THE USER INTERFACE DESIGN OF MOBILE ASSISTED LANGUAGE LEARNING BASED APPLICATIONS

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PLAGIARISM

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ÖZET

Taşınabilir teknolojiler, internetin yayılması sayesinde, diğer çoğu alanda olduğu gibi dil öğrenimi alanında da gün geçtikçe önem kazanmaktadır. Son yıllarda dil öğrenimi amaçlı mobil uygulamalar mobil marketlerde yerini almaktadır. Tüm bunların arasında, katmanlı rastgele yöntemle, bu araştırmayı yürütmek amacıyla 8 mobil uygulama seçilmiştir ve 4 bölümden meydana gelen mülakatlar yoluyla kullanıcı arayüz tasarımı açısından 11 İngilizce öğretmeni tarafından değerlendirilmiştir. Buradan gelen veriler dil öğrenimi için hedefe yönelik bir mobil uygulamanın nasıl olması gerektiğini, seçilen uygulamalar arasında dil öğrenimi için hiç bir uygulamanın arayüz tasarıma sahip olup olmadığını ve dil öğrenimi amaçlı mobil uygulamaların hangi belirgin özelliklerin olacağını belirlemek için analiz yapılmıştır. Sürecin sonunda, İngilizce öğretmenleri dil öğrenimi amaçlı mobil uygulamaların tasarımına katkıda bulunan bir esaslar listesi önerisi sağlamışlardır. İlaveten, her uygulamanın kendine ait hedef kullanıcılarının, yani öğrencilerinin, uygulamanın amaç ve özelliklerini şekillendirebileceği belirtilebilir. Son olarak, dil öğrenimini amaçlayan mobil uygulama kullanıcı arayüz tasarımı için bir öneri listesi ön plana çıkarılmıştır.

Anahtar kelimeler: *kullanıcı arayüz tasarımı, dil öğrenimi amaçlı mobil uygulama, mobil öğrenme, mobil destekli dil öğrenimi, İngilizce yabancı dil öğrenimi.*

ABSTRACT

Mobile technologies have been gaining popularity day by day, thanks to internet boom, in language learning like many other field. In recent years many language learning purposed mobile applications has taken place in mobile markets. Among all, in a stratified random way, 8 mobile applications for learning language were selected to conduct this study and they were evaluated through the view of user interface design (UID) principles about educational mobile applications by 11 English Language Teachers (ELTs) with the help of an interview composed of 4 parts. The data from the interview was analyzed to determine what a screen design of a goal-oriented mobile application should be like to learn languages, if any interface design of the stratified random selected mobile applications meets the needs of screen design of a mobile application to learn languages, and what the certain features of the mobile application interfaces to learn languages are. At the end of the process, the evaluations of ELTs lead to deduce a list of principles for designing language learning purposed mobile applications. Additionally, it can be stated that each application with its each target user, in another word learner, can shape the aims and many features of the interface design. Lastly, a list of features was suggested to design user interface of language learning purposed mobile applications.

Keywords: *user interface design, language learning purposed mobile application, mobile learning, mobile assisted language learning, English language learning*

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LIST OF ABBREVIATIONS

UID	User Interface Design
MALL	Mobile Assisted Language Learning
ELT	English Language Teaching
VCD	Visual Communication Design
CEIT	Computer Education and Information Technologies

1. INTRODUCTION

The introductory chapter presents the background of the study. This part also includes a brief overview of MALL (Mobile Assisted Language Learning) and Designing Mobile Interfaces. Additionally, by merging these two main concepts the purpose of this study comes to exist in this part. This section also details the research questions and hypothesis of this study.

1.1 Purpose of the study

By merging the two concepts of MALL and Interface Design, the purpose of this study comes to exist. It aims to investigate the importance of interface design for language learning mobile applications. In order to reveal the answer of the hypotheses, the initial establishment of this research has been prepared through the literature review section. By means of previous studies, an interview (See Appendix F) was designed and administered for collecting data. It was interrogated how a screen design of a goal-oriented mobile application should be like to learn languages. Beside this, it is evaluated on various mobile applications if any interface design of the stratified random selected mobile applications meets the needs of screen design of a mobile application to learn languages. Additionally, it is tried to find out what the certain features of the mobile application interfaces are for learning languages.

1.2 Statement of the problem

The use of mobile applications for learning languages provides language learning individually. Even if languages cannot seem to be learnt in this way, using mobile applications can be seen as a tool to lead individuals communicate and collaborate with others. This research will be helpful for interface design issues of MALL with the combination of content and complexity. In recent years, new branches occur almost all over the areas with the boom of communication technologies. New Media Design is one of them. There are many principles to design interfaces for devices like mobile applications. These principles are originated from some content adaptation necessities such as bandwidth, computational power, screen size, animations which are detailed in the study of Szabados and Sipos (2007) as an example. However, these principles are about either mobile application design or educational interface design. Therefore, this study aims to combine educational interface design principles with mobile application interfae design principles.

1.3 Background of the study

According to Cortez and Roy (2012):

> The optimal combination of content, complexity, and interface design is still a challenge that needs to be researched more intricately and even more so in an EFL context with moderate levels of language proficiency. The combination of current 3G services and latest handset devices capabilities shows that technologically it is possible to overcome most of the MALL challenges. Nevertheless, the key for MALL success is to create activities based on clearly stated pedagogical approaches that suit and take advantage of the full technical possibilities of 3G and learning needs. (p. 366)

Within this framework, different participants of different disciplinary will influence the improvement of multi-disciplinary and inter-disciplinary studies. All the findings will be of constructive and guiding contribution to the prospective studies in the fields of both Communication Design and English Language Teaching.

Recently, as is the case almost all over the world, learning a foreign language can be assumed to be an individual responsibility. Languages can be learnt where ever and when ever felt like. Changes in communicative tools let people to travel virtually without moving. For example, while learning a language in a non-native environment, at least an audio tool can help for the pronunciation of the target language. Additionally, according to Boztepe (2013) there is a significant difference between learners who are taught through audio only presentations and learners who are taught through audio-visual presentations in terms of their motivation levels. Beyond using technology in ELT, in recent years with the change of preferences, using smartphones meets almost all the needs of individuals.

When it comes to designing applications under education categories of the application stores, interface design can be assumed as a quarter point. There are many principles for this concept especially for educational matter. Combining with material design and evaluation, rapid development of technology makes room for both graphical designers and ELT (English Language Teaching) material evaluators. This research mainly focuses on the discussions of how to design mobile applications to learn languages from the view of interface design concept.

1.4 Research questions

This research addresses the answers of following questions:

What should a screen design of a goal-oriented mobile application be like to learn languages?

Does any interface design of the stratified random selected mobile applications meet the needs of screen design of a mobile application to learn languages?

What are the certain features of the mobile application interfaces to learn languages?

1.5 Significance of the study

The concept of mobile learning has gained significance in our changing world because learning individually may be more preferable in the future. Languages can also be learnt where ever and when ever felt like. Time is limited so the easiest and the fastest ways of communication can take place of perfectionism. There are many mobile applications under the education categories which are flashed every month. In recent years, by the setting of m-learning concept, MALL is formed as a new approach. In itself, mobile means to be free from time and place. Beyond using smart phones, mobile learning leads to learn wherever and whenever felt like. It opens the doors to create new teaching methods.

1.6 Definition of key terms

User Interface (UI): The screan representation so as to the one who can use it.

Interface design: Representation of software and hardware screens through which users interact with computers and other technologies

MALL: Language learning by mobile devices and application use.

CALL: Language learning by computer use.

M-Learning: Learning wherever and whenever felt like in a way of being mobile.

Language Acquisition: Process of getting something across learning a language without being taught.

ELTs: Professionals who teaches English as a foreign or second language.

CEITs:Computer education and information teaching

Generation Y: The generation of people who were assumed to be born between the years 1980 and 1995.

1.7 Organization

This research comprises five chapters. First chapter focuses on the background of the study while second chapter presents the literature review for guiding the study. Third section includes detailed information about methodology of the thesis. In the fourth chapter, results from interviews are analyzed. Last chapter provides findings of the thesis, conclusion, and implications for researchers from both ELT and VCD, suggestions for the further study and limitations. References and appendices are provided at the end of the thesis.

1.8 Overview of methodology

This is both a quantitative and a qualitative research which has maintained with an interview based on the literature review. The qualitative data comes from the interview results of 11 ELTs who were chosen owing to their appropriate age characteristic for the interview. They were the teachers who could best help because of their age groups. The quantitative data is provided with the help of demographic part, questionnaire part and one of the evaluation parts out of the interview. ELTs provided supplies for both qualitative and quantitative data. Finally, the results comprises the analysis of each data.

2. LITERATURE REVIEW

This chapter presents the review of literature. After a brief introduction, previous studies about principles of interface design, mobile technologies and MALL takes place in this chapter with their subheadings such as educational interface design, individualization, mobile markets, language acquisition, motivation and interaction in language learning.

2.1 Introduction

Recently, by improving of mobile technologies, many people have realized that they can deal with most of their daily grind with a mobile application. In this kind of information and communication era, when it comes to Learning, it can be said that using mobile applications became inevitable. Additionally, for better communication, Foreign Language Learning (FLL) has become necessity while intercontinental transportation is getting advanced day by day. Thereby, the number of mobile applications designed for the purpose of foreign language use is increasing. One of the substances of designing mobile applications is User Interface (UI) design, which can be a reason for preference according to a number of users.

This paper investigates the UI design issues of mobile applications for the purpose of learning foreign language. This chapter reviews the literature on the role of UI design of mobile applications for FLL and some relevant studies which are conducted in Turkey and abroad. There are some leading factors affecting the design of UI. Especially for learning purpose, Omar & Jaafar (2010) listed four factors for designing an educational tool: Interface issues, multimedia issues, content issues and pedagogical issues, which are as following in detail:

> Interface issues: characteristics of the educational tools that have an effect on its usability, which can be include following interface factors of heuristic approach: consistency, interactivity, navigation, pleasant to use, and screen design,
> Multimedia issues: characteristics of the educational games that consist of multimedia elopements and have an effect on its usability may include usage of text, animation, audio, image and video, multimedia presentation and suitability of multimedia used,
> Content issues: clear goal and objectives, feedback, reliable content, clear and understandable structure and engaging materials.
> Pedagogical issues: characteristics that facilitate learning. The pedagogical issues may include: motivation, learners' control, clear goal and objective, added value for learning, immediate feedback, player control and challenge. (pp. 214)

Cortez (2012) interferes the optimal combination of content, complexity, and interface design as a challenge and their study taken place in Japan has shown some success in this specific context with computer science majors but after a lot more testing, it can be made some conclusive remarks. That study was designed for raising awareness of issues which need additional and suitable consideration**.** The combination of current 3G services and latest handset devices capabilities shows that technologically can overcome most of the challenges in MALL. On the other hand, the results of that study underlined "the key for MALL success is to create activities based on clearly stated pedagogical approaches that suit and take advantage of the full technical possibilities of 3G and learning needs" (Cortez, 2012, P. 366)

According to Becer (2002) communication can be explained as a feeling, thought, behavior and information exchange carried out by two people or groups of people, the sender and the receiver. Küçükahmet (2005) added that education is a communication process. Without communication it is not conceivable. The four basic elements of the communication process, which are dealt with a simple definition as "the act of common sense between individuals", can be described as in Figure 1.

