improve listening, speaking, reading skills and vocabulary knowledge. Besides, I can decide whenever I study English because mobile apps are practical and portable. I can utilize them wherever I go such as

on holiday, on the bus, at the cafe, and so forth. Thus, I like using mobile applications. However, technical problems sometimes can happen such as running out of mobile devices' battery, internet connection problems. Mobile apps can cause internet addiction because you generally must use internet as well.”(Interviewee 20, YGRVHS, 9th grade)

Learners also valued mobile apps for enhancing digital literacy, reading, writing, and practicing listening and speaking skills. They appreciated the diverse choices but cited drawbacks like the absence of real-time correction, technical issues, and the importance of choosing suitable app levels for effective learning. One learner highlighted:

“I can develop my digital literacy thanks to utilizing mobile apps because I use both the internet and develop reading and writing skills. I can do practices to improve listening and speaking skills, as well because there are many choices in mobile apps that I can choose my favorite topics/themes within mobile apps. Mobile apps are also beneficial for pronunciation and vocabulary knowledge since they offer many podcasts and listening texts to do practice but there are a few disadvantages of mobile apps. There is mostly no real person who can correct your pronunciation and make a dialogue. Technical problems may happen as well such as running out of mobile devices' battery, internet connection problems. Mobile app's level may not be compatible with your level, too so you should be careful about choosing a mobile app to study English.” (Interviewee 30, RISHS, 11th grade)

Overall, students observed that mobile applications can enhance listening, speaking, and vocabulary skills through diverse activities and exercises. These apps offered valuable resources for accessing podcasts and recordings, allowing practice beyond regular class hours. However, drawbacks existed as well. Issues like battery drainage, connectivity problems, advertisements, and app suitability for various proficiency levels were noted. While students preferred using mobile apps, they found advertisements and internet connectivity frustrating.

CHAPTER V

DISCUSSION

The present study focused on high school students' perceptions and attitudes toward learning English through mobile applications. 650 high school students from state schools in Yenışehir town, Diyarbakir, participated by completing a questionnaire. Additionally, 30 of these participants volunteered for semi-structured face-to-face interviews, contributing qualitative data.

This chapter begins by discussing findings related to the research questions. Later, the implications for English Language Teaching are explored, followed by suggestions for further research.

5.1. RQ1: What are the perceptions and attitudes of high school English as a Foreign Language (EFL) learners towards mobile phone applications?

Quantitative (questionnaire) and qualitative (semi-structured interviews) methods were employed to effectively address the study's first research question. The analysis of scores from the "Unified Theory of Acceptance and Use of Technology" (UTAUT) scale indicated a strong positive attitude among participants toward using mobile applications. The mean scores for performance expectancy, effort expectancy, attitude, facilitating conditions, behavioral intention, and social influence were notably high, collectively indicating a significant inclination towards using mobile apps. Previous studies conducted in Turkish context have consistently shown learners favoring Mobile-Assisted Language Learning (MALL) (e.g., Ekinici & Ekinici, 2017; Yıldız, 2020). This aligns well with existing research (e.g., Ozdamlı& Uzunboylu, 2015), which highlighted learners' positive views on mobile learning's potential to boost motivation, engagement, and accessibility across various settings. EFL learners in various contexts have demonstrated positive attitudes toward using mobile devices and applications in classrooms, leading to shifts in their beliefs about language learning (Costa & Han, 2017; Dashtestani, 2013). Additionally, various studies, including those by Fujimoto (2012) have documented students' favorable reactions to adopting mobile learning apps.

According to the interview findings, high school participants primarily used Duolingo and Cambly, complemented by Google Translate and Tureng for dictionary purposes. Their

internet usage mainly centered around personal activities like watching movies, series, using social media, and listening to music. In this study, according to the interview results, students utilized various mobile apps to enhance listening, speaking, reading, pronunciation, grammar, and vocabulary skills. Few students focused on improving writing skills through these tools. Participants largely believed that mobile applications were beneficial for vocabulary, grammar, listening, and pronunciation, but they tended to avoid using them for writing due to traditional perceptions toward writing activities. Most students mentioned using these mobile apps to enhance vocabulary and pronunciation, considering these skills important for their schooling. Similar to the findings of the present study, various studies in the literature have reported learners' use of apps for different purposes. For instance, Mospan (2018) found that students extensively used mobile applications for educational purposes both inside and outside the classroom, with the majority using mobile devices while commuting, at home, and at university. Some studies focused exclusively on specific apps. For instance, Rosell-Aguilar (2018) discovered that the mobile app 'Busuu' effectively improved the language skills of thousands of students, with vocabulary being the primary area of improvement. Overall, it is reported that learners use mobile apps in various locations to develop different skills in their target languages.

The findings from both the quantitative data and the interviews showed that students valued mobile apps as beneficial tools for language development, especially for enhancing listening, speaking, and vocabulary skills through activities and podcasts. When discussing the factors aiding language learning, students emphasized advantages such as easy access to mobile devices and internet connectivity. However, despite their preference for these apps, they encountered issues like battery drainage, connectivity problems, ads, and apps unsuitable for varying proficiency levels. They also acknowledged occasional technical obstacles, like login difficulties, while using mobile devices. These challenges, including interruptions from ads and internet-related issues, were noted by the students. Overall, the findings suggest that students generally find mobile tools effective for language learning, despite facing occasional technical obstacles. These findings align with those observed in the Turkish context, where learners across different levels often preferred using mobile tools not only in formal classrooms but also in informal learning environments (e.g., Çavuş, 2011; Yildiz, 2020). Similar preferences were found among high school students. For instance, Widiana et al. (2018) discovered that 10th-grade students, particularly those with access to mobile technology, favored MALL for English learning. Learners in a multitude of other research

contexts often attributed this preference to the usability, availability, flexibility, and accessibility provided by these tools (e.g., Ekinici & Ekinici, 2017; Harbelioğlu, 2020; Seraj et al., 2020). In a study involving pre-service English language teachers, student teachers acknowledged the convenience, accessibility, and personalized nature of mobile devices, highlighting their positive impact on motivation and engagement in language learning activities (Oz, 2015). The challenges reported by the students in this study echoed those found in the literature. For example, in a secondary school context (Ozdamli & Uzunboyly, 2015), students and teachers highlighted that limited resources and infrastructure posed challenges for efficient mobile learning practices. Similarly, in higher education settings, learners faced difficulties concerning technical features of apps, including software lagging, micropayments for extra content, and internet requirements (Ekinici & Ekinici, 2017).

Regarding the specific aspects of the UTAUT scale such as performance expectancy, the findings suggested a strong inclination among participants towards using mobile tools for language learning, seeking motivation, enriched experiences, and effective utilization within language contexts. Considering the average scores of expressions regarding effort expectancy, the findings suggested that students adeptly acquired the skills to use mobile tools for learning foreign languages. With respect to the social influence, the results underscored students' belief in the effectiveness and significance of mobile tools in acquiring foreign languages. Regarding facilitating conditions, the outcomes underscored the significance of internet access for language learning via mobile devices. However, learners also pointed out a notable gap in technical support provision and access to diverse language-learning applications on mobile devices, indicating areas that may require improvement or attention to enhance the learning experience. Considering the behavioral willingness, the findings suggested a generally moderate level of engagement among students. Learners expressed readiness to utilize mobile tools for language learning themselves, indicating a willingness to incorporate these tools into their future language learning experiences. Similarly, previous research has consistently shown widespread mobile device usage among students across various school levels (e.g., Çavuş, 2011; Ma, 2017; Weng & Chen, 2015). In some studies (e.g., Zou & Yan, 2014), the majority of learners strongly agreed that MALL could significantly boost learning efficiency by cutting down the time needed for pre-learning activities. Specifically, students utilized mobile devices for accessing course materials, communicating with peers, participating in online activities, and actively seeking knowledge (Çavuş, 2011).

The integration of mobile devices in educational settings highlighted the need for effective strategies and awareness among educators. Preservice teachers, specifically regarding mobile phone-based learning, require increased awareness and positive attitudes toward mobile learning (Şad et al., 2022). Oz's (2015) study emphasized the necessity of providing adequate training and support to preservice English teachers for effective MALL implementation in future classrooms, recognizing its benefits alongside implementation challenges. Additionally, a study revealed that most preservice English teachers acknowledged MALL's potential to enhance language acquisition (Oz, 2015). Consideration of student preferences and institutional support emerged as crucial factors for successful mobile learning implementation, as indicated by studies (e.g., Çavuş, 2011). This significance is bolstered by previous research suggesting the positive impact of mobile learning tools on language acquisition, motivation, and academic achievement (Harbelioğlu, 2020; Özer & Kiliç, 2018).

These findings are essential as they underscore that attitudes toward mobile learning significantly influence learners' intent to utilize mobile technologies (Vo, 2023). Overall, these studies emphasize the importance of fostering positive attitudes, providing support, and recognizing the potential impact of mobile learning on language education.

5.2. RQ2: Do factors such as gender, age, type of school, smartphone ownership, and regular internet access have an impact on the utilization of mobile applications for language learning among high school EFL learners?

This research question was addressed using both quantitative data, specifically through questionnaires, and qualitative data gathered from interviews. When examining the relationship between gender and the use of mobile applications in language learning, it was discovered that women tend to have higher scores in the "Unified Theory of Acceptance and Use of Technology (UTAUT)" compared to men. Specifically, women scored higher in performance expectation, behavioral orientation, attitude, and overall UTAUT scores. The findings of the study align with previous research. In a manner consistent with the present study, Dwivedi et al. (2019) also discovered higher UTAUT scores among women. Similarly, a meta-analysis by Dwivedi et al. (2011) on UTAUT concluded that women were more likely to use mobile applications in language learning. Lewis et al.'s (2013) investigation into tendencies regarding educational technologies in language education asserted that female

students were more inclined to use mobile applications in language education than their male counterparts. Yıldırım (2012) conducted a study on mobile language learning through educational games in foreign language education, concluding that female students were successful in using mobile applications. Lastly, Harbelioğlu's study (2020) revealed that female participants exhibited greater interest in using mobile phones for learning English as a foreign language compared to their male counterparts.

The UTAUT scores were compared among students based on their age using an ANOVA test. The analysis revealed no significant difference in scores related to Effort expectancy, Social influence, Behavioral intention, and Attitude ($p > .05$). However, a significant difference was observed in terms of Performance expectancy, Facilitating conditions, and the overall UTAUT scores ($p \leq .05$). Further investigation via Tukey tests within the groups showed that 16-year-old students exhibited higher levels of Performance expectancy, Facilitating conditions, and UTAUT total scores compared to both 15-year-old and 17-year-old students. The findings of the present study, which observed a significant difference in Performance expectancy, Facilitating conditions, and overall UTAUT scores based on age, are noteworthy in light of similar research. This aligns with Lewis et al.'s (2013) findings that age is not significant in students' use of mobile applications in language education. Similarly, Nistor et al. (2014) found no age-related differences in the use of digital technologies in language and culture learning. Thus, the present study suggests that age has no discernible effect on mobile app use for language learning, except for certain aspects like Performance expectancy and Facilitating conditions.

The UTAUT scores among students were examined based on their school types using an ANOVA test. The analysis revealed no significant difference in scores related to Social influence, Behavioral intention, and Attitude. However, a notable difference was found in terms of Performance expectancy, Effort expectancy, Facilitating conditions, and the overall UTAUT scores. Further comparisons within the groups showed that students attending Science High School displayed higher levels of Performance expectancy compared to those at Vocational High School. Additionally, Anatolian High School students exhibited higher Effort expectancy scores compared to students from Religious Vocational High Schools. Moreover, both Anatolian High School and Science High School students scored higher in Facilitating conditions compared to other student groups. Similarly, these two groups of students scored higher in the total scores of the UTAUT scale compared to students from other types of schools. In relation to these findings, Yıldırım's (2012) study on mobile

language learning through educational games in foreign language education concluded that students were successful in applications regardless of school type, highlighting the effectiveness of mobile applications in language learning. Similarly, Şad et al., (2022) found that factors like program/department did not significantly influence preservice teachers' views on mobile learning devices. These studies support the present findings that UTAUT scores differ among school types and departments but suggest that mobile applications can be effective across various educational settings.

The UTAUT scores among students were assessed based on their possession of a smartphone using an independent sample *t*-test. The analysis showed no significant difference in Performance expectancy, Social influence, Behavioral intention, and Attitude scores ($p > .05$). However, a significant difference was observed regarding Effort expectancy, Facilitating conditions, and the overall UTAUT scores ($p \leq .05$). On average, participants with smartphones had higher UTAUT scores compared to those without smartphones. In relation to these findings, the study by Şad et al., (2022) revealed that possession of a laptop did not significantly influence preservice teachers' views on mobile learning devices, suggesting that smartphone possession may have a unique impact on technology acceptance. Additionally, Venkatesh et al.'s (2012) study, examining the effects of mobile applications on the use of information technology, found that participants had a high tendency to use mobile applications, aligning with the observed higher UTAUT scores among those with smartphones in the current study. These studies provide additional insights, collectively indicating the importance of considering device possession when examining technology acceptance and usage tendencies.

Similarly, the UTAUT scores were examined concerning students' regular internet access using an independent sample *t*-test. The analysis revealed a significant difference in scores ($p \leq .05$). On average, students who regularly accessed the internet displayed higher levels of Performance expectancy, Effort expectancy, Social influence, Facilitating conditions, Behavioral intention, Attitude, and overall UTAUT scores compared to those without regular internet access. This suggests that students who use the internet regularly exhibit higher levels of perception and proficiency in utilizing technology for language learning. In relation to these findings, Harbelioğlu's study (2020) revealed that students, with habits of frequent mobile phone usage and regular internet access, showed a highly positive attitude toward enhancing their foreign language skills. In a study by Kim and Lee (2016), research on the utilization of MALL by Korean students indicated that factors such as the

reliability of content, perceived enjoyment, usefulness, and ease of use also played significant roles in determining students' acceptance of MALL. These studies support the idea that regular internet access along with other factors contributes to a more positive perception and acceptance of technology for language learning.

5.3. RQ3: Which specific mobile applications do high school students utilize for language learning purposes?

Based on questionnaire responses, Duolingo emerged as the most popular app, with 22.2% of participants (144 students) using it. Google Translate follows with 10 respondents (1.5%). Other apps like Hello Talk, Jasmin Academy, Open English, Reverso Context, and Voscreen each have a minimal usage rate of 0.2%, with only one participant using each of these for improving their English proficiency. Notably, 491 students opted not to respond, possibly due to not using mobile apps or choosing not to disclose their preferences. Some students inquired about the confidentiality of their answers and whether these responses would be shared with their English teachers. Clear explanation and reassurance about the confidentiality of the data collection process were provided, but it is possible that some students might have felt fatigued or hesitant to objectively complete the questionnaire, potentially leading to missing responses. Factors like age, interests, English proficiency level, school type, and mood likely influenced students' responses in the questionnaire, contributing to the varied reactions among the 491 students who did not provide specific app preferences. Duolingo was reported as the preferred app due to its various levels and exercises, including fill-in-the-blank, true/false, sentence completion, and translation tasks. Its comprehensive approach appeals to students aiming to enhance vocabulary and grammar for English learning. Google Translate ranked as the second most preferred app, primarily used during reading exercises when students encounter unfamiliar words or need text translation support. Meanwhile, Voscreen, Hello Talk, Jasmin Academy, Reverso Context, and Open English have minimal usage among high school students, likely because these apps are primarily used for speaking and listening activities post-school hours, making them less frequently utilized.

The interviews conducted to determine the preferred applications among high school students revealed distinct preferences across different grade levels. Among 10th and 11th graders, Duolingo, Cake, and Cambly emerged as the top choices. Conversely, 9th grade students favored Tureng, Google Translate, and Grammarly as their preferred applications.

Specifically, 11th graders showcased a broader spectrum of preferences, showing interest in Duolingo, YouTube, and social media platforms like Instagram and Telegram. They emphasized their use of educational pages and channels on social media, along with watching YouTube videos tailored for learning English. Additionally, their preferences included Cake, Cambly, Voice of America, and the British Council, indicating a varied approach to language learning encompassing diverse platforms and resources.

The findings of the present study align with several related studies in the field of foreign language learning and the use of mobile applications. For example, Tiliç (2016) conducted a study that found similar results, with Duolingo being one of the frequently used applications among students for foreign language learning. Güngör et al. (2021) explored a mobile English learning application based on machine learning, determining that such applications contribute to language development in students. This aligns with this study's focus on the effectiveness of mobile applications like Duolingo in improving English proficiency. In addition, Klimova and Al-Obaydi (2023) highlighted the widespread use of mobile phones and applications for learning English. Their findings support the present study's observation that the portability and accessibility of applications make them valuable tools for language learning. Overall, the collective findings from these studies reinforce the significance of mobile applications, such as Duolingo, in supporting diverse aspects of language learning among students.

CHAPTER VI

CONCLUSION

This study aimed to explore the perceptions and attitudes of high school English as a Foreign Language (EFL) learners towards mobile language learning applications. In addition, it sought to investigate how factors such as gender, age, school type, smartphone ownership, and regular internet access influence the utilization of these applications among high school EFL learners. Finally, the study aimed to identify and analyze the specific mobile applications that high school students prefer for language learning. Through these objectives, the goal of the research was to provide valuable insights into the dynamics of mobile language learning among high school EFL learners. The data were collected through a survey (Unified Theory of Acceptance and Use of Technology - UTAUT) and semi-structured interviews conducted with high school students. The data were quantitatively and qualitatively analyzed.

The study utilized both quantitative (questionnaire) and qualitative (semi-structured interviews) methods to address the first research question. Analysis of UTAUT scale scores revealed a strong positive attitude among participants towards mobile applications, with high mean scores across various dimensions, indicating a significant inclination towards using mobile apps. Regarding the UTAUT scale aspects, participants showed a strong inclination toward using mobile tools for language learning, emphasizing motivation, enriched experiences, and effective utilization. Effort expectancy findings indicated students' adept skills in using mobile tools for learning foreign languages. Social influence results underscored students' belief in the effectiveness of mobile tools for language acquisition. Facilitating conditions highlighted the importance of internet access, with noted gaps in technical support and access to diverse language-learning apps, suggesting areas for improvement. Behavioral willingness findings suggested a moderate level of engagement, with students expressing readiness to use mobile tools in future language learning experiences.

It was also found that high school participants mainly used Duolingo, Cambly, Google Translate, and Tureng for language skills, emphasizing listening, speaking, reading, pronunciation, grammar, and vocabulary. While mobile apps were valued for vocabulary, grammar, listening, and pronunciation, writing was less emphasized, echoing findings in the literature. Furthermore, it was found that while students valued mobile apps for language

learning, they faced challenges like battery drainage, connectivity issues, ads, proficiency-level suitability, login difficulties, and interruptions from ads and internet-related issues.

The second research question examined how factors such as gender, age, school type, smartphone ownership, and regular internet access positively influence the utilization of mobile applications for language learning among high school EFL learners. The examination of categories such as gender and regular internet access in mobile application use for language learning revealed consistent higher scores among female students and those with regular internet access in UTAUT dimensions. In age-based comparisons, no significant differences were found in Effort expectancy, Social influence, Behavioral intention, and Attitude while a significant difference emerged in Performance expectancy, Facilitating conditions, and overall UTAUT scores. In school type-based comparisons, no significant differences were observed in Social influence, Behavioral intention, and Attitude. Nevertheless, a significant difference was identified in Performance expectancy, Effort expectancy, Facilitating conditions, and overall UTAUT scores. On the other hand, in smartphone ownership-comparisons, no significant differences were detected in Performance expectancy, Social influence, Behavioral intention, and Attitude. However, a significant difference emerged in Effort expectancy, Facilitating conditions, and overall UTAUT scores, indicating higher scores among smartphone owners.

The final research question addressed the specific specific mobile applications high school students used for language learning purposes. The findings showed that Duolingo was the most popular mobile application among high school students, followed by other apps such as Google Translate, Hello Talk, Vocscreen. Duolingo was preferred for its various levels and exercises, appealing to those enhancing vocabulary and grammar. Findings also indicated that 10th and 11th graders preferred Duolingo, Cake, and Cambly, while 9th graders favored Tureng, Google Translate, and Grammarly. 11th graders had a broader range of preferences, including Duolingo, YouTube, Instagram, Telegram, Cake, Cambly, Voice of America, and the British Council, showcasing diverse language learning approaches.

Overall, the study's findings indicate that high school EFL learners generally hold positive perceptions and attitudes toward mobile language learning applications. These apps are utilized for various purposes, including English language practice and development.

6.1. Implications for ELT

The present study explored the utilization of mobile applications by high school students to enhance their English language skills and identified the websites they rely on for language learning. The outcomes of this research carry implications for English Language Teaching teachers, field authorities, and policymakers, particularly in the context of integrating mobile apps into English lessons within state high schools.

The previous literature underscores the potential benefits of integrating mobile applications into English lessons, provided the necessary infrastructure is available. High school ELT teachers are encouraged to consider this integration, as it may transform lessons into more engaging, student-centered, and effective experiences.

Moreover, the customization and flexibility offered by mobile applications empower students to choose their learning paths based on individual interests and proficiency levels. This flexibility prompts English teachers to adopt a more personalized approach, tailoring lessons to meet the diverse needs of their students.

Recognizing the ubiquity of mobile applications, policymakers and school administrators may contemplate initiatives to ensure widespread access to mobile devices and reliable internet connectivity. This approach ensures that students can take full advantage of language learning resources whenever and wherever needed.

To facilitate the effective integration of mobile applications into English lessons, it is crucial for English teachers to undergo training and guidance. Workshops or professional development programs can equip teachers with the necessary skills to harness the educational potential of various language learning apps.