Figure 1 *The communication process*

Donor > Message > Channel > Recipient

These four basic elements can be applied to all communication processes. It is also necessary for communication to be bi-directional in order to reach common meanings. The sender wants to receive feedback from the source message when it communicates to the receiver.

Figure 2 *The education process*

Teacher > Content > Learning Processes > Learner

When it comes to the education process, the teacher who teaches is the "donor" and the learner is “recipient”. The teacher uses a variety of audiovisual tools to communicate the student with different methods. When it comes to these tools, one of the main issues going around this research is Information and Communication Technologies (ICTs). While technology use in education is improving day by day, taking advantages of this growing scope is essential. Sarkar (2012) mentioned ICTs that consist of the hardware, software, networks, and media for collection, storage, processing, transmission and presentation of information (voice, data, text, images), as well as related services; and, at the same time it was summarized the four most common mistakes in introducing ICTs into teaching. First mistake is installing technology to be learnt without reviewing needs of students and availability of the content. Second one is without involving the users, imposing technological systems from the top down. Third is without customizing the content taken from other regions of the world, using it inappropriately. Finally, the fourth one is low quality content being produced and having poor design of instruction and not adapted to the technology in use.

In his model, Kolb (1984) defines four concepts as following: Concrete experience, Reflective observation, Abstract conceptualization, Active experimentation. They show that students experience learning by different materials which can be utilized to develop learning technologies.

WinForms's (1999) asked where the students' interaction in the classroom and on the campus is, if the courses are completely delivered online because in the future a combination of real and virtual universities will be seen. A number of researchers have been trying to find the closest solution to this.

2.2 Principles of Interface Design

Screen designing requires understanding of both software development and user interface design. These areas can be considered as inseparable. According to Galitz (2007) it should be gone through step by step designing process. At first it should be known the user or client and then the business function should be understood. Secondly, designer should respectively understand the principles of good interface and screen design initially, and then develop system menus and navigation schemes, select the proper kinds of windows, graphical screen design consists of a series of windows, select the proper interaction devices, choose the proper screen-based controls and lastly write clear text and messages. After all it should be provided effective feedback and guidance and assistance. Later, effective internationalization and accessibility should be provided. Designer should create meaningful graphics, icons, and images. The proper colors should be chosen which involves understanding color and how to use it effectively on textual and statistical graphics screens and in web sites. After that windows layout and pages should be organized. Finally, the step of repeatedly testing and testing, and retesting takes place.

According to Galitz (2007) the part of a computer and its software is the user interface that people can see, hear, touch, talk to, or otherwise understand or direct. There are two essential components of user interface which are input and output. Input is how the users communicate their needs or desires with the computers. The keyboard, mouse, trackball, one's finger (for touch-sensitive screens or pads), and one's voice (for spoken instructions) are several common input components. When it comes to output, it is how the results of computations and requirements to the user are conveyed by the computers. Followed by mechanisms that take advantage of a person's auditory capabilities which are voice and sound, the display screen is the most common computer output mechanism. However, there is such a use of the human senses that are smell and touch output in interface design still remaining largely unexplored.

In this era, it is most of all facilitated with internet and different tools, one of which can be supposed to be mobile devices having more interactivity level than many computer systems. According to Galitz (2007) communicating with each other, the user and a computer system have an interaction style as a simple the method or methods. There are many choices of interaction styles in graphical system or web page and application design for designers such as command line, menu selection, form fill-in, direct manipulation, and anthropomorphic.

Three principles below for the design of a user interface is identified by Bloch (2009) as accessibility, simplicity and functionality. Additionally, according to Delil (2014) interface design was composed of 3 elements: Visual objects, Color and Typography.

In educational tools there are numerous principles to take into consideration; one of which, usability is the most outstanding one. Burov and Tsarik (2012) stated the importance of usability as a set of methods that serve to improve the interface during the process of its development. Usability has five quantitative components, first of which is educability explaining how easily users can perform basic tasks, first meeting with the unknown interface; the second component is efficiency explaining when the users become acquainted with the design and how quickly they can perform the same task; the third one is memorability explaining when the users return to the interface again after a certain period of time and how easy it will restore his skills with this interface; next is errors explaining how many errors users do, how serious these problems and how easily the user can correct these errors; and the last component is satisfaction explaining how it is pleasant for the user to use this interface.

According to Burov and Tsarik (2012) there are also several disciplines to follow as a path while designing interactive user interfaces. Firstly, the interaction between the user and the computer provides communication. Secondly, some principles for usability for interface design are neutrality or intuition, consistency, nonredundancy, direct access to help and flexibility. The third discipline is isolation of interface elements brightness. And next is the use of color in the design of ergonomic interface. Moreover, text and dialogues are the following disciplines. And the last one is consistency and standardization: The data on the screen should be positioned so that the user knows where to find and where to expect the output of information.

According to Alahmadi (2015) the user-interface can be classified into three categories: First, computer-interface where the functionality relies more on how the computer processes information; second, user-centered where the functionality concentrates on how the user processes information; and third, designer-centered where the focus is on how the designer prefers to lay out the information.

Ming, & Deng (2007) describes several steps of designing a user interface, one of which is creating identification of the UI needs by using text, graphic, illustrations, and relevant multimedia representation. Additionally, next step is applying it according to that defined identification. The third step is the created UI is approved over the identification of UI needs by the developers to check whether these identifications are met. And finally, if it does not work, it has to be modified and readjusted to meet all the needs completely.

Robson, Abell, & Boustead (2013) reveal that typefaces should be easy to read and text should be placed so that it is easy to find. Graphics should be simple, consistent and appropriate to the content. Colors should be chosen considering their purpose and effect. Objects should relate to the needs of the user. Metaphors can be used to provide structure to the interface design Also, as every element on the screen adds to the cognitive load, fewer elements make an interface easier to use. Feedback is also described by Robson, Abell, & Boustead (2013) as about errors messages has to be polite and provide information allowing a user to plan his or her next action.

2.2.1 Educational Interface Design

Robson, Abell, and Boustead (2013) stated that thorough understanding of many key areas like pedagogy, software developments and user interface design is needed to create educational software. It is also added by them that poor interface design can cause a student to take longer and being less likely to fulfill the lesson and can influence students' motivation so much that students may lose interest when they are mixed up. The user interface guidelines supported the pedagogical principles.

For determining the principles of mobile language learning interface design, educational tool design items should be taken into consideration. According to Özcan (2008) the purpose of an educational tool from the view of interactive media design is to provide the resource access on time and keep the highest level of the communication between the students and the teachers. The major principles are as indicated by him as following:

- The easiest access to the information,
- The less aesthetic concern the more simplicity,
- Light background and dark foreground objects and writings,
- Keep away from eye-straining long written information,
- The tool able to controlled by three aspects: the student, the teacher and the other applicants,
- No traditional organization that place and time can be independent: Be sure about the foreknowledge of the students thereby no one wastes time,
- After all, don’t forget to check comprehension.

According to the data obtained from a research applied to 7th grade students by Demir (2004) students often prefer light color tones as background color. Students prefer dark tones as writing colors. The background color and font color choices of students are overlapped. According to its results design guidelines must be followed when preparing educational software. It should not be forgotten that the design features are as important as the content. Attention should be paid to the text properties. The texts in the software should be supported by visual and auditory means such as pictures, graphics, video, audible listening if possible. The more senses addressed to learning, the more permanent the learning will be.

Interaction between learner and interface is defined by Bahçekapılı (2010) as a process shaping the tools through learners' self-targets for making a task real, which is affected by the factors derived from different resources as following:

- Experience on a computer,
- Perception about the technology,
- Access to the technology,
- Learners' attitude towards the software of the instructions,
- The length of an instruction,
- Previous experiences of teachers and students towards web-based course,
- Good interface designs,
- Opportunities for students to learn by interacting with their friends.

Out of hundreds of guidelines presenting interface design steps, ADDIE (Analysis, Design, Development, Implementation and Evaluation) can be a basic model mentioned by Bahrudin... (2011) and during the design step of an educational interface, the following points are taken into account:

- the learning problem,
- the goals and objectives,
- the audience's needs,
- existing knowledge and
- any other relevant characteristics.

El-Sofany and El-Seoud (2011) mentioned about evaluation criteria by asking the following questions:

> Usability: Is the system providing a coherent and flexible user interface that can be used easily with all users? Has the system an obvious component which allows the user to navigate easily? Are the system applications easy to use by students, teachers, and parents? Is the system adaptive to user needs? Is the tracking component working properly and produce the expected results?
> Supportability: Can the system be easily modified or extended easily? Can teachers and administrators add materials easily?
> Contents and Design: Are the design and contents of the system satisfactory to student, teachers and parents? What are their feedbacks? Does the system cover well the topics? Are they useful and meet their goals? Quality of texts, images, sounds, and clips? We compare the progress of students.
> Performance: Are the performance requirement concerned with quantifiable attributes of the system, such as response time, throughput availability and accuracy?
> Flexibility: Is the system flexible, since it will be used regularly with a new set of initial data and can accommodate changes in database such as modifying the contents?
> Security: Is the system preventing unauthorized users to access the system? (pp. 29)

Robson, Abell, and Boustead (2013) stated that there are some cases that conflicting recommendations works in different sides. While immediate feedback is better when it is designed to help students analyze their errors and determine an improved course of action, delayed feedback is suited to memorization tasks.

Šedivá, Z. (2014) mentioned educational programs as following:

"Experience and knowledge of education charged include both the actual learning new skills, so refreshing and repeating the knowledge gained through previous training course. Here can include both mandatory and optional tasks that can be supported integrated tests, quizzes, educational games or surveys.” (pp. 83)

There are Eight "golden rules" of interface design are derived by Robson, Abell, and Boustead (2013) that interfaces should be consistent. Additionally, it should suit different types of users. Next, it should provide informative feedback and indicate completion of actions while preventing user errors. Finally, it should permit actions to be reversed, minimize cognitive load and allow the user to feel in control.

2.2.2 Mobile Interface Design

Due to some of their limitations, mobile devices are to have their own interface design principles. Besides their utility, mobile technologies have also restrictions. Kurbel, Jankowska and Nowakowski (2010) explained that small screens, low processing power, challenging navigation mechanisms are major restrictions for the adoption of mobile technologies, and mobile browsers and Web solution providers provides a variety of languages and adaptation approaches. It is a complex task to designing and develop the user interface due to the characteristics of mobile devices and their environment. A wide range of data transfer rates are offered; their input and output vary; and many formats is supported in variations by mobile devices. Being possible to range from 9.6 to 2 Mbps, data transfer rates are a very important factor because users do not want to waste several minutes to download content.

As Szabados and Sipos (2007) point out that the different mobile devices have different technical capabilities so content adaptation is needed.

During the design of the systems the following properties were considered. First, b-bandwidth, which can be relatively low, or the quality of the connection can be poor. An example is the GPRS based Internet access. While trying to send higher quality or longer videos over the network, that may lead problems, which can also occur while using a notebook. Second, computational power, which can also lead problems for longer video playback or higher quality downloads. Third, screen size leads problems while trying to display large images or videos. As the device displays the images in full size, the user has to scroll on the page so intelligibility decreases. Addition to this, in the case of large videos, much computational power is required. Last of all is animations. The electronic learning courses are popular with being rich in vivid multimedia contents so there are flash animations in these courses. If these files cannot be displayed in a device, this can lead problems.

Cortez and Roy (2012) listed three user interface factors that must be considered during the content and structure design of a mobile course: Including only the essential task, having sequential access and providing minimal on-screen help.