Encouraging student engagement with mobile applications becomes pivotal, requiring a supportive environment where students are motivated to explore these tools. Teachers can play a pivotal role in this process by incorporating apps into assignments, projects, or post-lesson revision activities.

Furthermore, the study suggests that integrating mobile applications aligns with modern educational practices, emphasizing the importance of technology in language classrooms. Policymakers and educational authorities may explore initiatives promoting the integration of technology across various subjects.

In essence, the implications derived from this study provide a guide for English Language Teaching teachers, authorities, and policymakers to make the most of the potential of mobile applications for enhanced language learning experiences in high schools.

6.2. Suggestions for Further Research

Drawing from the findings of the present study, several potential directions for future research emerged. First, exploring longitudinal studies could be beneficial to trace changes in perceptions and attitudes towards mobile language learning applications over an extended period. This approach could unveil trends, shifts, or long-term impacts on language learning outcomes. Second, future research could investigate the effectiveness of specific mobile applications in language learning. Experimental designs comparing language learning outcomes of students using different apps could provide insights into their impact on language proficiency. Third, exploring the perspectives of English Language teachers concerning the integration of mobile applications in high school EFL classrooms could offer a more comprehensive understanding of the overall ecosystem. Fourth, implementing intervention studies, such as workshops or training programs, to enhance students' utilization of mobile language learning applications could be valuable. Assessing the impact of these interventions on learning outcomes would contribute to practical insights. Additionally, examining the potential integration of mobile language learning applications into the formal English curriculum in high schools could involve assessing the feasibility, challenges, and benefits of such integration. Finally, National Ministry of Education in Türkiye has recently launched applications called *Diyalekt* and *Diyalekt Kids*. These applications aim to contribute to the development of English language skills of students in all age groups. They use a language learning method based on the European Language Portfolio (ELP) and the Common European Framework of Reference for Languages (CEFR) standards, includes content prepared considering the four language skills, as well as books, short and long videos, activities, and exams where students can evaluate themselves. It is recommended that future researchers explore the potential and impact of these nationally developed applications for English language learning.

REFERENCES

- Abdelraheem, A. Y., & Ahmed, A. M. (2015). Electronic social media in teaching: usages, benefits, and barriers as viewed by sudanese faculty members. *American International Journal of Science*, 4(5), 58–68.
- Abduh, M. Y. M. (2019). The effect of implementing MALL applications on learning pronunciation of English by EFL learners at Najran University. *International Journal of Linguistics*, 11(6), 30-32.
- Abu-Al-Aish, A., & Love, S. (2013). Factors influencing students' acceptance of m-learning: An investigation in higher education. *International Review of Research in Open and Distributed Learning*, 14(5), 82-107.
- Ahn, S. K. (2018). *Korean EFL college students' acceptance and use of smartphone applications for English language learning (Doctoral dissertation)*. Alliant International University. ProQuest Dissertations and Theses Global. (Publication No. 10794038)
- Akkara, S., Anumula, V., & Mallampalli, M. (2020). Impact of Whatsapp interaction on improving L2 speaking skills. *International Journal of Emerging Technologies in Learning*, 15(3), 250-259. <https://doi.org/10.3991/ijet.v15i03.11534>
- Alam, M. Z., & Mizan, F. B. (2019). Facebook as a formal instructional environment in facilitating L2 writing: Impacts and challenges. *International Journal of Language Education*, 3(2), 41.
- Albers, M., & Kim, L. (2001). Information design for the small-screen interface: an overview of web design issues for personal digital assistants. *Technical Communications*, 49(1), 45-60.
- Alemi, M., Sarab, M. R. A., & Lari, Z. (2012). Successful learning of academic word list via MALL: Mobile assisted language learning. *International Education Studies*, 5(6), 99-109.
- Ally, M. (Ed.). (2009). *Mobile learning: Transforming the delivery of education and training*. Athabasca University Press.

- Al Shehri, S. (2011). Context in our pockets: mobile phones and social networking as tools of contextualizing language learning. *10th World Conference on Mobile and Contextual Learning*. Beijing, China.
- Alrasheedi, M., & Capretz, L. F. (2015). An empirical study of critical success factors of mobile learning platform from the perspective of instructors. *Procedia-social and behavioral sciences*, 176, 211-219.
- Alzu'bi M. A. M., & Sabha, M. R. N. (2013). Using mobile-based email for English foreign language learners. *Turkish Online Journal of Educational Technology*, 12(1), 178-186.
- Andujar, A. (2016). Benefits of mobile instant messaging to develop ESL writing. *System*, 62, 63-76.
- Aslan, M. (2023). The Views of Efl Preparatory Students on the Use of Mobile Devices in Language Learning. *Euroasia Journal Of Social Sciences & Humanities*, 10(31), 66-82.
- Arnold, B. A. (2019). The seven traits of a learning environment: A framework for evaluating mobile learning engagement. *International Journal of e-Education e-Business e-Management and e-Learning*, 9(1), 54-60.
<https://doi.org/10.17706/ijeeeee.2019.9.1.54-60>
- Ataeifar, F., Sadighi, F., Bagheri, M. S., & Behjat, F. (2019). Iranian female students' perceptions of the impact of mobile-assisted instruction on their English speaking skill. *Cogent Education*, 6(1), 1662594.
- Ayers, R., Btothers, S., & Jansen, W. (2014). Guidelines on mobile device forensics. *National Institute of Standards and Technology*, U.S. Department of Commerce, 3-4
<https://doi.org/10.6028/NIST.SP.800-101r1>
- Azar, A. S., & Nasiri, H. (2014). Learners' attitudes toward the effectiveness of mobile assisted language learning (MALL) in L2 listening comprehension. *Procedia-Social and Behavioral Sciences*, 98, 1836-1843.
- Azli, W. U. A. W., Shah, P. M., & Mohamad, M. (2018). Perception on the usage of mobile assisted language learning (MALL) in English as a second language (ESL) learning among vocational college students. *Creative Education*, 9(1), 84-98.

- Baek, Y., Zhang, H., & Yun, S. (2017). Teachers' attitudes toward mobile learning in Korea. *Turkish Online Journal of Educational Technology-TOJET*, 16(1), 154-163.
- Baleghizadeh, S., & Oladrostam, E. (2010). The effect of mobile assisted language learning (MALL) on grammatical accuracy of EFL students. *Mextesol Journal*, 34(2), 1-10.
- Baran, E. (2014). A Review of research on mobile learning in teacher education. *Educational Technology & Society*, 17(4), 17-32.
- Barton, D., & Lee, C. (2013). *Language online: Investigating digital texts and practices*. New York: Routledge
- Başal, A., Yilmaz, S., Tanriverdi, A., & Sari, L. (2016). Effectiveness of mobile applications in vocabulary teaching. *Contemporary Educational Technology*, 7(1), 47-59.
- Beatty, K. (2010). *Teaching and researching computer-assisted language learning*. Harlow: Pearson/Longman.
- BenMoussa, C. (2003). *Workers on the move: New opportunities through mobile commerce*. Presented at Stockholm Mobility Roundtable, 22-23.
- Bernacki, M. L., Greene, J. A., & Crompton, H. (2020). Mobile technology, learning, and achievement: Advances in understanding and measuring the role of mobile technology in education. *Contemporary Educational Psychology*, 60, 101827. <https://doi.org/10.1016/j.cedpsych.2019.101827>
- Bezircilioğlu, S. (2016). Mobile Assisted Language Learning. *Journal Of Educational & Instructional Studies in the World*, 6(1), 9-12.
- Booton, S. A., Hodgkiss, A., & Murphy, V. A. (2023). The impact of mobile application features on children's language and literacy learning: a systematic review. *Computer Assisted Language Learning*, 36(3), 400-429.
- Botero, G. G., Questier, F., Cincinnato, S., He, T., & Zhu, C. (2018). Acceptance and usage of mobile assisted language learning by higher education students. *Journal of Computing in Higher Education*, 30(3), 426-451.
- Burston, J. (2015). Twenty years of MALL project implementation: A meta-analysis of learning outcomes. *ReCALL*, 27(1), 4-20.
- Caldwell, M. (2018). Japanese university students' perceptions on the use of ICT and mobile-learning in an EFL setting. *Call-EJ*, 19(2), 188-216.

- Chang, C-S, & Millett, S. (2014), The effect of extensive listening on developing L2 listening fluency: some hard evidence. *ELT Journal*, 68(1), 31-40.
- Chaniago, A. D. (2022). The effect of cake usage as mobile assisted language learning on students' English speaking skill in smp hang tuah 1 belawan. *ETERNAL (English, Teaching, Learning, and Research Journal)*, 8(1), 131-144.
- Chen, C. M., & Chung, C. J. (2008). Personalized mobile English vocabulary learning system based on item response theory and learning memory cycle. *Computers & Education*, 51(2), 624-645.
- Chen, X. (2013). Tablets for informal language learning: student usage and attitudes. *Language Learning & Technology*, 17, 20-37.
- Cheon, J., Lee, S., Crooks, S. M., & Song, J. (2012). An investigation of mobile learning readiness in higher education based on the theory of planned behavior. *Computers & Education*, 59(3), 1054-1064. <https://doi.org/10.1016/j.compedu.2012.04.015>
- Chinnery, & Gilgen. M. (2006). Going to the MALL: Mobile-assisted language learning. *Language Learning & Technology*, 10(1), 9-16.
- Crompton, H., & Burke, D. (2020). Mobile learning and pedagogical opportunities: A configurative systematic review of PreK-12 research using the SAMR framework. *Computers & Education*, 156, 103945. <https://doi.org/10.1016/j.compedu.2020.103945>
- Costa, R. S., & Han, T. (2017). The Effect Of Using A Mobile Application On Efl Learners'beliefs About Language Learning (Ball). *International Journal of Developmental and Educational Psychology*, 2(1), 229-238.
- Çakır, İ. (2012). Promoting correct pronunciation through supported audio materials for EFL learners, *Energy Education Science and Technology Part B-Social and Educational Studies*, 4, 1801-1812.
- Çakmak, F., & Erçetin, G. (2019). Mobile Learning and Mobile Assisted Language Learning in Focus. *Language and Technology*, 1(1), 30-48.
- Çavus, N. (2011). Investigating mobile devices and LMS integration in higher education: Student perspectives. *Procedia Computer Science*, 3, 1469-1474.

- Çuhadar, C. (2014). Information technologies pre-service teachers' acceptance of tablet PCs as an innovation learning tool. *Educational Sciences: Theory & Practice*, 14(2), 741-753.
- Dağdeler, K. O., & Demiröz, H. (2022). EFL Instructors' Perceptions of Utilizing Mobile-Assisted Language Learning in Higher Education. *Acta Educationis Generalis*, 12(2), 22–40. <https://doi.org/10.2478/atd-2022-0012>
- Dashtestani, R. (2013). Implementing mobile-assisted language learning (mall) in an efl context: Iranian EFL teachers' perspectives on challenges and affordances. *JALT CALL Journal*, 9(2), 149–168.
- Davie, N., & Hilber, T. (2015). Mobile-Assisted Language Learning: Student Attitudes to Using Smartphones to Learn English Vocabulary. *International Association for Development of the Information Society*, 11th International Conference Mobile Learning, 70-72. <https://files.eric.ed.gov/fulltext/ED562454.pdf>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319. <https://doi.org/10.2307/249008>
- Dehkordi, M. E., & Taki, S. (2018). Iranian male and female efl learners' perceptions toward the use of mobile assisted language learning. *Journal of Applied Linguistics and Language Research*, 5(3), 56–66.
- Ducate, L. & Lomicka, L. (2009). Podcasting: An effective tool for honing language students' pronunciation. *Language Learning & Technology*, 13(3), 66-86
- Dwivedi, Y. K., Rana, N. P., Chen, H., & Williams, M. D. (2011). A Meta-analysis of the Unified Theory of Acceptance and Use of Technology (UTAUT). In *Governance and Sustainability in Information Systems. Managing the Transfer and Diffusion of IT: IFIP WG 8.6 International Working Conference, Hamburg, Germany, September 22-24, 2011. Proceedings* (155-170). Springer Berlin Heidelberg.
- Dwivedi, Y. K., Rana, N. P., Jeyaraj, A., Clement, M., & Williams, M. D. (2019). Re-examining the unified theory of acceptance and use of technology (UTAUT): Towards a revised theoretical model. *Information Systems Frontiers*, 21, 719-734.

- Ebadi, S., & Rahimi, M. (2018). An exploration into the impact of WebQuest-based classroom on EFL learners' critical thinking and academic writing skills: A mixed-methods study. *Computer Assisted Language Learning*, 31(5-6), 617-651.
- Elaish, M. M., Shuib, L., Ghani, N. A., & Yadegaridehkordi, E. (2019). Mobile English language learning (MELL): A literature review. *Educational Review*, 71(2), 257-276
- Ekinci, E., & Ekinci, M. (2017). Perceptions of efl learners about using mobile applications for English language learning: A case study. *International Journal of Language Academy*, 5(5), 175-193.
- Elçiçek, M., & Bahçeci, F. (2017). Mobil öğrenme yönetim sisteminin öğrenenlerin akademik başarıları ve tutumları üzerindeki etkilerinin incelenmesi [Examining the effects of mobile learning management system on learners' academic achievement and attitudes]. *Kastamonu Eğitim Dergisi*, 25(5), 1695-1714.
- El-Hussein, M. O. M., & Cronje, J. C. (2010). Defining mobile learning in the higher education landscape. *Journal of Educational Technology & Society*, 13(3), 12-21.
- Fisher, M., & Baird, D. (2007). Making m-learning work, utilizing mobile technology for active exploration, collaboration, assessment, and reflection in higher education. *Journal of Educational Technology Systems*, 35(1), 3-30.
- Franklin, T. (2011). Mobile learning: at the tipping point. *Turkish Online Journal of Educational Technology*, 10(4), 261-275.
- Fujimoto, C. (2012). Perceptions of mobile language learning in Australia: How ready are learners to study on the move? *The JALT CALL Journal*, 8(3), 165–195. <https://doi.org/10.29140/jaltcall.v8n3.140>
- Gangaiamaran, R., & Pasupathi, M. (2017). Review on use of mobile apps for language learning. *International Journal of Applied Engineering Research*, 12(21), 11242-11251
- Ganapathy, M., Shuib, M., & Azizan, S. N. (2016). Malaysian ESL students' perceptions on the usability of amobile application for grammar test: A case study of ESL undergraduates in Universiti Sains Malaysia. *3L: Language, Linguistics, Literature*, 22(1), 127–140.

- Geddes, S. J. (2004). Mobile learning in the 21st century: benefit for learners. *Knowledge Tree e-journal*, 30(3), 214-228.
- Ghorbani, N., & Ebadi, S. (2020). Exploring learners' grammatical development in mobile assisted language learning. *Cogent Education*, 7(1), 1704599.
- Godwin-Jones, R. (2008). Mobile-Computing trends: Lighter, faster, smarter. *Language Learning & Technology*, 12(3), 3-9. <http://dx.doi.org/10125/44150>
- Godwin-Jones, R. (2011). Emerging Technologies: Mobile apps for language learning. *Language Learning & Technology*, 15(2), 2-11.
- Gonulal, T. (2019). The use of Instagram as a mobile-assisted language learning tool. *Contemporary Educational Technology*, 10(3), 309-323.
- Goodison, T. (2001). *The implementation of e-learning in uk higher education*. In *EdMedia: World Conference on Educational Media and Technology*. Association for the Advancement of Computing in Education (AACE). 613-618
- Gromik, N. (2008). iPods in the EFL classroom: a tool for independent learning. *JALT CALL Journal*, 5(3), 57-66.
- Gromik, N. A. (2012). Cell phone video recording feature as a language learning tool: A case research. *Computers & Education*, 58(1), 223 – 230.
- Güngör, E., Sinem, A. K., & Orman, Z. (2021). Mobile English learning application based on machine learning. *Journal of Computer Science and Technology*, 2(2), 58-65.
- Güven, R. (2019). *Attitudes of ELT students and in-service teachers towards using mobile assisted language learning*. Master's Thesis, Kocaeli University, Institute of Social Sciences.
- Handayani, A. E., & Izzah, L. (2020). Improving Students Listening Comprehension with Mobile App “English Listening Test.” *English Language in Focus (ELIF)*, 3(1), 69–76.
- Harbelioğlu, U. (2020). *University students' perceptions of mobile assisted language learning*. Master's Thesis, Cag University, Institute of Social Sciences.

- Hashim, H., Md. Yunus, M., Amin Embi, M., & Mohamed Ozir, N. A. (2017). Mobile-Assisted Language Learning (Mall) for ESL learners: A review of affordances and constraints. *Sains Humanika*, 9(1–5). <https://doi.org/10.11113/sh.v9n1-5.1175>
- Hazaea, A. N., & Alzubi, A. A. (2016). The Effectiveness of using mobile on EFL learners' reading practices in Najran University. *English Language Teaching*, 9(5), 8-21. <https://doi.org/10.5539/elt.v9n5p8>
- Heil, C. R., Wu, J. S., Lee, J. J., & Schmidt, T. (2016). A review of mobile language learning applications: Trends, challenges, and opportunities. *The EuroCALL Review*, 24(2), 32-50.
- Hockly, N. (2012). Mobile learning. *ELT Journal*, 67(1), 80–84. <https://doi.org/10.1093/elt/ccs064>
- Hoi, V. N. (2020). Understanding higher education learners' acceptance and use of mobile devices for language learning: A Rasch-based path modeling approach. *Computers & Education*, 146, 103761. <https://doi.org/10.1016/j.compedu.2019.103761>
- Houser, C., Thornton, P., & Kluge, D. (2002). Mobile learning: cell phones and PDAs for education. In *International Conference on Computers in Education, Proceedings. IEEE*. 1149-1150
- Howlett, G., & Waemusa, Z. (2019). 21st Century Learning Skills and Autonomy: Students' Perceptions of Mobile Devices in the Thai EFL Context. *Teaching English with Technology*, 19(1), 72-85.
- Hsu, C. L., & Lin, J. C. C. (2008). Acceptance of blog usage: The roles of technology acceptance, social influence and knowledge sharing motivation. *Information Management*, 45(1), 65-74.
- Hsu, L. (2013). English as a foreign language learners' perception of mobile assisted language learning: A cross-national study. *Computer Assisted Language Learning*, 26(3), 197–213. <https://doi.org/10.1080/09588221.2011.649485>
- Huang, Y. M., Huang, Y. M., Huang, S. H., & Lin, Y. T. (2012). A ubiquitous English vocabulary learning system: Evidence of active/passive attitudes vs. usefulness/ease-of-use. *Computers & Education*, 58(1), 273-282.

- Hubbard, P. (2021). Revisiting the TESOL Technology Standards for Teachers: Integration and Adaptation. *CALICO Journal*, 38(3), 319-337. doi:10.1558/cj.20068.
- Seraj, P. M. I., & Rahmatullah, A. (2022). Systematic Literature review on the Use of Applications of Smartphones for Teaching English in EFL Contexts. *Journal of English Education and Teaching*, 6(3), 347–366. <https://doi.org/10.33369/jeet.6.3.347-366>
- Imtiaz, H. T., Norrihan S, Aslam, M. S., & Waqar, A. (2016). Impact of mobile assisted language learning (MALL) on EFL: A meta-analysis. *Advances in Language and Literary Studies*, 7(2), 76-83. doi: 10.7575/aiac.all.v.7n.2p.76.
- Jin, B., Kim, J., & Baumgartner, L. M. (2019). Informal learning of older adults in using mobile devices: A review of the literature. *Adult Education Quarterly*, 69(2), 120-141.
- Kajornboon, A. B. (2005). Using interviews as research instruments. *E-journal for Research Teachers*, 2(1), 1-9.
- Karasimos, A. (2022). The Battle of Language Learning Apps: A cross-platform overview. *Research Papers in Language Teaching and Learning*, 12(1), ISSN: 1792-1244.
- Karunasri, A., Damodar, G., & Ravikumar, P. (2022). Conveniences and Complexities in the Domain of Mobile Assisted Language Learning at the Backdrop of Pandemic Situation. *International Journal of English and Education*, 11(1), 52-56.
- Kashanizadeh, I., & Shahrokhi, M. (2021). The use of mobile to boost Iranian EFL learners' grammar knowledge: The case of Grammar Learning Application in focus. *Journal of Applied Linguistics and Language Research*, 8(1), 1–10. <https://www.jallr.com/index.php/JALLR/article/download/1150/pdf1150>
- Khaddage, F., Müller, W., & Flintoff, K. (2016). Advancing mobile learning in formal and informal settings via Mobile App Technology: where to from here, and how? *Educational Technology & Society*, 19(3), 16-27.
- Khodabandeh, F., & Soleimani, H. (2017). The effect of MALL-based tasks on EFL Learners' grammar learning. *Teaching English with Technology*, 17(2), 29-41.
- Kim, D., & Kim, D. J. (2012). Effect of screen size on multimedia vocabulary learning. *British Journal of Educational Technology*, 43(1), 62-70.
- Kim, D. D., Rueckert, D., Kim, D. D., & Seo, D. (2013). Students' perceptions and experiences of mobile learning. *Language Learning & Technology*, 17(3), 52–73.