Omar and Jaafar (2010) listed ten Nielsen heuristics and how it related in evaluating game usability as following: Visibility of system status, matching between the system and the real world, user control and freedom, consistency and standards, error prevention, recognition rather than recall, flexibility and efficiency of use, aesthetic and minimalist design, helping users recognize, diagnose, and recovery from errors, and documentation.

Saraç (2014) points out that if m-learning practices are prepared effectively, there is a teaching environment in which the learners can do learning, interaction with other learners can occur by network technologies and group work can be possible. This new learning environment allows learners to record and analyze content with repeatable content, exercises and performance-relevant information without errors. The development of m-learning applications is possible by bringing together experts and the necessary technology when the technological properties are considered. The development of m-learning practices that are consistent with educational programs and the pedagogical development of the learners ensures that m-learning environments are effective and productive. For this reason, while developing an application for m-learning environments, careful attention should be paid to the educational features, content, visual and multimedia design of the application, feedback and interaction, use and access, and m-learning environments will be an effective educational platform.

As it is listed by Saraç (2014) the principles of visual design are as following: Designing the interface design to be simple, understandable, not distracting; Using appropriate font and letter size for mobile devices considering screen sizes; The color, balance, size, and readability match the visual design principles; Designing mobile devices to be responsive to screen sizes.

Additionally, Namlı (2010) points out that measurable requirements can be examined in ten separate categories or objectives. First are application properties. Test takers provide information about the application so that they can be helpful during testing. Second is relevance which focuses on the fit of the device to the device during the test. Third is application launch which ensures that the application starts and stops correctly after loading, depending on the device and other applications on the device. Fourth is user interface requirements which provides a general guide to user interface design, rather than shaping the design according to the expectations of publishers and operators. Next localization checks the status of the application, not the changes in the language, the alphabet, the date or the currency format, but the local properties. Then functionality takes part. The user's guide checks to see if the features are being applied and working as expected, as indicated in the information sources such as the application documentation. Later connection exists. If the application is establishing a connection, it can be correctly connected over the network and ensures that a probing on the network or server side responds appropriately. And then personal information management ensures that the applet navigates without harming the user's knowledge. Security is the next one, which provides tests on many different aspects of safety in practice. Last of all is re-test which allows to perform the specified retest.

Artuk (2015) explained the results of their research, in which icons used in today's graphical interfaces of randomly selected mobile applications are examined, can be summarized that the properties of the icons used in the graphical interfaces of mobile applications indirectly affect the success of the application. Applications that were investigated in the study found that icons with poor intelligibility, including those that are common around the world, were frequently used. In common applications, such icons have become a major problem thanks to the recognition of the application, and it has been seen that such icons have become recognized by their function in these applications. Widely used in practice, but far from creativity, the icons used in other applications and known for their functions seem to have avoided the risk of new designs being introduced, thus reducing the intelligibility and readability of the application. In most applications icons that have functions such as menu, search, contact list, settings are identical, and icons that symbolize these functions are universalized. As a result of the hardware enhancements of mobile devices, it was seen that there were no resolution problems in the icons, only a few resolution problems were encountered as a design error. It has been seen that in the interfaces of applications designed by professional companies' icons are used in accordance with the corporate identity design rules of the icons and in other applications icons which use colors that are incompatible with their functions are designed.

2.3 Mobile Technologies

Rossing, Miller, Cecil, and Stamper (2012) states that by release of the first Apple iPad in March 2010, mobile tablets burst onto the market. In 2010-2011 academic year, a team as being interdisciplinary from a faculty of Indiana University and Purdue University Indianapolis (IUPUI) studied the use of mobile technology on the purpose of learning by using the Apple iPad1**.**

By interrogating what forms of application of m-learning may improve the quality of teaching, Šedivá (2014) states that there are different forms of application of m-learning in education. The involvement of m-learning into traditional teaching, distance learning and training programs can be examples. It is possible to use in education in wide ranges of ways and if applied correctly, it can achieve an effective and fun way of learning.

2.3.1 Mobile Interactions

Connecting in a mobile way can be utilized for interactive activities. Designing mobile interfaces is likely to be for having more social functions. Muktar... (2014) mentions "Although mobile devices were initially intended to be simple voice calling devices, they have since been transformed into small computers required to do much more than act as a communication medium." (pp. 1233) Additionally, Lică (2010) mentions "when designing mobile applications with social networking functions remember that a mobile device is not a smaller, less capable computer, it’s a powerful device that is always available, no matter where we are.” (pp. 73) And also Yokuş (2016) stated that when the answers of the undergraduate students of the Faculty of Education to the materials related to the use of mobile devices related to the courses are examined, it is seen that university students do not use mobile devices to learn effectively. Mobile devices often seem not to be used for learning purposes. Indicating that students “sometimes” perform these activities for learning purposes. Students saying that they sometimes do these activities for learning purposes, indicated that mobile devices were limited to communication purposes.

2.3.1.1 Online facilities

When it comes to facilitate existing websites, from which mobile functions are developed, Lică (2010) states “mobile applications don’t need to replace or replicate a website. They need to complement the already offered services. They need to offer these services in a very easy to use way, because of the limitations of the small screen…” (pp. 73)

2.3.1.2 Social media

New media can increase the interaction in many areas, one of which is education. Traditionally people are used to be taught in a classroom. On the other hand, travelling to native lands is known as the best way for foreign language learning because communication can provide acquisition. However, in 21st era thanks to the internet, one can arrive most quarters without travelling. Lica (2010) mentions “The boom of the mobile device industry is inseparably related to the growth of the number of mobile applications. Such application should not and do not ignore the popularity of social networks and, therefore, integrate various social driven functions.” (pp. 60) These functions can also be utilized in Education.

2.3.1.3 Individualization

One of the outcomes of interaction is supposed to be customizability. According to Delil (2014) mobile devices are personal devices that add individuality to us. IPhones, iPads and ITouchers provide us with individualized work experience and experience with applications developed for these devices.

2.3.2 Mobile applications

Increasing mobile applications in markets supports the need of the new system in education. Saraç (2014) declared that special software developed for mobile devices (tablet computers, smart phones, e-book readers etc.) is called "Mobile Application". These applications running on mobile platforms can be downloaded and installed on mobile devices for free or for a fee by connecting online to specific application stores (e.g. App Store, Google Play) for each mobile operating system.

2.3.2.1 Mobile markets

Özdemir, Akadal et al. (2012) stated that Apple store and Google Play are assumed to be the two most common application markets. There are too many applications are being designed day by day and the need is shaped by the markets strategically. They investigated the featured applications under education category and found out that the applications promoting language learning and children-oriented applications took the primary stages.

According to Šedivá (2014) it is interesting that in second place is an educational application in the event of App Store. In the ranking of Google Play this category is also high due to minimal differences in ratios of second to fourth item. Lică (2010) declares:

Apple still rules the mobile apps world, however, with the growth rate of

> Android its supremacy might be challenged soon...Changing platforms and learning new skills is time consuming and in a world where changes happen at a maddening pace, losing a couple of months with the wrong platform can be costly. The question is – is there such a thing as the right platform? The answer is mostly a big no, but there are some trends that can be watched. (pp 64-65)

2.3.2.2 Mobile language learning applications

It can be assumed to be the most preferable application markets, Apple Store and Google Play, which is also proven in their research by Özdemir, Akadal, Çelik & Reis (2013), are mostly appealed for language applications under education category. In this paper, overused of mobile applications under educational category are reviewed on user interface design by taking into consideration language learning applications.

According to Truong (2014) basically, Apple educational applications can be classified into four major categories:

> 1) flash card applications that provide students with the term, definition, explanation, formulas, and examples of all concepts in their study areas;
> 2) hands-on lecture and tutorial applications that show students step-by-step instructions;
> 3) utility applications that help students organize their study, provide curriculum guide, calculate GPA, and calculate the grades for each course;
> 4) interactive applications that allow students to communicate and work in a team without having to meet physically. (pp. 5-6)

Truong (2014) also defines some common advantages and weaknesses of Apple educational applications, first of which is that students do not have any difficulties operating the app because it is easy to navigate and simple to use them. Secondly, some of the applications let users create cards on the computer and download to their mobile devices. Some others allow users to import cards and share with others. Thirdly, students can keep track of their progress because many of them (but not all) provide the preview mode with score reports. On the other side, there are also have some weaknesses of these educational applications. The lack of content is the first and important weakness. Most apps need users to create their own cards. Secondly, none of them are free as another weakness of these apps. Although it seems to be a small investment, it still may create a barrier to students and some students may feel discouraged to use them.

2.4 Mobile Assisted Language Learning (MALL)

According to Delil (2014) nowadays, learning became compulsory not only in the classroom but also in all areas of life, and its importance is decreasing to know something. The reason for this is that instead of the existing information, the new is being produced quickly and the existing information loses its actuality. Therefore, individuals who do not only learn but also research and reach information are needed to be able to see distinguish the truth of the information they have. That is why the definition of behavior change has become a process that takes shape according to the individual's differences due to changing student diversity. Learning is a self-centered learning situation and is a tool for the individual to adapt to the environment. On the basis of effective teaching, it is necessary to attract the attention of the learner and to preserve this interest in the teaching process. Therefore, it is supposed to first draw attention to the teaching material. The attention of the learners can be attracted to the presentation of many verbal voices, to mention a problem situation, to give an example from everyday life, to an anecdote and to visual and audio pictures, films, tables, video stimulating elements. These stimulating elements make learning easier and educative more fluid and richer. During teaching-learning, materials are often used as supportive. Correctly designed instructional materials increase the efficiency of the teaching process, enrich the learning process and enhance learning. Teaching materials and tools can be defined as "the different ways and environments in which produced knowledge can be presented to learners.

Delil (2014) declares that portable devices make five distinct differences in education. First is portability that portable devices bring transportability to educational activity. Second is availability that portable devices offer more than 6 billion Internet accesses and advanced technology to more people in a more functional and faster way than other equivalent electronic devices all over the world. Thirdly, wherever and whenever education is an opportunity. Nowadays people want to access the information at a time and place that they want, this can be achieved with mobile devices and cloud computing-based data from devices. This experience and knowledge are provided by mobile devices through cloud storage technologies. Next one is connection and convergence that M-Learning is often associated with social interactivity and remote access. And then, mobile devices allow us to connect with other people, other devices, other networks and other technologies. Finally, individualized experiences take part. Mobile devices are personal devices that give us individuality. With the applications improved for them, iPhones, iPads and iTouches provide us an individual work experience and facilities in an easy way.

Özcan (2008) points out that m-learning is a form of learning that occurs as a result of evaluating "mobile information" and e-learning areas together, allows you to access eLearning content without being tied to a specific location, to benefit from dynamically generated services, and to communicate with others. Mobile application development considerations: There are differences in both software and hardware between computer and mobile device applications. These include memory resources, user interface, power requirements, and development environments. The software, which is developed in awareness of these, will perform better.