- Kim, G. M., & Lee, S. J. (2016). Korean students' intentions to use mobile-assisted language learning: Applying the technology acceptance model. *International Journal of Contents*, 12(3), 47-53. <http://dx.doi.org/10.5392/IJoC.2016.12.3.047>
- Kinash, S., Brand, J., & Mathew, T. (2012). Challenging mobile learning discourse through research: Student perceptions of Blackboard Mobile Learn and iPads. *Australasian Journal of Educational Technology*, 28(4), 640-655.
- Klimova, B., & Al-Obaydi, L. H. (2023). Use of mobile applications for foreign language learning among university students: Needs and functions. *International Journal of Interactive Mobile Technologies*, 17(12), 28-39
- Klopfer, E.; K. Squire, and H. Jenkins. (2002). Environmental Detectives: PDAs as a window into a virtual simulated world. In *Proceedings of IEEE International Workshop on Wireless and Mobile Technologies in Education*. Vaxjo, Sweden: IEEE Computer Society, 95-98
- Koehler, M. J., Mishra, P., Kereluik, K., Shin, T. S., & Graham, C. R. (2014). The technological pedagogical content knowledge framework. *Handbook of research on educational communications and technology*, 101-111.
- Kohnke, L. (2020). Exploring learner perception, experience and motivation of using a mobile app in L2 vocabulary acquisition. *International Journal of Computer-Assisted Language Learning and Teaching (IJCALLT)*, 10(1), 15-26.
- Koole, M. (2006). *The framework for the rational analysis of mobile education (FRAME) model: An evaluation of mobile devices for distance education*. Doctoral dissertation, Athabasca University.
- Kramarski, B., & Gutman, M. (2006). How can self-regulated learning be supported in mathematical E-learning environments? *Journal of Computer Assisted Learning*, 22(1), 24-33.
- Krivoruchko, V. A., Raissova, A. B., Makarikhina, I. M., Yergazanova, G. D., & Kazhmuratova, B. R. (2015). Mobile-assisted learning as a condition for effective development of engineering students' foreign language competence. *International Education Studies*, 158–168.

- Kukulska-Hulme, A., & Traxler, J. (2005). *Mobile learning: A handbook for educators and trainers*. London: Routledge
- Kukulska-Hulme, A., Traxler, J., & Pettit, J. (2007). Designed and user-generated activity in the mobile age. *Journal of Learning Design*, 2(1), 52-65.
- 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.
- Kukulska-Hulme, A. (2009). Will mobile learning change language learning? *ReCALL*, 21(2), 157-165.
- Kukulska-Hulme, A., & Bull, S. (2009). Theory-based support for mobile language learning: Noticing and recording. *International Journal of Interactive Mobile Technologies (iJIM)*, 3(2), 12–18.
- Kukulska-Hulme, A. (2010). Learning cultures on the move: Where are we heading? *Educational Technology & Society*, 13(4), 4-14.
- Kukulska-Hulme, A. (2012). Mobile-assisted language learning. In C. Chapelle (Ed.), *The encyclopedia of applied linguistics*, 3701-3709.
- Kuru Gönen, S. İ., & Zeybek, G. (2022). Training on multimodal mobile-assisted language learning: a suggested model for pre-service EFL teachers. *Computer Assisted Language Learning*, 1-22.
- Kuznekoff, J. H., & Titsworth, S. (2013). The impact of mobile phone usage on student learning. *Communication Education*, 62(3), 233-252.
- Kvale, D. (1996). *Interviews*. London: SAGE Publications
- Lai, Y., Saab, N., & Admiraal, W. (2022). University students' use of mobile technology in self-directed language learning: Using the integrative model of behavior prediction. *Computers & Education*, 179, 104413.
- Lashari, A. A., Abbasi, F. N., Kurd, S. A., Mirjat, M. A., Mehmood, T., & Ahmad, S. (2023). The impact of mobile assisted language learning (MALL) on ESL students' learning. *Onomázein*, 60, 137-148.

- Lee, H., Parsons, D., Kwon, G., Kim, J., Petrova, K., Jeong, E., & Ryu, H. (2016). Cooperation begins: Encouraging critical thinking skills through cooperative reciprocity using a mobile learning game. *Computers & Education*, 97, 97-115.
- Levy, M. (1991). Integrating computer assisted language learning (CALL) into a communicative writing course. *On-CALL*, 6(1), 11-18.
- Lewis, C. C., Fretwell, C. E., Ryan, J., & Parham, J. B. (2013). Faculty use of established and emerging technologies in higher education: A unified theory of acceptance and use of technology perspective. *International Journal of Higher Education*, 2(2), 22-34. <https://doi.org/10.5430/ijhe.v2n2p22>
- Li, Q. (2008). Mobile enhanced learning: Application model and practice. In *Computer Science and Software Engineering, 2008 International Conference on IEEE*, 5, 694-697.
- Losi, R. V. (2022). Students' perceptions on mobile-assisted language learning (MALL) in EFL class: An overview of altissia usage. *Jurnal Pamator*, 15(1), 25-33.
- Lu, M. (2008). Effectiveness of vocabulary learning via mobile phone. *Journal of Computer Assisted Learning*, 24(6), 515-525.
- Luo, Y., & Watts, M. (2022). Exploration of university students' lived experiences of using smartphones for English language learning. *Computer Assisted Language Learning*, 37(4), 608–633. <https://doi.org/10.1080/09588221.2022.2052904>
- Ma, Q. (2017). A multi-case study of university students' language-learning experience mediated by mobile technologies: A socio-cultural perspective. *Computer Assisted Language Learning*, 30(3–4), 183–203.
- Magal-Royo, T., Gimenez-Lopez, J. L., Pairy, B., Garcia-Laborda, J., & Gonzalez-del Rio, J. (2011). *Multimodal application for foreign language teaching [Paper presentation]*. Interactive Collaborative Learning (ICL), 2011 14th International Conference IEEE, 145–148.
- Marchewka, J. T., & Kostiwa, K. (2007). An application of the UTAUT model for understanding student perceptions using course management software. *Communications of the IIMA*, 7(2), 93-95.

- Martin, F., & Ertzberger, J. (2013). Here and now mobile learning: An experimental study on the use of mobile technology. *Computers & Education*, 68, 76-85
- Masrom, M. (2007). *Technology Acceptance Model and E-learning*. 12th International Conference on Education, Sultan Hassanah Bolkiah Institute of Education Universiti Brunei Darussalam 21-24 May 2007, 2–3.
- Miangah, T. M. & Nezarat, A. (2012). Mobile-Assisted Language Learning, *International Journal of Distributed and Parallel Systems (IJDP)*, 3(1), 310
- Moghari, M. H., & Marandi, S. S. (2017). Triumph through texting: Restoring learners' interest in grammar. *ReCALL*, 29(3), 357-372.
- Mospan, N. (2018). Mobile teaching and learning English—A multinational perspective. *Teaching English with Technology*, 18(3), 105-125.
- Motiwalla, L. F. (2007). Mobile learning: A framework and evaluation. *Computers & Education*, 49(3), 581–596.
- Murugan, A., & Teoh, G. B. S. (2022). The Effectiveness of Mobile-Assisted Language Learning (MALL) via smartphone applications for tertiary ESL learners. *Journal of Contemporary Social Science and Education Studies (JOCSSSES)*, 2(2), 99-113.
- Mutiarasari, M. I., Ngadiso & Kristina, D. (2020) Indonesian learners' perception on the usage of mobile applications in writing skill, *Leksika*, 14(1), 36-38
- Nah, K. C., White, P. & Sussex, R. (2008). The potential of using a mobile phone to access the internet for learning EFL listening skills within a Korean context. *ReCALL*, 20(3), 331-347.
- Naismith, L., Lonsdale, P., Vavoula, G., & Sharples, M. (2004). *NESTA Futurelab Report 11: Literature review in mobile technologies and learning*. Bristol, UK: NESTA Futurelab. Retrieved from <https://www.nfer.ac.uk/publications/futl15/futl15.pdf>
- Nariyati, N. P. L., & Pratiwi, N. P. A. (2020). EFL pre-service teachers' perception toward the use of mobile assisted language learning in teaching English. *International Journal of Language Education*, 4(1), 38-47.
- Nistor, N., Lerche, T., Weinberger, A., Ceobanu, C., & Heymann, O. (2014). Towards the integration of culture into the Unified Theory of Acceptance and Use of Technology. *British Journal of Educational Technology*, 45(1), 36-55.

- Nuraeni, C., Carolina, I., Supriyatna, A., Widiati, W., & Bahri, S. (2020). Mobile-Assisted Language Learning (MALL): Students' Perception and Problems towards Mobile Learning in English Language. *Journal of Physics: Conference Series*, 1641(1).
- Norton, B., & Pavlenko, A. (Eds.). (2004). *Gender and English language learners*. Alexandria, VA: Teachers of English to Speakers of Other Languages.
- O'Malley, C., Vavoula, G., Glew, J., Taylor, J., Sharples, M., & Lefrere, P. (2003). *Guidelines for learning /teaching/ tutoring in a mobile environment*. Mobile project deliverable. Retrieved on 15.07.2023 from <https://hal.science/hal-00696244/>
- Oreški, P., Mikulan, K., & Legac, V. (2018). *Benefits and deficiencies of mobile foreign language learning applications*. In Ireland International Conference on Education (IICE-2018 Proceedings), 30-35.
- Oz, H. (2015). An investigation of pre service english teachers' perceptions of mobile assisted language learning. *English Language Teaching*, 8(2), 22–34.
- Ozdamli, F., & Cavus, N. (2011). Basic elements and characteristics of mobile learning. *Procedia-Social and Behavioral Sciences*, 28, 937-942.
- Ozdamli, F., & Uzunboyulu, H. (2015). M-learning adequacy and perceptions of students and teachers in secondary schools. *British Journal of Educational Technology*, 46(1), 159-172.
- Ozer, O., & Kılıç, F. (2018). The effect of mobile-assisted language learning environment on EFL students' academic achievement, cognitive load and acceptance of mobile learning tools. *Eurasia Journal of Mathematics, Science and Technology Education*, 14(7), 2915-2928. <https://doi.org/10.29333/ejmste/90992>
- Özhan, S. (2023). *Learners' perceptionstoward using social media and technological applications in EFL learning in Turkey*. Unpublished Master's Thesis, Karabuk University.
- Pachler, N. (2010). *Mobile learning: Structures, agency, practices*. Boston, MA: Springer Verlag.
- Park, S. Y., Nam, M. W., & Cha, S. B. (2012). University students' behavioral intention to use mobile learning: Evaluating the technology acceptance model. *British Journal of Educational Technology*, 43(4), 592-605.

- Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.), London:Sage.
- Pebiana, P., & Febria, D. (2023). The Increasing Student Motivation for Speaking Skills with MALL (Mobile-Assisted Language Learning). *SALEE: Study of Applied Linguistics and English Education*, 4(2), 424-439.
- Persson, V., & Nouri, J. (2018). A systematic review of second language learning with mobile technologies. *International Journal of Emerging Technologies in Learning*, 13(2), 188–210.
- Petersen, S., Procter-Legg, E., Cacchione, A., Fominykh, M., & Divitini, M. (2012, September). Creativity and mobile language learning. In *Proceedings of the 7th European Conference on Technology Enhanced Learning*, Saarbrücken, Germany, September 2012. Berlin: Springer-Verlag.
- Pingmuang, P., & Koraneekij, P. (2022). Mobile-Assisted Language Learning using Task-Based Approach and Gamification for Enhancing Writing Skills in EFL Students. *Electronic Journal of e-Learning*, 20(5), 623-638.
- Polat, M. (2016). *Emerging technologies in language pedagogy: Language learners' perceptions through the lenses of innovation diffusion and user intention theories*. Doctoral dissertation, The University of Arizona.
- Poláková, P., & Klímová, B. (2019). Mobile technology and Generation Z in the English language classroom—A preliminary study. *Education Sciences*, 9(3), 203.
- Prahani, B., Jatmiko, B., Hariadi, B., Sunarto, D., Sagirani, T., Amelia, T., & Lemantara, J. (2020). Blended web mobile learning (BWML) model to improve students' higher order thinking skills. *International Journal of Emerging Technologies in Learning (iJET)*, 15(11), 42-55.
- Puebla, C., Fievet, T., Tsopanidi, M., & Clahsen, H. (2022). Mobile-assisted language learning in older adults: Chances and challenges. *ReCALL*, 34(2), 169-184.
- Puentedura, R. R. (2013). *SAMR: Getting to transformation*. Retrieved May, 31, 265-283.
- Quinn, C. N. (2011). *The mobile academy: M-learning for higher education*. John Wiley & Sons.

- Rahmanu, I. W. E. D., & Santosa, M. H. (2022). Exploring polytechnic learners' perception on multimodality in mall in business administration instruction. *D nam ka Pendidikan*, 17(1), 12-24.
- Rick, A., Sam, B., & Jansen, W. (2014). Guidelines on mobile device forensics. *National Institute of Standards and Technology*, U.S. Department of Commerce. <https://doi.org/10.6028/NIST.SP.800-101r1>
- Romero, R., Zarraonandia, T., Aedo, I., & Díaz, P. (2010). Designing usable educational material for English courses supported by mobile devices. In H. Lackner & R. Michel (Eds.), *HCI in work and learning, life and leisure: 6th Symposium of the Workgroup Human-Computer Interaction and Usability Engineering, USAB 2010, Klagenfurt, Austria, November 4-5, 2010. Proceedings* (pp. 373-383). Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-11762-6_33
- Rosell-Aguilar, F. (2007). Top of the Pods - In search of a podcasting “pedagogy” for language learning. *Computer Assisted Language Learning*, 20(5), 471–492.
- Rosell-Aguilar, F. (2009). Podcasting for language learning: Re-examining the potential. In Lomicka, L., & Lord, G. (Eds.), *The next generation: Social networking and online collaboration in foreign language learning* (pp. 13-34). Equinox Publishing.
- Rosell-Aguilar, F. (2013). Podcasting for language learning through iTunes U: The learner's view. *Language Learning & Technology*, 17(3), 74–93. Retrieved from <http://ilt.msu.edu/issues/october2013/rosellaguilar.pdf>
- Rosell-Aguilar, F. (2018). Autonomous language learning through a mobile application: A user evaluation of the busuu app. *Computer Assisted Language Learning*, 31(8), 854–881. [doi:10.1080/09588221.2018.1456465](https://doi.org/10.1080/09588221.2018.1456465)
- Rysbayeva, G., Berdaliyeva, A., Kuralbayeva, A., Baiseitova, N., Uspabayeva, A., Zhapparbergenova, E., & Poshayeva, G. (2022). Students' attitudes towards mobile learning. *International Journal of Engineering Pedagogy*, 12(2), 129–140. <https://doi.org/10.3991/ijep.v12i2.29325>
- Sad, S. N., & Göktas, O. (2014). Preservice teachers' perceptions about using mobile phones and laptops in education as mobile learning tools. *British Journal of Educational Technology*, 45(4), 606–618.

- Sandberg, J., Maris, M., & de Geus, K. (2011). Mobile English learning: An evidence-based study with fifth graders. *Computers & Education*, 57(1), 1334–1347.
- Saran, M. & Seferoğlu, G. (2010). Supporting foreign language vocabulary learning through multimedia messages via mobile phones. *Hacettepe University Journal of the Faculty of Education*, 38(1), 252-266.
- Sari, N., & Sulisty, T. (2022). EFL teachers' perspectives on mobile-assisted language learning (MALL) resources for vocational high school students. *Journey: Journal of English Language and Pedagogy*, 5(1), 80-90.
- Savaş, P. (2014). Tablet PCs and instructional tools in English as a foreign language education. *The Turkish Online Journal of Educational Technology*, 13(1). 217-221
- Serin, O. (2012). Mobile learning perceptions of the prospective teachers (Turkish Republic of Northern Cyprus sampling). *Turkish Online Journal of Educational Technology-TOJET*, 11(3), 222-233.
- Setiyanti, A., Sumantri, M. S., Dewanti, R., & Lustyantie, N. (2022). Enhancing Undergraduate Students' Speaking Performance through Mobile-Assisted Learning Language. *Journal of Positive School Psychology*, 6(2), 3815-3822.
- Sharples, M., Taylor, J., & Vavoula, G. (2005). Towards a theory of mobile learning. *Proceedings of m Learn*, 1(1), 1-9.
- Sufi, E., & Shalmani, H. B. (2018). The effects of Tflat pronunciation training in Mall on the pronunciation ability of Iranian EFL learners. *European Journal of Foreign Language Teaching*, 3(2), 1-17.
- Sung, Y. T., Chang, K. E., & Yang, J. M. (2015). How effective are mobile devices for language learning? A meta-analysis. *Educational research review*, 16, 68-84.
- Sung, Y. T., Chang, K. E., & Liu, T. C. (2016). The effects of integrating mobile devices with teaching and learning on students' learning performance: A meta-analysis and research synthesis. *Computers & Education*, 94, 252-275.
- Sutrisna, I. P. E., Ratminingsih, N. M., & Artini, L. P. (2018). Mall-based English instruction. *JPI (Jurnal Pendidikan Indonesia)*, 7(1), 30-40.

- Song, Y., & Fox, R. (2008). Using PDA for undergraduate student incidental vocabulary testing. *European Association for Computer Assisted Language Learning*, 20(3), 290-314.
- Stockwell, G. (2010). Using mobile phones for vocabulary activities: examining the effect of the platform. *Language Learning & Technology*, 14(2), 95–110
- Suneetha, Y. (2013). MALL (Mobile Assisted Language Learning): A paradise for English language learners. *International Journal of English Language & Translation Studies*, 1(2), 91-99.
- Sutrisna, I. P. E., Ratminingsih, N. M., & Artini, L. P. (2018). Mall-based English instruction. *Jurnal Pendidikan Indonesia*, 7(1), 30–40.
- Şad, S. N., Özer, N., Yakar, Ü., & Öztürk, F. (2022). Mobile or hostile? Using smartphones in learning English as a foreign language1. *Computer Assisted Language Learning*, 35(5-6), 1031-1057.
- Tanrıku, F. (2021). The use of face-to-face and mobile assisted peer tutoring in solving the language problems of Syrian refugees. *Mentoring & tutoring: Partnership in Learning*, 29(2), 215-237.
- Teeter, J. (2017). Improving motivation to learn English in Japan with a self-study shadowing application. *Languages*, 2(4), 1-9. [doi: 10.3390/languages2040019](https://doi.org/10.3390/languages2040019).
- Thornton, P., & Houser, C. (2005). Using mobile phones in English education in Japan. *Journal of Computer Assisted Learning*, 21(3), 217-228.
- Tiliç, G. (2016). Interactive mobile applications which used in foreign language learning: Duolingo example. *Eğitim ve Öğretim Araştırmaları Dergisi*, 5, 303-314.
- Ting, Y. R. (2005). *Mobile learning: Current trend and future challenges*. Proceedings of the Fifth International Conference on Advanced Learning Technologies, Los Alamitos, CA: IEEE Computer Society Press
- Traxler, J. (2005). Defining mobile learning. In *IADIS International Conference Mobile Learning Proceedings*, 261-266.
- Trifonova, A., Knapp, J., Ronchetti, M., & Gamper, J. (2004). *Mobile ELDIT: Challenges in the transition from an e-learning to an m-learning system*. University of Trento.

- Trinder, J. (2007). Mobile technologies and systems. In *Routledge eBooks*, 23–40.
<https://doi.org/10.4324/9780203003428-10>
- Tutal, C. (2016). *The Perspectives of English as a Foreign Language (EFL) Instructors on the use of Mobile Applications as Educational Tools*. Master of Arts Thesis, Bahçeşehir University.
- Türker, M. S. (2022). Syrian Refugees' Acceptance and Use of Mobile Learning Tools during the COVID-19 Pandemic. *Educational Policy Analysis and Strategic Research*, 17(1), 164-189
- Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly*, 157-160.
- Vo, T. L. (2023). EFL Tertiary learners' perceptions on ease of use of portable devices in English mobile learning at a University in Ho Chi Minh City, Vietnam. *AsiaCALL Online Journal*, 14(2), 37-46.
- Vota, W. (2011). Tablets are good, content is better, and teachers are the best educational ICT investment. *Tablet Computers in Education*. Retrieved in 15.01.2024 from <http://edutechdebate.org/tablet-computers-in-education/tablets-are-good-content-is-better-and-teachers-are-the-best-educational-ict-investment>
- Wagner, K. (2021). Using Instagram for language learning. *University of Hawaii National Foreign Language Resource Center*, 2(1), 154-164.
- Wang, S., & Higgins, M. (2006). Limitations of mobile phone learning. *The JALT CALL Journal*, 2(1), 3–14.
- Weng, T.-H., & Chen, Y.-J. (2015). Students' Perceptions Towards the Use of Smart Phone Applications for English Learning. *International Journal of Educational Science and Research (IJESR)*, 5(3), 1–10.
- Welsh, K. E., Mauchline, A. L., Powell, V., France, D., Park, J. R., & Whalley, W. B. (2015). Student perceptions of iPads as mobile learning devices for fieldwork. *Journal of Geography in Higher Education*, 39(3), 450–469.
<https://doi.org/10.1080/03098265.2015.1066315>

- Widiana, P. A., Made Hery Santosa, S. P., & Myartawan, I. P. N. W. (2017). Tenth grade students' perception toward Mobile Assisted Language Learning (Mall) in learning English in buleleng regency in academic year 2017/2018. *Jurnal Pendidikan Bahasa Inggris undiksha*, 5(2), 1-13.
- Wulandari, M. (2019). Improving EFL learners' speaking proficiency through instagram vlog. *LLT Journal: A Journal on Language and Language Teaching*, 22(1), 111-125. doi:10.24071/llt.2019.220111.
- Wu, Q. (2015). Pulling Mobile Assisted Language Learning (MALL) into the Mainstream: MALL in Broad Practice. *Plos One*, 10(5), e0128762. <https://doi.org/10.1371/journal.pone.0128762>
- Yang, W., Prasad, M. R., & Xie, T. (2013, March). A grey-box approach for automated GUI-model generation of mobile applications. *In International Conference on Fundamental Approaches to Software Engineering*, 250-265
- Yıldırım, N. (2012). *Mobile learning in foreign language education with educational games*. Unpublished Masters Thesis, Firat University, The Institute of Educational Sciences.
- Yıldız, S. (2020). Use of mobile device language learning applications by turkish speaking adults: A survey study. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*, 20(3), 1442–1458. <https://doi.org/10.17240/aibuefd.2020..-660171>
- Yudhiantara, R. A., & Nasir, I. A. (2017). Toward mobile-assisted language learning (mall): reaping mobile phone benefits in classroom activities. *Register Journal*, 10(1), 12–28.
- Zhang, K., & Yu, Z. (2022). Extending the UTAUT model of gamified English vocabulary applications by adding new personality constructs. *Sustainability*, 14(10), 6259. <https://doi.org/10.3390/su14106259>
- Zou, B., & Yan, X. (2014). Chinese students' perceptions of using mobile devices for English learning. *International Journal of Computer-Assisted Language Learning and Teaching (IJCALLT)*, 4(3), 20-33. <https://doi.org/10.4018/ijcallt.2014070102>

APPENDICES

Appendix 1. Questionnaire –English Version

Dear Participant,

This questionnaire investigates the attitudes and perceptions of high school students in Yenışehir, Diyarbakir towards utilizing mobile assisted applications for learning English. The findings will only be used for academic purposes in my research which is employed in my MA thesis in Dicle University.