Özcan (2008) points out in their research that the improved application consists of a web page for managing a program content and a program development on the PDA. The training manager can use the web page to add new lessons and unit, topic and question information to the server that will be reflected in the users' PDA's. It is enough for users to click on a single button to download the lessons that the administrator has added to the server and to download them to the mobile devices they are using - their PDAs. When the button is pressed, the lesson that the administrator has defined with all the unit, subject and question information can be downloaded in XML format on the PDA used by the users through the written web service. In order to ensure equality of opportunity in education, every citizen must have appropriate learning paths at every stage of his / her life and needs. Learning content, the ways of access to learning and the place where learning takes place depend on the learning person and the learning needs of that person. With this application, it is possible to organize the facilities to be presented according to the needs of the learners and the same facilities are provided seamlessly for all users, offering an open and flexible structure for the users. By making mobile learning web-based, users can instantly access the contents of courses that the training administrator defined on this site via web service. In addition, all changes made to the content on a single server are reflected to all users. Thanks to this part of the training on the PDA, regardless of time and space, this learning model enables users of all ages to gain and renew (lifelong learning) all talents, interests, knowledge and qualification.

Šedivá (2014) defines applying mobile devices, which the learning process is often referred to mobile learning, as following words:

> Mobility of students is ensured by the use of suitable mobile devices. It is therefore not required nothing more than a learner's motivation to learn anytime and anywhere with mobile learning opportunity arises. Unlike other IT resources (such as PCs or laptops) it can be studied e.g. Even when riding on public transport, in the waiting room at the doctor, during the lunch break and so on. (pp. 82)

Mobile learning, interface design and language learning integrated by Cortez (2012)'s following statements "… it is obvious that the efficacy of the user interface might play a big role in making the user feel welcome and comfortable in the world of Mobile Assisted Language Learning." (pp. 354)

Additionally, Cortez (2012) defines content-based approach in means of using mobile applications for language learning focusing on content delivery. The most frequent delivery method is to use mobile phones which is text-based, through text messaging or email and quizzes and surveys for vocabulary teaching. The use of MP3 players like iPods for audio content in assignments can be another example. According to Yıldırım (2012) it is observed that the educational mobile applications increase the success level of the students in English education. It can be stated that the education games installed to the mobile devices will increase the lesson motivation and success of the students and these games can be used as a useful educational material. Yıldırım (2012) pointed out the importance of games in education is significantly high. It is obvious that digital game-based learning, following the computer age, has taken an important place in the game-based learning. The digital games installed to the mobile devices as well as the mobile phones offer entertainment at any time and any place. It is observed that various educational applications are being developed for turning this entertainment into educational entertainment.

2.4.1 Language acquisition

Lexical meaning of acquisition can be assumed as the process of getting something across learning a language without being taught. Among most of the learning subjects, language educations can be considered in a way of babies' getting to know how to communicate. According to Sağlam, Özüdoğru, and Çıray (2011) it is also possible to list what to do about language teaching in the following way. First of all, it should keep in mind that the language is a learned skill, and the fun should be prepared according to this principle. Secondly, the learning experiences created should be prepared in accordance with the student's life and student characteristics. It should not be forgotten that language learning has two sides (understanding and expression) and these skills should be given enough room in classes, “the program must be trained” anxiety should not be moved. Third, out-of-school activities should be included to keep students engaged more on the taught. Next, while the lessons are being prepared, it is necessary to take care to increase the number of stimulants and to increase the reinforcements. Then, purposeful testing tools should be prepared, testing techniques, especially in language teaching, should not be used frequently. Finally, language teachers must go absolutely and absolutely planned before entering the class.

Sağlam, Özüdoğru, and Çıray (2011) states that as known, a learner has got 4 basic skills: listening, speaking, reading and writing. Listening is known as a model to improve the speaking skills and similarly reading helps to imitate while writing. It has been assumed by different approaches for years. Language, which is shaped by the society of human, primarily parallel with the maturing of the language center of the brain, improved with the sociocultural interactions, is a kind of changeable seditious. Lingual seditious has got many functions such as identity builder, value support, communication provider, etc. An individual learning a second (foreign) language must be aware of the differences or similarities between phonetics and syntax of the target language and his/her mother tongue. Five principles on learning are ranged as following:

1. Language must be acquired in a natural environment.
2. In education it must be set out from the mother tongue.
3. It must be made use of all subjects in Turkish as a foreign language learning...
4. It must be familiarized between different language tasks.
5. It must be taken advantages of various education equipment’s.

2.4.1.1 Second Language Learning

When it comes to learning a second language, we can inspire from babies how to acquire their communication skills. Five main hypotheses can be taken into consideration from Krashen’s theory of second language acquisition of common knowledge as following:

- the Acquisition-Learning hypothesis;
- the Monitor hypothesis;
- the Natural Order hypothesis;
- the Input hypothesis;
- and the Affective Filter hypothesis.

Krashen’s hypothesis underlines the difference between acquisition and learning on the interaction. Learning is a formal and conscious process while acquisition requires to be more communicative. Firstly, the most known of his hypotheses is the Acquisition-Learning hypothesis. It can be said that “the acquired system” and “the learned system” are two different systems for learning a second language. Secondly, it is explained in the Monitor hypothesis that the acts of arrangement, formation and correction take place when the learners allocate enough time, they pay attention on form, and they recognize the target language system. The role of the “monitor” (in another word the “editor”) is to encourage the learning in a way of organizing and correcting. The next one is the Natural Order hypothesis which offers the arrangement of how to sort what to learn. According to this hypothesis there should be a syllabus that follows the order step by step. However, there can be some other factors such as age, background knowledge and circumstances. When it comes to the Input hypothesis, through the natural order the learner can acquire the language in a conscious way and it may need to add only one “input” in each step. Therefore, the background knowledge of the learner takes the most importance. Finally, the fifth one is the Affective Filter hypothesis which underlines the motivation, anxiety and self-confidence of the learner. Without motivation and self-esteem and addition with anxiety the affective filter may be higher but whenever the learners are motivated and draw better self-images, they can reach success for learning a second language. and it may need to add only one “input” in each step. Therefore, the background knowledge of the learner takes the most importance. Finally, the fifth one is the Affective Filter hypothesis which underlines the motivation, anxiety and self-confidence of the learner. Without motivation and self-esteem and addition with anxiety the affective filter may be higher but whenever the learners are motivated and draw better self-images, they can reach success for learning a second language. In brief, it can be stated that all these hypotheses above are combined with and connected to each other.

2.4.1.2 Motivation

In the language of the learners, Acat and Demiral (2002) underlined three sources of motivation to learn: Internal factors to take care of foreign language learning, to enjoy it and to use foreign languages; Instrumental factors including interests and benefits of learning a good foreign language, for example career progression and taking up higher education; and, Integrative factors including goals for being able to engage in cultures of another territory or country and to engage with other people by mastering a foreign language. The most important source of foreign language learning in Turkey is providing support to individuals in finding jobs and raising them in the future. It is seen as the second main motivation source that foreign language can be used in communication between people and in understanding written sources. Relative motivational sources for internal factors remain at the lower ranks of the average views. Individuals who learn foreign languages in Turkey are motivated by sources of motivation based on instrumental factors and integrative factors rather than on internal factors. It has been expressed that the intracultural activities are various and appropriate to the wishes of the students and the factors which are the motivating factors of the medium attractiveness in which the material and language teaching are performed. Moreover, the fact that the expectations on the foreign affairs are high and that these expectations cannot be fully realized are seen as fundamental motivation problems.

According to Acat and Demiral (2002) what is meant by the lack of motivation in the field of educational sciences is that individuals cannot be convinced of the necessity of language learning, they do not feel this necessity, and the society is an element in facilitating language learning. In this case, it is obvious that they are going to foreign language courses for language learning. Thereby, a significant portion of the foreign language teaching task is undertaken by private lessons and courses. There are also some problems in this regard. Students who attend courses to learn languages in the prospective observations may not be able to make use of the necessary skills in the context of not being motivated enough in the classroom, and there are some problems in this regard. Ongoing students at Turkish state schools are even more aware of the problem of illegal language at a time when their counterparts are likely to succeed in their foreign language tests or want to enter a language that they do not need to speak a foreign language, or even when they want to stay in the country for a variety of purposes. In this case, it is obvious that they are going to foreign language courses for language learning. Thereby, a significant portion of the foreign language teaching task is undertaken by private lessons and courses. There are also some problems in this regard. Students who attend courses to learn languages in the prospective observations may not be able to make use of the necessary skills in the context of not being motivated enough in the classroom, and there are some problems in this regard. Moreover, in the study of Yolageldili and Arıkan (2011) states:

> All of the participants are of the same opinion that games provide learners with a chance to show their skills not only in grammar, but also in many areas of language… The important part of the teachers, 93.3%, are agree with the idea that grammar games encourage, entertain and promote fluency…. a great majority of EFL teachers, 90%, believe that while playing a game, learners do not focus on the structures only, but they learn them unconsciously… As the findings of this study show, according to the teachers, games are an important and necessary part of English language teaching and learning in the context of primary schools' English lessons simply because they provide EFL teachers with many instructional advantages. Games are one of the best ways to direct young learners' energy into language

> learning because young learners like to be physically active; moreover, they are imaginative and creative and they learn subconsciously. (pp. 225-226)

Concerning foreign-language learners' motivation Bang, Wohn and Shi Kaist (2014) states "SDT [Self-Determination Theory] proposes that increased human motivation is based on three psychological needs: autonomy [self-willingness], competence [challenge] and relatedness [surrounded atmosphere]." (pp. 43)

2.4.2 History of Technology use in ELT

Dursun and Odabaşı (2011) states that the human-machine interaction first started mechanically and later became electronic with the development of technology. While this interaction was initially an arm, it now appears to be a button or touch screen. It can be stated that these controls are used as a means of communication between man and machine. It is provided by means of interfaces that communicate visually and audibly in human interaction with the machine. If we want to define the interface design in a simple way, we can describe it as a software application or part that provides communication between the user and the machine. The reasons for using technology in foreign language teaching can be that first of all students are generally technology literate, and they have become the habit of using computers, watching videos and using technology to learn. Secondly, visual effects, graphics, sounds used in technology can be fun even the most tedious work. Third, students have different learning styles. The use of technology helps teachers to reach all students in different ways and to train in the direction of multiple intelligence theories. Next, working with foreign languages with the help of technology helps students become practical and meaningful in their lives. Next is that communicating with people in foreign countries by using internet and technology opportunities of pupils is an increase in technology of language education. And then, technology adds many dimensions to foreign language learning through the use of multimedia programs. Additionally, technology allows students to participate in activities such as interpersonal exchange, information gathering, problem solving around the world. Moreover, in foreign language lessons, computer software can be used to develop listening-comprehension and reading-understanding skills. And finally, students using computer-aided learning materials continue their studies longer and students learn faster.

2.4.2.1 Distance Education

Before e-learning and mobile learning, it is better to take distance education into consideration. Sarkar (2012) stated that for introducing eLearning or online learning both in face to face courses and in distance education, an incline was seen. Distance education and eLearning vary in some way.

2.4.2.2 E-Learning

When it comes to electronic learning, Sarkar (2012) states that digital tools have taken the place of printed materials. The most interactive and communicative way of learning is thought to be M-learning. Electronic tools come into our lives in most areas. According to Kubilinskiene and Dagiene (2009) the traditional way of teaching differs from the electronic learning process: one can use different tools like computer and e-mail, different types of resources such as pictures, video or audio records, work at different time.

Digital entertainment and education come together in means of new media while using for education. Games are indicated by Yıldırım (2012) that at any time and any place, it is observed as an entertainment turning into educational entertainment, because the digital games are installed to mobile phones and following by computer age.

According to Alahmadi (2015) there are seven principles for developing CALL (Computer Assisted Language Learning) materials, first of which is to supply major linguistic quantity and second one is to offer modification of the linguistic input. Third one is to present chances for comprehensible output. Next one is to provide opportunities for noticing errors. Later providing chances to correct ill-stated output exists and addition to this anchoring friendly interaction between the user and the computer is the next principle. Last one is playing roles in L2 tasks.

2.4.2.3 M-Learning

According to Sarkar (2012) With the Internet and the World Wide Web, a wealth of learning materials in almost every subject and in a variety of media can now be accessed by an unlimited number of people from anywhere at any time.

Some says education has to be in an environment that everybody is face to face but others believe that it is possible to save mainly time and money through new media tools. According to Rossing, Miller, Cecil& Stamper (2012)

> First, new technology often evokes feelings of both excitement and anxiety from students and faculty, and the iPads proved no different… Second, students reported that the immediate access to information enhanced in-class discussion because they could easily search for information to share with small groups or the class: “We can find information online in class and share with one another.” The growing number of mobile websites and databases further facilitate the ease with which students can “find examples that were relevant to class topics” and “stumble upon new/various information.” …Third, it appears that one way to capitalize on information access for learning is to maximize the collaborative potential of mobile tablets. iPads are suited for collaborative learning because the devices allow for easy viewing and sharing of online resources, and they encourage interaction between group members…Fourth, mobile technology appears to be versatile and highly adaptable for many learning styles and preferences. Mobile technology offered a change from more standard lecture and discussion-based activities in college classrooms. (pp. 14 – 16)

The instructional principles deriving from constructivism are stated by John & Thomas (1995) to anchor all learning activities to a larger task or problem and to support the learner in developing ownership for the overall problem or task. Additionally, to design an authentic task is added by them as well as to design the task and the learning environment to reflect the complexity of the environment they should be able to be tasked at the end of learning. Moreover, they add to give the learner ownership of the process used to develop a solution and to design the learning environment to support and challenge the learner's thinking. They also state to encourage testing ideas against alternative views and alternative contexts and to provide opportunity for and support reflection on both the content learned and the learning process.

In order to present the feasibility of designing a mobile learning courseware based on PBL approach and implementing this on the novel mobile learning framework developed based on Service-oriented architecture, Shanmugapriya, and Dr.Tamilarasi (2013) the case study presented in their article for developing a courseware for Java Programming for ICT students encourages the use of various learning pedagogies such as problem based learning and other instructional design strategies on the mobile learning framework used in that project. Their approach envisaged and enabled learner-centric approach in the mobile learning platform and the mobile learning framework supports accordingly. That framework was built on the ubiquity principle and supplements both the traditional learning environment like classroom-setting and during the mobility of the students in-campus and off-campus environment. The evaluation of the designed framework had been tested with the group of students belonging to Master of Computer Applications (MCA) program. The mobile learning framework was developed to support open platform like Android. Those applications could be implemented in other Mobile Platforms like iOS, Blackberry and Windows Mobile.

Murphy, Farley, Lane, Hafeez-Bai and Carter (2014) found that the adoption of mobile technologies, particularly smartphones and tablet computers, has increased considerably over the past three or four years. Their study shows that a student engages with learning while he/she is on the move and in non-traditional learning locations as he/she goes about his/her daily lives. They aimed at obtaining exploratory data about the ownership of mobile technologies among higher education students and their use of these technologies to support informal learning. The findings of that research clearly indicate that a range of mobile technologies which are fit for purpose for a range of learning activities, are being embraced by students. Mobile devices appear to be dominant technologies being used by a student for a range of learning activities. The use of these mobile technologies across those learning activities have logical troughs and peaks indicating that students are using these mobile technologies in a common sense and programmatic manner to best effect to support their learning. Furthermore, their findings indicate that mobile technologies present both opportunities and challenges to academics and institutions to create learning activities which better utilize the multi-functionality of mobile technologies such as laptops, smart phones and tablets. But at the same time that also creates some dilemmas in that learning activities which are facilitated by mobile technologies may actually disadvantage to a student who doesn’t have access to those technologies and connectivity. That study has the potential to support institutional planning by providing insights into the ways a student is currently using technologies for learning and his/her attitude preferences for future use.

Šedivá (2014) deduced that m-learning in education can be represented in many forms - whether it's a use for the transfer of educational materials for learning or through mobile applications. An important role now has social networks or other social resources (forums, shared blogs, shared storage videos or photos), which is used only for communication within the work team or study group, but also for sharing information and knowledge. Both in the form of formal education and especially in the field of non-formal education. It would seem from the foregoing that the mobile lessons already because of its advantages strongly represented the learning process. But it is not so. So, what prevents increased use of m-learning? There are mainly two major constraints: technical and personnel. Given that teaching quality is dependent on the level of technical and communication environment, it is necessary that every student had the same resources available. And it can be a major obstacle, since it can be removed if students school facilities and provide services and so the school will have to spend large sums of money. Or a student has to mobile devices and services to pay himself. And it is sometimes a big limitation. Greater barrier to application of m-learning, however, is thinking traditional approaches in teaching and inability to learn new technologies on the part of teachers. Creating background materials using multimedia content seem to be many teachers very time consuming because it requires thorough preparation. For older teachers can be a barrier as well as the need to communicate via social networks and blogs.

According to Yokuş (2016) mobile technology offers users a revolutionary leap in terms of learning-teaching process, and the existing student population is psychologically and physically ready for this new learning experience. Schools and educational institutions should organize training programs, contents, learning-teaching processes and assessment tools in an appropriate way according to the emerging new systems and changing learning styles. The education system and school culture should adapt the new practices and tools in the form of continuous development, which should not be used indiscriminately from mobile technologies, and prepare a development plan according to the school culture.

NagaSubramani, and Sharmila (2014) found the following important findings of the present investigation:

> 1. There is significant difference between the male and female students in respect of their M-learning awareness. Moreover, the female students are found to be better than their male counter parts in their M-learning awareness.
> 2. There is significant difference between the urban and rural area students in respect of their M-learning awareness. Moreover, the urban area students are found to be better than their rural counter parts in their M-learning awareness.
> 3. There is no significant difference between the nuclear and joint family students in respect of their M-learning awareness.
> 4. There is significant difference between the male and female students in respect of their involvement in mobile technology. Moreover, the female students are found to be better than their male counter parts in their involvement in mobile technology.
> 5. There is no significant difference between the urban and rural area students in respect of their involvement in mobile technology.
> 6. There is no significant difference between the nuclear and joint family students in respect of their involvement in mobile technology.
> 7. There is no significant relationship between M-learning awareness and involvement in mobile technology belonging to male and female students, urban and rural area students and nuclear and joint family students. (pp. 4)

2.4.3 Interaction in Language Learning

Gleitman, Gross & Reisberg (2011) described sensory coding in summary that each of the sense modalities has its own properties and follows its own rules. For some modalities including vision, hearing, taste and smell, a human has specialized organs that collect, concentrate, and amplify the incoming information stimulating them. In other cases, like various skin senses, we simply accept the input, unamplified, as it arrives. Certain form of energy such as a mechanical push against the eardrum in the case of hearing or a photon striking the back of the eyeball for vision are included the crucial input for some senses. For other senses, chemical as a molecule on the tongue or in the nose is the key input. Vision, hearing and smell can respond to stimuli that are far away from human beings while touch and taste can respond only to nearby inputs. Moreover, an enormous amount of information is provided accordingly by vision which tells about shapes and colors, about spatial arrangements, and about objects both far away and near. Human beings also tend to put great trust in their vision because it is said things like “seeing is believing.” So, it’s easy to evidence that trust into vision. For example, it can be arranged things so that a person can be seen speaking off to the left but hear their voice from right. In this setting, people are likely to believe what they see and thus (mis)perceive the voice to be coming from the left. In tackling how vision functions, it will be focused on three issues: what the structures for gathering the stimulus are, how they work; what the nature of the transduction process is that converts the physical energy of the stimulus into a neural signal; and, what the coding processes are that allow us to discriminate and recognize the millions of shapes, colors, and patterns of movement that make up the visual world. Moreover, about hearing they shared their survey so far has deliberately held two senses to the side hearing and vision. That was because a person relies on those two senses more than any of the others, justifying more extensive coverage of how it is heard and how it is seen. Without questioning, these are the two sense modalities that human beings use for the vast majority of their communication, and that provide their main guidance as they move around.

Seferoğlu (2006) deduced that educational tools are the greatest help to teachers and raisers to ensure that their teaching and learning activities are more productive. However, it is important to remember that even the best of the tools cannot keep the teacher in position. On the other hand, the more perfect the tools, the less useful they are when they are not used appropriately. According to the results of the research people, they remember % 10 of what that read, % 20 of what they heard, % 30 of what they saw, % 70 of what they said, % 50 of what they saw and heard, 90% of what they said and did. As a result, it is important to organize multimedia (learning situations with multimedia features) so that students can better remember what they are learning in the classroom environment.

According to Sarkar (2012) who you teach is the most important thing for preparing a learning environment. It depends mainly on background knowledge, ability and literacy of the learner. One of the distinctive features of human beings is their ability to acquire knowledge, and what makes this knowledge an ever-thriving entity is man’s ability to ‘impact’ this knowledge to others. Among the most fundamental social achievements of human beings, transfer of knowledge is one of the foundations of learning.

Wigforss (1999) stated that interaction is not a new idea for learning, especially for language learning. To learn a language, even as a baby, you need to interact with others. The transition from information to knowledge is most often done by interpersonal communication even if it could be argued that intrapersonal communication is the main characteristic of learning... The roles of the teachers in an information-rich world will not be to provide more information, but to guide students in the learning process. Teachers in this learning environment will primarily act as mentors. Students will be more active in their learning, sometimes even having more information on specific topics than their professors. Wigforss (1999) added that the design of the learning environment is of course of outmost importance, but the low technological level of synchronous communication is actually today the most hampering factor in the development of Internet-based distance courses in higher education.

3. METHOD

This study investigates the importance of interface design for language learning based mobile applications. This chapter presents the participants, data collection tools, research design, procedures and data analysis used in the study. For this reason, the sections describe the details of how to design this research, the participants, the materials and the procedure in this chapter.

3.1 Research design

By merging the two concepts of MALL and Interface Design, the purpose of this study comes to exist. It is aimed to investigate the importance of interface design for language learning mobile applications. In order to reveal the answer of the hypotheses the initial establishment of this research has been prepared through the literature review section. By means of previous studies, an interview (See appendix F) was designed and administered for collecting data. It was interrogated how a screen design of a goal-oriented mobile application should be like to learn languages. Beside this, it is evaluated on various mobile applications if any interface design of the stratified random selected mobile applications meets the needs of screen design of a mobile application to learn languages. Additionally, it is tried to find out what the certain features of the mobile application interfaces are for learning languages.

3.2 Participants

At the outset, 8 mobile applications (See Appendix G) on language learning were selected randomly by reviewing the mobile application markets under education category. They were chosen in the Fall semester of 2016-2017 academic year. After that 11 English Language Teachers (See Appendix A), who were born after 1980's up to 1994 as Generation Y, are questioned by utilizing 8 applications. They were the teachers who could best help because of their age groups. While selecting the participants, purposive sampling took place in terms of their characteristics based on their generation and snowball sampling for keeping in touch with each ELTs.

3.3 Data collection tools

This is both a qualitative and a quantitative research which has maintained with an interview based on the literature review (see appendix G). There were four main parts including the first part with demographic and academic background questions, the second part with giving background information about what mobile interface design was, the third part evaluating the interface design of randomly having been selected 8 applications and the last part for contributing screen design ideas. The questions of the research ad been derived from previous researches and literature review.