You are asked to read the questions carefully and choose the option that fits you most while filling in the questionnaire. There is no need to write your name. Considering the questionnaire is being conducted for a scientific research, your sincere replies to all of the questions will contribute to my study in a great way. Thank you for your participation.

*****@gmail.com **Zelal Coşkun**

Please choose the most appropriate alternative for you

1. Gender

Female () Male ()

2. Age

1.13 ()

2.14 ()

3.15 ()

4.16 ()

5.17 ()

3. Class

9 th grade ()

10 th grade ()

11 th grade ()

4. Type of School

Anatolian High School ()

Science High School ()

Vocational High School ()

ReligiousVocational High School ()

5. Do you have a smartphone ? Yes() No()

6. Do you have a regular Internet access which you can use all the time?

Yes () No()

7. How do you usually access to the Internet?

1. tablet ()

3. PDA ()

2. smartphone ()

4. Laptop/ PC ()

8. How long do you connect to the internet ?

1. Less than 1 hour a day ()

5. 4 hours a day ()

2. 1 hour a day ()

6. 5 hours a day ()

3. 2 hours a day ()

7. More than 5 hours a day ()

4. 3 hours a day ()

9. Do you use mobile applications for language learning?

Yes () No ()

10. Which mobile applications do you use for improving English?

.....
.....

Read these items in questionnaire and choose suitable option for your idea and put a X for each statement

1 = strongly disagree

5 = agree

2 = disagree

6 = strongly agree

3 = slightly disagree

4 = slightly agree

	1	2	3	4	5	6
1. Using mobile devices helps maintain and enhance my motivation and interest in language learning.						
2. Using mobile devices can enhance the language learning environment and experience.						
3. Using mobile devices can improve my language learning performance in class.						
4. Using mobile devices can improve the effectiveness of language learning outside the class						
5. I find it useful to use mobile devices for language learning.						
6. Using mobile devices to learn a foreign language is easy for me.						
7. I find it convenient to use mobile devices for listening practice.						
8. I find it convenient to use mobile devices for speaking practice						
9. I find it convenient to use mobile devices for reading practice.						
10. I find it convenient to use mobile devices for writing practice						
11. It is easy for me to find and use mobile apps for learning a foreign language.						

	1	2	3	4	5	6
12.It is easy for me to learn to use a mobile device						
13. People who are influential to me believe that I should use mobile devices for language learning.						
14. People who are important to me believe that I should use mobile devices for language learning.						
15. I use mobile devices for language learning if my instructors support and recommend it.						
16. My friends' recommendation influences my decision to use mobile devices for language learning.						
17.I have easy access to a mobile device.						
18.I can have easy and regular access to internet, via Wi-Fi or mobile data, on my mobile devices.						
19.I can have access to many mobile apps to learn foreign languages on my mobile devices						
20.I have the required knowledge and skills to use mobile devices for language learning.						
21.I can get technical support if I have problems learning foreign languages on mobile devices.						
22.I know a convenient place where I can get access to Wi-Fi for language learning on mobile devices.						
23.I intend to use/continue to use mobile devices for language learning.						
24. I guess I would use mobile devices to learn foreign languages more regularly in the future.						
25.I have a plan to use mobile devices to learn foreign languages more regularly.						
26. I will recommend my friends to use mobile devices to learn foreign languages.						
27.Using mobile devices to learn a foreign language is a good idea.						
28.I would like to use mobile devices to learn foreign languages						
29.Using mobile devices to learn a foreign language is fun.						
30.Using mobile devices for language learning in the classroom is a good idea						
31.Using mobile devices for language learning outside the classroom is a good idea.						

Do you want to volunteer in participating in an interview about MALL? If yes,
please write your name and phone number.....

Appendix 2. Questionnaire – Turkish Version

Sayın Katılımcı,

Bu anket Diyarbakır, Yenişehir'deki lise öğrencilerinin İngilizce öğrenmek için mobil destekli uygulamaları kullanmaya yönelik tutum ve algılarını incelemektedir. Bulgular, Dicle Üniversitesi'nde yüksek lisans tezimde kullandığım araştırmamda sadece akademik amaçlarla kullanılacaktır. Anketi doldururken soruları dikkatlice okumanız ve size en uygun seçeneği işaretlemeniz istenmektedir. Adınızı yazmanıza gerek yoktur. Anketin bilimsel bir araştırma için yapıldığı düşünülürse, tüm sorulara içtenlikle vereceğiniz cevaplar çalışmaya büyük katkı sağlayacaktır. Katıldığınız için teşekkürler.

*****@gmail.com **Zelal Coşkun**

ANKET

A. Demografik Bilgiler

Lütfen size uygun olan seçeneği işaretleyin

1. Cinsiyet

Kadın () Erkek ()

2. Yaş

1.13 ()

2. 14 ()

3.15 ()

4.16 ()

5. 17 ()

3. Sınıf Seviyesi

9.Sınıf ()

10. Sınıf ()

11.Sınıf ()

4. Okul Türü

Anadolu Lisesi ()

Fen Lisesi ()

Meslek Lisesi ()

Anadolu İmam Hatip Lisesi ()

5. Akıllı telefonunuz var mı? Evet () Hayır ()

6. Tüm gün kullanabileceğiniz düzenli bir internet erişiminiz var mı ?

Evet () Hayır ()

7.İnternete genellikle nasıl erişirsiniz?

tablet ()

Cep Bilgisayarı ()

akıllı telefon ()

Dizüstü bilgisayar/kişisel bilgisayar ()

8. İnternete günde ne kadar süre bağlıyorsunuz?

Günde 1 saatten az ()

Günde 4 saat ()

Günde 1 saat ()

Günde 5 saat ()

Günde 2 saat ()

Günde 5 saatten fazla ()

Günde 3 saat ()

9. Dil öğrenmek için cep telefonu uygulamalarını kullanıyor musunuz ?

Evet () Hayır ()

10. İngilizcenizi geliştirmek için hangi cep telefonu uygulamalarını kullanıyorsunuz ?

.....
.....

B. Tutum Anketi

Anketteki bu maddeleri okuyun ve fikriniz için uygun seçeneği seçin ve her madde için X işaretleyiniz.

1 = kesinlikle katılmıyorum

4 = kısmen katılıyorum

2= katılmıyorum

5 = katılıyorum

3 = kısmen katılmıyorum

6 = kesinlikle katılıyorum

	1	2	3	4	5	6
Performans Beklentisi						
1. Mobil cihazları kullanmak, dil öğrenmeye olan ilgimi ve motivasyonumu korumama ve artırmama yardımcı oluyor.						
2. Mobil cihazları kullanmak, dil öğrenme ortamını ve deneyimini geliştirebilir.						
3. Mobil cihazları kullanmak sınıfta dil öğrenme performansımı arttırabilir.						
4. Mobil cihazları kullanmak, sınıf dışında dil öğreniminin etkinliğini arttırabilir						
5. Dil öğrenimi için mobil cihazları kullanmayı faydalı buluyorum.						
ÇabaBeklentisi						
6. Yabancı dil öğrenmek için mobil cihazları kullanmak benim için kolaydır.						
7. Dinleme alıştırmaları için mobil cihazları kullanmayı uygun buluyorum.						
8. Konuşma pratiği için mobil cihazları kullanmayı uygun buluyorum.						
9. Okuma pratiği için mobil cihazları kullanmayı uygun buluyorum.						
10. Yazma pratiği için mobil cihazları kullanmayı uygun buluyorum.						
11. Yabancı dil öğrenmek için mobil uygulamaları bulmak ve kullanmak benim için kolaydır.						
12. Mobil cihaz kullanmayı öğrenmek benim için kolay						
13. Beni etkileyen kişiler, dil öğrenimi için mobil cihazları kullanmam gerektiğine inanıyor.						
14. Benim için önemli olan kişiler, dil öğrenimi için mobil cihazları kullanmam gerektiğine inanırlar.						
15. Öğitmenlerim destekliyorsa ve öneriyorsa dil öğrenimi için mobil cihazları kullanırım.						
16. Arkadaşlarımla tavsiyesi, dil öğrenimi için mobil cihazları kullanma kararımı etkiliyor.						
Kolaylaştırıcı Koşullar						
17. Bir mobil cihaza kolayca erişebiliyorum.						
18. Mobil cihazlarımda Wi-Fi veya mobil data üzerinden internete kolay ve düzenli erişim sağlayabiliyorum.						
19. Mobil cihazlarımda yabancı dil öğrenmek için birçok mobil uygulamaya erişebiliyorum.						
20. Dil öğreniminde mobil cihazları kullanmak için gerekli bilgi ve beceriye sahibim.						

21. Mobil cihazlarda yabancı dil öğrenmede sorun yaşarsam teknik destek alabilirim.						
22. Mobil cihazlarda dil öğrenimi için Wi-Fi'ye erişebileceğim uygun bir yer biliyorum.						
Davranışsal Niyet						
23. Mobil cihazları dil öğrenimi için kullanmayı/ kullanmaya devam etmeyi düşünüyorum.						
24. Gelecekte daha düzenli yabancı dil öğrenmek için mobil cihazları sanırım kullanırdım						
25. Yabancı dilleri daha düzenli öğrenmek için mobil cihazları kullanmayı planlıyorum.						
26. Yabancı dil öğrenmek için arkadaşlarıma mobil cihazları kullanmalarını tavsiye edeceğim.						
Tutum						
27. Yabancı dil öğrenmek için mobil cihazları kullanmak iyi bir fikirdir.						
28. Yabancı dil öğrenmek için mobil cihazları kullanmak istiyorum.						
29. Yabancı dil öğrenmek için mobil cihazları kullanmak eğlencelidir.						
30. Sınıfta dil öğrenimi için mobil cihazları kullanmak iyi bir fikirdir						
31. Sınıf dışında dil öğrenimi için mobil cihazları kullanmak iyi bir fikirdir.						