3.4 Procedures

Searching for the features above, the interview includes 4 parts: A pre-interview part to test the validity, a briefing part to inform the interviewees about the screen design principles, a tasking part to evaluate 8 applications and an interview part to contribute screen design ideas. There are both a questionnaire which roots in the literature and an open-ended-question sections.

ELTs determined the answers of the following two questions of the research “how should be the interface of a language learning mobile application designed?” and “how important is it to speculate the interface design for mobile assisted language learning?” by evaluating 8 mobile applications aimed to learn languages. It took approximately 90 minutes for the ELTs to complete the interview.

3.5 Data analysis

At first, Part A shows the demographic details of the participated ELTs, each of whom are named by a number. After that, in Part B the background of the study is given to the participants. When it comes to Part C, the participants apply the tasks engaging with the mobile applications. Finally, Part D has been designed to get addition ideas from ELTs. All the answers are discussed in the following chapter part by part in details throughout a narrative analysis.

4. RESULTS

Third chapter presents the results of the analyses, in order by each part of the interview which includes 4 parts. They are respectively Part A that comprises demographic questions as a pre-interview part; Part B is a briefing part to inform the ELTs about the screen design principles; Part C is a tasking part to evaluate 8 applications and the last one is Part D including an interview part to contribute screen design ideas from the ELTs. Both a questionnaire, which roots in the literature and an open-ended-question sections existed. The ELTs set aside time for the interview approximately in 90 minutes.

4.1 Findings related to Part A – Pre-Interview

This part was formed by demographic questions. 11 English Language Teachers attended this study to answer the questions and to go over the check list (See Appendix D) for evaluating interface design of the 8 mobile applications. They are all were born the years between 1980-1995 as the generation Y who can best help for this research in the era of internet boom. As 10 females and 1 male ELTs are suitable while there are more female ELTs in Turkey than male ones (See Appendix A).

The participants have been graduated from variety of foreign language departments in Turkey: 10 of them have been graduated from English Language Teaching (ELT) departments of Başkent University, Bilkent University, Yeditepe University, Middle East Technical University, Marmara University, Cyprus International University and Hacettepe University. 5 of them got a master degree from ELT program of Yeditepe University. and 1 of them got a master degree from Curriculum and Instruction Program of

Yeditepe University (See Appendix A).

When it comes to their professional background, it can be encountered differences by means of conditions. 2 of them have worked in Language schools with adult students. 2 of them have worked in Universities with early adults age between 17-22. 3 of them have worked in high schools with teenage groups. 8 of them have worked in secondary schools with early teenage groups age between 10-14. 4 of them have worked in primary schools and 4 of them have worked in preschools in other words kindergartens. 6 of them have more than 2 experiences in different age groups and educational institutions. These variety of Professional backgrounds help this study to include different visions (See Appendix A).

On the whole, mobile application access background of 2 participants is Google Play while the access background of 9 participants is Apple store. It can be assumed to be the most preferable application markets, Apple Store and Google Play, which is also proven in their research by Özdemir, Akadal, Çelik & Reis (2013), are mostly appealed for language applications under education category. In this paper, overused of mobile applications under educational category are reviewed on user interface design by taking into consideration language learning applications.

4.2 Findings related to Part B – Briefing

The purpose of this part is to sufficiently inform the participants about the screen design and MALL (Mobile Assisted Language Learning). The interviewer shares the literature review data with the participants and ask related questions to make sure that the ELTs obtained efficient information and became ready for the interview. The answers of the questions (See Appendix B) are analyzed as following ways:

Q1: Which of the applications below have you used before?

The first question of "which of the applications below (Wordly, Duolingo, Busuu, Lingua Leo, Johnny Grammar, Gymglish, Kolay İngilizce, Learn Languages by Rosetta Stone) have you used before?" yield that 7 of the participants have never used any mobile applications for learning languages. Because they chose the option of none of them above. On the other hand, 4 of them have heard Duolingo, one of the applications of the survey, and one of which has also used Busuu, another application from the survey.

Mobile application interface design focused questions "how can you describe screen design of a (language learning intended) mobile application?" and "In recent approach, MALL is applied mostly. What can be your first impression about screen design of a MALL application?" oriented the participants to keep within the limits of the research. They answered the questions as following:

Q2: How can you describe screen design of a (language learning intended) mobile application?

For the question above, the list of answers by the ELTs is taken into consideration are analyzed with a view to the concept of interface design. One of the common points can be approved to be the visual representation of what you see. In other words, the combination of icons, colors, buttons and visuals which consist different categories of target language. It should contain language specific to be user friendly. It is mentioned to be interesting for taking the learners' attention which is another common point of screen design concept among the participants s. To appeal the users, it can be eye catching at the first glance. It is added to be motivating by one of the participants. Beside these, it should make it easy to use and reach the information to learn the target language. Additionally, the design should take it into consideration according to the user group depending on age group, background knowledge etc. For example, while a young learner has motivational needs of enjoyable animations, an adult learner may need much simpler interface design. In conclusion, all these comments gained by the participants show that the concept of screen design is matched up with their vision to be approved.

Q3: In recent approach, MALL is applied mostly. According to CEIT researchers it is independent on time and place. What can be your first impression about screen design of a MALL application?

For the question above, the list of answers by the ELTs is analyzed in regards to the concept of MALL. One of the common points is to be simple and clear as a first impression. It might serve an easy Access to get the main purpose. At the same time, it might be interesting and helpful for teachers in means of being enjoyable to carry out the process. It is added to be fun and educationally significant and learners might study autonomously. It is mentioned to be attractive and motivating about the icons and visuals. When it comes to the target users, it might be important to design colors, font and other visuals according to the specific groups so it depends on the user as a learner. Hereby, the vision of the participants is revealed and analyzed above.

4.3 Findings related to Part C – Tasking

Purpose of this part is to evaluate each application from the view of screen design and MALL concepts. Therefore, each ELT is given enough time to evaluate each application and evaluate according to the check list.

4.3.1 Objectives of the applications

Initially, it is asked to state the objective of each application because it could be important to identify the target of the learning tool initially. After that each application is evaluated according to the check list by the 11 ELTs.

When it is asked to write the objectives of each application, the answers (See

Appendix C) vary according to the target users' age, level and interests as following:

Firstly, in terms of the statements made by the participants about Busuu in terms of objective of the mobile application, it can be deduced that this is suitable for adults; but, if it is used appropriately, all levels can benefit from Busuu. Additionally, while beginners are the most suitable target users, all levels can utilize it by reaching more advance levels with the help of check tests between the levels. On the other hand, there are translation methods take part while the communicative tasks relieve somehow. It can be stated that General Language is in use of this application.

Secondly, about Duolingo, the participants' statements in terms of its objectives can be deduced that this is a mobile application mostly for adults; but, it can be utilized by all age groups when adapted properly. There are fun games supporting the vocabulary activities. One of the ELTs stated that it is useful between beginner and elementary levels. Beside these, audiolingual methods take part while learning because of the included activities. It is also beneficial in a way of communicative approach. In a meaningful way, it provides practice with grammar translation method which makes the application more old-fashioned.

Thirdly, according to the participants one of the statements given in terms of the objectives of Gymglish application is that it is mostly based on grammar. And also all opinions about the target group consist of adult learners, users with higher level and learners with the purpose of academic practice. One of the statements raises the issue that the application includes traditional way of learning language. It can be because there are common reading and listening materials as asserted by one of the participants.

Then, according to most of the participants Kolay İngilizce is for adult learners. For one of them, it has a boring design. It can be said that the application is based on translation method which is not for learning the language but for utilizing, like a dictionary because it assists the users. The users can access their real life needs. Therefore, it can be stated that it is for beginners in purpose of individual use.

After that, it can be said that Johnny Grammar is a motivational competitive English learning application stated by the participants. When it comes to the target users, both adults and young learners can benefit from it, but mostly young and teenager users are recommended from the level of beginner and elementary. According to another statement given by the participants, the application can check all levels but lacks the communicative features so Vocabulary and Grammar takes the first place through assessment. For one of the participants, there can be some implications of audiolingual method. According to another ELT, the modern format of the design is creative.

Next, about Learn Languages by Rosetta Stone, the participants' statements in terms of its objectives can be deduced that this is a mobile application for young and adult users but serves mote to teenagers and adults. It starts from beginner level and continues. Users can learn through its communicative ways unit by unit. It is provided with listening and speaking activities so a user can have a chance to practice while learning. Additionally, there are overall language abilities included and according to one of the participants, it consists of grammar and vocabulary activities provided with audiolingual method. Moreover, with the help of direct method, the learner assessed directly after the instruction parts. For another ELT, with its the colorful, full of multimedia and modern format Learn Languages is a simple and repetitive application which is divided into lessons as if an online course book. Finally, it can be used both in classroom atmosphere and individually.

After that, according to most of the participants, Lingua Leo is for the learners with intermediate and higher levels who are adult or teenager individuals but for one of the participants it can be used by kids too. Users can benefit from its solutions to their individual language learning problems because they can choose the subjects based on their own needs. There is a translation method, communicative skills and direct grammar learning facilities together provided with several medias such as videos, recordings and stories. However, it can be added that there are not enough comprehension checks.

Last of all, Wordly seems more to focus on one's vocabulary development. According to all the participants, it can be used for vocabulary practice and memorization because this application provides one vocabulary each day by considering the users' level of proficiency with the meaning, pronunciation and examples in sentence of the Word but not any other components of language learning. According to one of the ELTs, it can get richer and richer with more multimedia substances and icons.

4.3.2 Check list statistics

When it comes to check list (See Appendix D), there were 17 statements in this part. Evaluated by ELTs based on the language learning purposed mobile application interface design principles, all the applications are analyzed along with each principle as a statement. The ELTs determined the statements to be completely applicable, applicable, not sure, inapplicable or definitely inapplicable. In this part the analysis was made statement by statement but throughout the interview, 8 applications are evaluated one by one.

According to the indications based on the statement 1: "The screen design of the mobile learning application is easy to understand first meet with the user" (See Table 1), the applications Johnny Grammar with 4,81 average and Kolay İngilizce with 4,72 average are "completely applicable" while the applications Lingua Leo and Wordly with 4,27 averages, Duolingo with 4,18 average, Learn Languages with 3,90 average and Busuu with 3,81 average are "applicable". On the other hand, participants are adopted as "not sure" about the application Gymglish with 3,00 average.

Table 1: *Analysis of statement 1 - The screen design of the mobile learning application is easy to understand first meet with the user.*

Applications	01	02	03	04	05	06	07	08	09	10	11	Average	Evaluation
Busuu	5	2	3	4	3	4	5	3	5	4	4	3,81	Applicable
Duolingo	3	4	4	4	3	4	5	5	3	3	3	4,18	Applicable
Gymglish	4	2	5	3	1	2	3	3	5	3	2	3,00	Not Sure
Kolay İngilizce	5	5	4	5	5	5	5	4	4	5	5	4,72	Completely Applicable
Johnny Grammar	5	5	5	5	5	5	5	4	4	5	5	4,81	Completely Applicable
Learn Languages	2	4	5	5	3	5	5	3	2	4	5	3,90	Applicable
Lingua Leo	5	5	5	5	3	4	5	4	3	4	4	4,27	Applicable
Wordly	3	5	3	5	5	5	5	3	4	3	5	4,18	Applicable

According to the indications based on the statement 2: "The screen design of the mobile learning application has direct access to help when needed" (See Table 2), the application Johnny Grammar with 4,51 average is "completely applicable" and the application Kolay İngilizce with 3,45 average is "applicable" while the participants are adopted as "not sure" about rest of the applications Busuu and Duolingo with 3,18 averages, Wordly with 3,09 average, Gymglish with 3,00 average, Learn Languages and Lingua Leo with 2,90 averages.

Table 2: *Analysis of statement 2 - The screen design of the mobile learning application has direct access to help when needed.*

Applications	01	02	03	04	05	06	07	08	09	10	11	Average	Evaluation
Busuu	5	1	2	5	2	2	5	4	4	4	1	3,18	Not Sure
Duolingo	2	1	2	5	2	3	5	5	3	4	3	3,18	Not Sure
Gymglish	2	1	5	3	2	2	4	3	3	3	5	3,00	Not Sure
Kolay İngilizce	5	1	3	5	3	3	5	4	4	4	1	3,45	Applicable
Johnny Grammar	5	5	5	5	5	3	5	4	5	4	4	4,51	Completely Applicable
Learn Languages	5	1	3	5	1	2	4	3	2	4	2	2,90	Not Sure
Lingua Leo	5	1	4	5	1	3	4	4	2	4	2	2,90	Not Sure
Wordly	2	1	3	5	2	4	5	4	3	4	1	3,09	Not Sure

According to the indications based on the statement 3: "The screen design of the mobile learning application has the easiest access to the information" (See Table 3), the application Kolay İngilizce with 4,81 average is "completely applicable" and the applications Busuu with 4,36 average, Wordly with 4,18 average, Lingua Leo with 4,09 average, Johnny Grammar with 4,00 average, Duolingo and Learn Languages with 3,54 averages are "applicable". On the other hand, the application Gymglish is found "inapplicable" with 2,27 average.

Table 3: *Analysis of statement 3 - The screen design of the mobile learning application has the easiest access to the information.*

Applications	01	02	03	04	05	06	07	08	09	10	11	Average	Evaluation
Busuu	**5**	**4**	**4**	**5**	**5**	**3**	**4**	**5**	**4**	**4**	**5**	**4,36**	**Applicable**
Duolingo	**2**	**4**	**3**	**5**	**2**	**2**	**5**	**4**	**4**	**3**	**5**	**3,54**	**Applicable**
Gymglish	**2**	**3**	**5**	**3**	**2**	**1**	**4**	**2**	**2**	**3**	**3**	**2,27**	**Inapplicable**
Kolay İngilizce	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**4**	**5**	**4**	**5**	**4,81**	**Completely Applicable**
Johnny Grammar	**5**	**5**	**5**	**5**	**4**	**3**	**4**	**4**	**4**	**4**	**5**	**4,00**	**Applicable**
Learn Languages	**1**	**5**	**5**	**5**	**1**	**3**	**5**	**3**	**2**	**4**	**5**	**3,54**	**Applicable**
Lingua Leo	**5**	**4**	**4**	**5**	**2**	**5**	**5**	**5**	**4**	**4**	**2**	**4,09**	**Applicable**
Wordly	**5**	**5**	**4**	**5**	**2**	**5**	**5**	**1**	**5**	**4**	**5**	**4,18**	**Applicable**

According to the indications based on the statement 4: "The screen design of the mobile learning application keeps away from eye-straining long written information" (See Table 4) , the applications Busuu, Kolay İngilizce, Johnny

Grammar and Learn Languages with 4,72 averages and Duolingo with 4,45 average are "completely applicable" while the applications Wordly with 3,90 average and Lingua Leo with 3,81 average are "applicable"; however, the application Gymglish with 1,81 average is found "inapplicable".

Table 4: *Analysis of statement 4 - The screen design of the mobile learning application keeps away from eye-straining long written information.*

Applications	01	02	03	04	05	06	07	08	09	10	11	Average	Evaluation
Busuu	**4**	**5**	**4**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**4**	**4,72**	**Completely Applicable**
Duolingo	**4**	**5**	**4**	**5**	**5**	**4**	**5**	**5**	**4**	**3**	**5**	**4,45**	**Completely Applicable**
Gymglish	**1**	**1**	**3**	**2**	**1**	**1**	**3**	**1**	**2**	**3**	**2**	**1,81**	**Inapplicable**
Kolay İngilizce	**5**	**5**	**4**	**4**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**4,72**	**Completely Applicable**
Johnny Grammar	**5**	**5**	**4**	**5**	**5**	**4**	**5**	**4**	**5**	**5**	**5**	**4,72**	**Completely Applicable**
Learn Languages	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**4**	**4**	**4**	**5**	**4,72**	**Completely Applicable**
Lingua Leo	**4**	**2**	**4**	**5**	**2**	**5**	**5**	**4**	**4**	**4**	**3**	**3,81**	**Applicable**
Wordly	**4**	**1**	**3**	**5**	**5**	**5**	**5**	**4**	**4**	**2**	**5**	**3,90**	**Applicable**

According to the indications based on the statement 5: "The screen design of the mobile learning application regulates the content of education" (See Table 5), the applications Learn Languages with 4,81 average, Busuu with 4,72 average and Duolingo with 4,45 average are “completely applicable” while the applications Johnny Grammar with 4,18 average and Lingua Leo with 4,09 average are “applicable”. On the other hand, the participants are adopted as “not sure” about the application Kolay İngilizce with 2,45 average while the applications Gymglish with 2,27 average and Wordly with 2,00 average are found “inapplicable.”

Table 5: *Analysis of statement 5 - The screen design of the mobile learning application regulates the content of education.*

Applications	01	02	03	04	05	06	07	08	09	10	11	Average	Evaluation
Busuu	4	5	5	5	5	5	5	5	5	5	3	4,72	Completely Applicable
Duolingo	3	5	5	5	5	5	5	5	5	3	3	4,45	Completely Applicable
Gymglish	4	2	3	2	1	1	1	2	2	4	3	2,27	Inapplicable
Kolay İngilizce	3	1	5	5	1	1	2	2	3	3	1	2,45	Not Sure
Johnny Grammar	5	2	4	5	2	5	5	5	5	5	3	4,18	Applicable
Learn Languages	5	5	5	5	4	5	5	5	4	5	5	4,81	Completely Applicable
Lingua Leo	3	5	5	5	4	4	5	5	4	2	3	4,09	Applicable
Wordly	2	1	2	2	2	3	5	1	2	1	1	2,00	Inapplicable

According to the indications based on the statement 6: “The screen design of the mobile learning application contains multimedia targeted index to work with the instruction" (See Table 6), the application Lingua Leo with 4,90 average is "completely applicable" while the applications Learn Languages with 4,18 average, Busuu and Duolingo with 3,45 averages are "applicable". On the other hand, the participants are adopted as "not sure" about Gymglish with 3,18 average while the applications Johnny Grammar with 2,36 average, Kolay İngilizce with 1,90 average and Wordly with 1,45 average are found "inapplicable."

Table 6: *Analysis of statement 6 - The screen design of the mobile learning application contains multimedia targeted index to work with the instruction.*

Applications	01	02	03	04	05	06	07	08	09	10	11	Average	Evaluation
Busuu	**3**	**3**	**4**	**3**	**4**	**4**	**3**	**1**	**4**	**4**	**5**	**3,45**	**Applicable**
Duolingo	**2**	**4**	**4**	**3**	**4**	**3**	**4**	**3**	**4**	**2**	**5**	**3,45**	**Applicable**
Gymglish	**3**	**1**	**2**	**2**	**4**	**1**	**2**	**1**	**2**	**4**	**2**	**3,18**	**Not Sure**
Kolay İngilizce	**2**	**1**	**2**	**3**	**2**	**2**	**2**	**1**	**2**	**3**	**1**	**1,90**	**Inapplicable**
Johnny Grammar	**3**	**1**	**3**	**2**	**2**	**4**	**2**	**1**	**3**	**4**	**1**	**2,36**	**Inapplicable**
Learn Languages	**5**	**5**	**3**	**5**	**3**	**3**	**5**	**5**	**3**	**4**	**5**	**4,18**	**Applicable**
Lingua Leo	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**4**	**5**	**4,90**	**Completely Applicable**
Wordly	**2**	**1**	**1**	**2**	**2**	**1**	**2**	**1**	**1**	**1**	**2**	**1,45**	**Inapplicable**

According to the indications based on the statement 7: "The screen design of the mobile learning application concerns less aesthetic more simplicity" (See Table 7), the applications Wordly with 4,36 average, Kolay İngilizce with 4,18 average, Learn Languages with 4,09 average, Johnny Grammar and Lingua Leo with 3,81 averages, Busuu and Duolingo with 3,72 averages are "applicable" while the participants are adopted as "not sure" about Gymglish with 2,27 average.

Table 7: *Analysis of statement 7 - The screen design of the mobile learning application concerns less aesthetic more simplicity.*

Applications	01	02	03	04	05	06	07	08	09	10	11	Average	Evaluation
Busuu	4	4	3	5	3	5	4	5	5	1	2	3,72	Applicable
Duolingo	2	3	5	5	2	4	5	5	4	3	3	3,72	Applicable
Gymglish	2	1	5	3	1	4	4	3	2	3	2	2,72	Not Sure
Kolay İngilizce	5	5	2	4	4	4	5	4	4	4	5	4,18	Applicable
Johnny Grammar	5	1	5	4	3	5	4	4	4	3	4	3,81	Applicable
Learn Languages	5	5	5	5	2	5	5	3	4	4	2	4,09	Applicable
Lingua Leo	5	4	4	5	3	4	4	4	4	3	2	3,81	Applicable
Wordly	4	5	2	5	5	5	5	4	5	3	5	4,36	Applicable

According to the indications based on the statement 8: "The screen design of the mobile learning application includes light background and dark foreground content" (See Table 8), the applications Lingua Leo with 4,90 average, Busuu with 4,81 average, Learn Languages with 4,72 average, Johnny Grammar with 4,63 average, Duolingo and Kolay İngilizce with 4,45 averages are “completely applicable” while the applications Gymglish with 4,36 average and Wordly with 3,63 average are “applicable."

Table 8: *Analysis of statement 8 - The screen design of the mobile learning application includes light background and dark foreground content.*

Applications	01	02	03	04	05	06	07	08	09	10	11	Average	Evaluation
Busuu	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**4**	**5**	**4**	**5**	**4,81**	**Completely Applicable**
Duolingo	**4**	**4**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**3**	**3**	**4,45**	**Completely Applicable**
Gymglish	**4**	**5**	**5**	**4**	**5**	**5**	**5**	**4**	**4**	**2**	**5**	**4,36**	**Applicable**
Kolay İngilizce	**5**	**5**	**4**	**5**	**5**	**5**	**5**	**4**	**3**	**3**	**5**	**4,45**	**Completely Applicable**
Johnny Grammar	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**4**	**4**	**3**	**5**	**4,63**	**Completely Applicable**
Learn Languages	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**4**	**4**	**4**	**5**	**4,72**	**Completely Applicable**
Lingua Leo	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**4**	**5**	**4,90**	**Completely Applicable**
Wordly	**4**	**2**	**3**	**5**	**5**	**1**	**5**	**4**	**4**	**2**	**5**	**3,63**	**Applicable**

According to the indications based on the statement 9: “The screen design of the mobile learning application is capable of individualization” (See Table 9), the application Lingua Leo with 4,72 average is “completely applicable" while the applications Gymglish with 4,36 average, Duolingo and Johnny Grammar with 3,72 averages and Busuu with 3,63 average are "applicable". On the other hand, the participants are adopted as "not sure" about Learn Languages with 3,27 average while the applications Kolay İngilizce with 2,09 average and Wordly with 1,81 average are found "inapplicable."