Mobil destekli dil öğrenimi hakkında bir görüşme yapmak için gönüllü olmak ister misiniz? Cevabınız evet ise lütfen adınızı ve telefon numaranızı yazınız

.....

Appendix 3. Sample Interview Questions - English Version

Do you have a smartphone? Do you actively use it?

What are your purposes for connecting to the internet?

Do you use mobile apps for language learning?

Which mobile application(s) do you use for language learning?

Which English skills do you aim to improve by using your mobile applications?

What are the advantages and disadvantages of using mobile apps for language learning?

Do you think mobile apps should be utilized in class? (before the lesson, during the lesson, after the lesson, or at the end of the lesson?)

Do you think mobile applications should be integrated into language learning, and why?

Would you like to add anything else?

Appendix 4. Sample Interview Questions - Turkish Version

Akıllı telefonunuz var mı? Aktif olarak kullanıyor musunuz?

İnterneti kullanma amaçlarınız nelerdir?

Dil öğrenmek için mobil uygulamaları kullanıyor musunuz?

Dil öğrenimi için hangi mobil uygulama(lar)ı kullanıyorsunuz?

Mobil uygulamaları kullanarak hangi İngilizce becerilerinizi geliştirmeyi hedefliyorsunuz?

Dil öğrenimi için mobil uygulama kullanmanın avantajları ve dezavantajları nelerdir?

Sizce mobil uygulamalar sınıfta kullanılmalı mı? (dersten önce mi, ders sırasında mı, dersten sonra mı, yoksa dersin sonunda mı)?

Sizce mobil uygulamalar dil öğrenimine entegre edilmeli midir ve neden?

Ekleme istediğiniz başka bir şey var mı?

Appendix 5. Consent From the Ethical Committee in Dicle University

Evrak Tarih ve Sayısı: 26/08/2022-343908



T.C.
DİCLE ÜNİVERSİTESİ REKTÖRLÜĞÜ
Hukuk Müşavirliği



Sayı : E-14679147-663.05-343908
Konu : İnceleme (Projenin Değerlendirilmesi)

26/08/2022

Sayın ZELAL ÇOŞKUN

"Lise Öğrencilerinin İngilizce Dil Öğrenimi İçin Mobil Cihazları Kabul Etmelerinin ve Kullanmalarının İncelenmesi" başlıklı çalışmanız Yükseköğretim Kurumları Bilimsel Çalışma ve Yayın Etiği Yönergesi uyarınca Üniversitemiz Sosyal ve Beşeri Bilimler Etik Kurulu Başkanlığı tarafından değerlendirilmiş olup söz konusu çalışmanın bilimsel etik açısından uygun olduğuna ilişkin Üniversitemiz Sosyal ve Beşeri Bilimler Etik Kurulu Başkanlığı kararı Üniversitemiz Rektörlük Makamının 25.08.2022 tarih ve 343223 sayılı Olur'u ile uygun görülmüştür.

Bilgilerini rica ederim.

Av. Rengin AVCI
Hukuk Müşaviri V.

Ek: İlgili Belgeler(1 sayfa)

Ek: İlgili Belgeler(1 sayfa)

Bu belge, güvenli elektronik imza ile imzalanmıştır.
Belge Doğrulama Kodu: BSRA8HT3B9 Pin Kodu: 23452 Belge Takip Adresi: <https://turkiye.gov.tr/ebd?eK=5539&eD=BSRA8HT3B9&eS=343908>
Adres: Dicle Üniversitesi Rektörlüğü, 21280-Diyarbakır Bilgi için: Erkan Seyrek
Telefon: +90 412 241 10 00 Faks: +90 412 241 10 56 Unvanı: Büro Personeli
e-Posta: gensek@dicle.edu.tr Elektronik Ağ: <http://www.dicle.edu.tr>
Kep Adresi: dicleuniversitesi@hs01.kep.tr Tel No: 2237

Bu belge, güvenli elektronik imza ile imzalanmıştır.

	DİCLE ÜNİVERSİTESİ SOSYAL VE BEŞERİ BİLİMLER ETİK KURULU PROJE ONAY BELGESİ FORMU (EK 4)
---	---

Üniversitemiz Ziya Gökalp Eğitim Fakültesi Yabancı Diller Eğitimi Anabilim Dalı İngiliz Dili Eğitimi Bölümü Öğrencilerinden ZELAL ÇOŞKUN'un "Lise Öğrencilerinin İngilizce Dil Öğrenimi İçin Mobil Cihazları Kabul Etmelerinin ve Kullanmalarının İncelenmesi" başlıklı çalışması, Dicle Üniversitesi Sosyal ve Beşeri Bilimler Etik Kurulu Yönergesi uyarınca değerlendirilmiştir.

SOSYAL VE BEŞERİ BİLİMLER ETİK KURULU KARARI (Etik Kurul tarafından doldurulacaktır)	
Başvuru formunun Etik Kurula ulaştığı tarih	26.07.2022/327539
Etik Kurul Karar toplantı tarihi ve karar sayısı	24.08.2022—204
☒ Proje etik açısından uygun bulunmuştur.	
☐ Proje etik açısından geliştirilmesi gerekmektedir. Açıklama:	
☐ Proje etik açısından uygun bulunmamıştır. Açıklama:	

Prof. Dr. H. Musa BAĞCI
BAŞKAN

Prof. Dr. Hasan TANRIVERDİ
ÜYE

Prof. Dr. Mehmet Mesut ERGİN
ÜYE

Prof. Dr. Kemal ÖZGEN
ÜYE

Prof. Dr. Yılmaz DEMİRHAN
ÜYE

Prof. Dr. Bahar BURTAN DOĞAN
ÜYE

Prof. Dr. Mehmet Halis ÖZER
ÜYE

ASLI GİBİDİR

HKM-FRM-499/00

Appendix 6. Consent From Ministry Of National Education For Conducting The Study



T.C.
DİYARBAKIR VALİLİĞİ
İl Millî Eğitim Müdürlüğü

Sayı : E-30769799-44-60604637
Konu : Araştırma İzni (Zelal ÇOŞKUN)

12.10.2022

DİCLE ÜNİVERSİTESİ REKTÖRLÜĞÜNE
(Öğrenci İşleri Daire Başkanlığı)

İlgi : 19/09/2022 tarih ve 357079 sayılı yazınız.

Üniversiteniz Eğitim Bilimleri Enstitüsü Yabancı Diller Eğitimi Anabilim Dalı İngiliz Dili Eğitimi Bilim Dalı Yüksek Lisans Öğrencisi Zelal ÇOŞKUN'nun "Lise Öğrencilerinin İngilizce Dil Öğrenimi İçin Mobil Cihazları Kabul Etmelerinin ve Kullanımlarının İncelenmesi" konulu araştırma çalışmasını İlimiz Yenişehir İlçesindeki Şehit Mehmet Mecit Yalçın Anadolu Lisesi, Farabi Mesleki ve Teknik Anadolu Lisesi, Rekabet Kurumu Fen Lisesi, Yenişehir Kız Anadolu İmam-Hatip Lisesi ve Diyarbakır Anadolu İmam Hatip Lisesinde öğrenim görmekte olan öğrencilere uygulama talebi 10.10.2022 tarih ve 60435891 sayılı müdürlük onayı ile uygun görülmüştür.

Bilgilerinize arz ederim.

Ali AKBAŞ
Müdür a.
Müdür Yardımcısı

Ek:

1- Müdürlük Onayı

Bu belge güvenli elektronik imza ile imzalanmıştır.

Adres : şehitlik mahallesi mehmet akif ersoy bulvarı eski eğitim fakültesi

Belge Doğrulama Adresi : <https://www.turkiye.gov.tr/meb-ebys>

binası

Bilgi için: BİNGÖL GÜLTEKİN

Telefon No : 0 (412) 322 22 35

Unvan : İçiş

E-Posta: argelli@meb.gov.tr

İnternet Adresi:

Faks:

Kep Adresi : meb@hs01.kep.tr

Bu evrak güvenli elektronik imza ile imzalanmıştır. <https://evrak.sorgu.meb.gov.tr> adresinden 321f-eb85-3365-89e4-7585 kodu ile teyit edilebilir.



Appendix 7. Consent From Yenişehir District National Education For Conducting The Study



T.C.
DİYARBAKIR VALİLİĞİ
İl Millî Eğitim Müdürlüğü

Sayı : E-30769799-44-60604692
Konu : Araştırma İzni (Zelal ÇOŞKUN)

12.10.2022

YENİŞEHİR KAYMAKAMLIĞINA
(İlçe Millî Eğitim Müdürlüğü)

Dicle Üniversitesi Eğitim Bilimleri Enstitüsü Yabancı Diller Eğitimi Anabilim Dalı İngiliz Dili Eğitimi Bilim Dalı Yüksek Lisans Öğrencisi Zelal COŞKUN'un "Lise Öğrencilerinin İngilizce Dil Öğrenimi İçin Mobil Cihazları Kabul Etmelerinin ve Kullanımlarının İncelenmesi" konulu araştırma çalışmasını ilimiz Yenişehir İlçesindeki Şehit Mehmet Mecit Yalçın Anadolu Lisesi, Farabi Mesleki ve Teknik Anadolu Lisesi, Rekabet Kurumu Fen Lisesi, Yenişehir Kız Anadolu İmam-Hatip Lisesi ve Diyarbakır Anadolu İmam Hatip Lisesinde öğrenim görmekte olan öğrencilere uygulama isteğinin uygun görüldüğüne dair 10.10.2022 tarih ve 60435891 sayılı müdürlük onayı ekte gönderilmiştir.

Söz konusu etkinliğin Türkiye Cumhuriyeti Anayasası, Millî Eğitim Temel Kanunu ile Türk Millî Eğitiminin Genel Amaçlarına uygun olarak ilgili yasal düzenlemelerde belirtilen ilke, esas ve amaçlara aykırılık teşkil etmeyecek şekilde 2022-2023 eğitim ve öğretim yılında denetimlerin İlçe Millî Eğitim Müdürlüğü ile ilgili okul Müdürlüğü tarafından yapılmak ve derslerin aksatılmaması, hijyen, sosyal mesafe ve maske kuralına uymak kaydıyla araştırma çalışmasının gönüllülük esasına bağlı olarak yapılması uygun görülmektedir.

Gereğini rica ederim.

Ali AKBAŞ
Vali a.
Müdür Yardımcısı

Ek:

- 1- Onay Yazısı (1 Sayfa)
- 2- Anket Belgeleri

Dağıtım:

Yenişehir İlçe Kaymakamlığı
(İlçe Millî Eğitim Müdürlüğü)

Bu belge güvenli elektronik imza ile imzalanmıştır.

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Appendix8. Author's Consent for Using the Questionnaire



Ngoc Hoi Vo 29.08.2022

Alicilar: ben ✓



Dear Zelal Coskun,

Please feel free to use the questionnaire for your research.

Kind regards,
Hoi

Subject: Taking your permission to use your questionnaire in your study