Table 9: *Analysis of statement 9 - The screen design of the mobile learning application is capable of individualization.*

Applications	01	02	03	04	05	06	07	08	09	10	11	Average	Evaluation
Busuu	**5**	**3**	**2**	**2**	**5**	**5**	**5**	**3**	**4**	**5**	**1**	**3,63**	**Applicable**
Duolingo	**4**	**5**	**2**	**3**	**5**	**3**	**5**	**4**	**5**	**4**	**1**	**3,72**	**Applicable**
Gymglish	**4**	**5**	**5**	**4**	**5**	**5**	**5**	**4**	**3**	**3**	**5**	**4,36**	**Applicable**
Kolay İngilizce	**2**	**1**	**2**	**3**	**2**	**2**	**3**	**1**	**2**	**4**	**1**	**2,09**	**Inapplicable**
Johnny Grammar	**5**	**5**	**5**	**5**	**4**	**3**	**5**	**2**	**2**	**4**	**1**	**3,72**	**Applicable**
Learn Languages	**5**	**1**	**5**	**3**	**3**	**4**	**5**	**3**	**2**	**4**	**1**	**3,27**	**Not Sure**
Lingua Leo	**5**	**4**	**5**	**5**	**3**	**5**	**5**	**5**	**4**	**4**	**1**	**4,72**	**Completely Applicable**
Wordly	**2**	**1**	**2**	**2**	**1**	**2**	**3**	**2**	**1**	**3**	**1**	**1,81**	**Inapplicable**

According to the indications based on the statement 10: "The screen design of the mobile learning application focuses on modern forms of education" (See Table 10), the applications Lingua Leo with 4,25 average, Learn Languages with 4,09 average and Busuu with 3,45 average are “applicable.”, On the other hand, the participants are adopted as “not sure” about the applications Johnny Grammar with 3,00 average, Gymglish with 2,90 average and Duolingo with 2,63. While the application Kolay İngilizce with 1,90 average is found “inapplicable” and the application Wordly with 1,18 average is found “definitely inapplicable.”

Table 10: *Analysis of statement 10 - The screen design of the mobile learning application focuses on modern forms of education.*

Applications	01	02	03	04	05	06	07	08	09	10	11	Average	Evaluation
Busuu	3	2	3	4	4	4	5	3	3	4	3	3,45	Applicable
Duolingo	1	1	4	4	5	3	4	3	2	1	1	2,63	Not Sure
Gymglish	1	4	3	3	5	3	3	1	2	4	3	2,90	Not Sure
Kolay İngilizce	2	1	2	3	1	1	5	1	2	2	1	1,90	Inapplicable
Johnny Grammar	4	5	5	5	2	1	2	1	2	4	2	3,00	Not Sure
Learn Languages	5	1	5	5	3	4	5	4	4	4	5	4,09	Applicable
Lingua Leo	4	5	5	5	4	5	4	5	5	2	5	4,25	Applicable
Wordly	2	3	2	3	1	1	1	1	2	1	1	1,18	Definitely Inapplicable

According to the indications based on the of statement 11: “The screen design of the mobile learning application suits different types of users” (See Table 11), the applications Learn Languages with 4,09 average, Johnny

Grammar with 4,00 average, Busuu with 3,90 average, Lingua LEO with 3,81 average and Duolingo with 3,54 average are “applicable” while the applications Kolay İngilizce with 2,27, Gymglish with 2,06 average and Wordly with 1,63 are “inapplicable.”

Table 11: *Analysis of statement 11 - The screen design of the mobile learning application suits different types of users.*

Applications	01	02	03	04	05	06	07	08	09	10	11	Average	Evaluation
Busuu	**3**	**5**	**3**	**5**	**4**	**5**	**3**	**3**	**4**	**4**	**4**	**3,90**	**Applicable**
Duolingo	**1**	**2**	**5**	**4**	**4**	**3**	**4**	**5**	**4**	**3**	**4**	**3,54**	**Applicable**
Gymglish	**1**	**3**	**2**	**3**	**2**	**1**	**2**	**1**	**2**	**4**	**2**	**2,09**	**Inapplicable**
Kolay İngilizce	**3**	**1**	**4**	**4**	**1**	**1**	**5**	**1**	**2**	**2**	**1**	**2,27**	**Inapplicable**
Johnny Grammar	**3**	**5**	**5**	**5**	**3**	**4**	**5**	**4**	**4**	**4**	**2**	**4,00**	**Applicable**
Learn Languages	**5**	**5**	**4**	**5**	**2**	**3**	**4**	**4**	**4**	**4**	**5**	**4,09**	**Applicable**
Lingua Leo	**4**	**1**	**5**	**4**	**2**	**5**	**5**	**5**	**4**	**2**	**5**	**3,81**	**Applicable**
Wordly	**2**	**4**	**2**	**4**	**2**	**3**	**5**	**1**	**3**	**3**	**1**	**1,63**	**Inapplicable**

According to the indications based on the statement 12: “The screen design of the mobile learning application considers the age of pedagogical features of users” (See Table 12), the applications Lingua Leo with 4,00 average, Learn Languages with 3,72 average and Johnny Grammar with 3,45 average are “applicable” while the participants are adopted as “not sure” about the applications Duolingo with 3,27 average and Busuu with 3,00 average. On the other hand, Kolay İngilizce with 2,27 average and Gymglish and Wordly with 2,09 average are found “inapplicable.”

Table 12: *Analysis of statement 12 - The screen design of the mobile learning application considers the age of pedagogical features of users.*

Applications	01	02	03	04	05	06	07	08	09	10	11	Average	Evaluation
Busuu	**5**	**1**	**3**	**3**	**1**	**4**	**5**	**4**	**4**	**2**	**1**	**3,00**	**Not Sure**
Duolingo	**2**	**4**	**3**	**5**	**1**	**3**	**4**	**4**	**4**	**3**	**3**	**3,27**	**Not Sure**
Gymglish	**2**	**1**	**5**	**4**	**2**	**5**	**2**	**1**	**4**	**4**	**5**	**2,09**	**Inapplicable**
Kolay İngilizce	**5**	**1**	**2**	**4**	**1**	**1**	**4**	**3**	**4**	**3**	**1**	**2,27**	**Inapplicable**
Johnny Grammar	**5**	**1**	**5**	**5**	**2**	**4**	**3**	**3**	**5**	**5**	**1**	**3,45**	**Applicable**
Learn Languages	**5**	**3**	**4**	**5**	**2**	**4**	**4**	**4**	**4**	**4**	**2**	**3,72**	**Applicable**
Lingua Leo	**5**	**5**	**4**	**5**	**2**	**4**	**4**	**5**	**5**	**2**	**3**	**4,00**	**Applicable**
Wordly	**2**	**2**	**2**	**4**	**1**	**3**	**3**	**1**	**3**	**1**	**1**	**2,09**	**Inapplicable**

According to the indications based on the statement 13: “The screen design of the mobile learning application is consistent on graphical design (icons, buttons, typography...)” (See Table 13), the applications Lingua Leo with 4,63 average and Learn Languages with 4,45 average are “completely applicable” while the applications Busuu with 4,36 average, Duolingo and

Johnny Grammar with 4,00 average are "applicable". On the other hand, the participants are adopted as "not sure" about the application Kolay İngilizce with 3,00 average while the application Gymglish and Wordly with 2,27 average are found "inapplicable."

Table 13: *Analysis of statement 13 - The screen design of the mobile learning application is consistent on graphical design (icons, buttons, typography...)*

Applications	01	02	03	04	05	06	07	08	09	10	11	Average	Evaluation
Busuu	5	4	4	5	5	5	5	4	4	4	3	4,36	Applicable
Duolingo	3	3	5	5	5	4	5	4	5	2	3	4,00	Applicable
Gymglish	1	1	2	3	4	1	4	1	2	3	3	2,27	Inapplicable
Kolay İngilizce	4	2	3	3	3	3	5	4	2	3	1	3,00	Not Sure
Johnny Grammar	5	5	4	4	5	3	5	4	2	5	2	4,00	Applicable
Learn Languages	5	4	5	5	5	4	5	5	3	4	4	4,45	Completely Applicable
Lingua Leo	5	5	5	5	5	5	5	4	5	3	4	4,63	Completely Applicable
Wordly	2	1	2	3	5	1	5	1	1	2	2	2,27	Inapplicable

According to the indications based on the statement 14: "The screen design of the mobile learning application includes authentic tasks" (See Table 14), the application Lingua Leo with 4,72 average is "completely applicable" while the participants are adopted as "not sure" about the applications Busuu with 3,36 average, Gymglish with 2,90 average, Learn Languages with 2,63 average and Duolingo with 2,54 average. On the other hand, the applications Kolay İngilizce with 2,36 average, Johnny Grammar with 2,00 average and Wordly with 1,54 average are found "inapplicable."

Table 14: *Analysis of statement 14 - The screen design of the mobile learning application includes authentic tasks.*

Applications	01	02	03	04	05	06	07	08	09	10	11	Average	Evaluation
Busuu	**3**	**5**	**2**	**5**	**2**	**2**	**4**	**3**	**4**	**4**	**3**	**3,36**	**Not Sure**
Duolingo	**1**	**5**	**2**	**2**	**3**	**2**	**4**	**3**	**3**	**2**	**1**	**2,54**	**Not Sure**
Gymglish	**3**	**5**	**2**	**2**	**4**	**1**	**5**	**3**	**2**	**3**	**2**	**2,90**	**Not Sure**
Kolay İngilizce	**1**	**1**	**2**	**2**	**1**	**1**	**3**	**1**	**1**	**1**	**1**	**2,36**	**Inapplicable**
Johnny Grammar	**2**	**1**	**2**	**2**	**2**	**1**	**2**	**3**	**2**	**4**	**1**	**2,00**	**Inapplicable**
Learn Languages	**3**	**5**	**3**	**5**	**2**	**1**	**5**	**5**	**2**	**5**	**4**	**2,63**	**Not Sure**
Lingua Leo	**4**	**5**	**5**	**5**	**5**	**4**	**5**	**5**	**5**	**4**	**5**	**4,72**	**Completely Applicable**
Wordly	**2**	**4**	**2**	**2**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1,54**	**Inapplicable**

According to the indications based on the statement 15: "The screen design of the mobile learning application keeps things private and make it be sure to the user" (See Table 15), the applications Gymglish and Lingua Leo with 4,72 averages, Duolingo and Learn Languages with 4,63 averages are "completely applicable" while the applications Johnny Grammar with 4,27 average, Busuu with 4,18 average and Kolay İngilizce with 3,72 average are "applicable." However, the participants are adopted as "not sure" about the application Wordly with 3,36 average.

Table 15: *Analysis of statement 15 - The screen design of the mobile learning application keeps things private and make it be sure to the user.*

Applications	01	02	03	04	05	06	07	08	09	10	11	Average	Evaluation
Busuu	**5**	**5**	**3**	**5**	**5**	**4**	**5**	**4**	**4**	**4**	**4**	**4,18**	**Applicable**
Duolingo	**5**	**5**	**4**	**5**	**5**	**5**	**5**	**4**	**5**	**4**	**4**	**4,63**	**Completely Applicable**
Gymglish	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**4**	**4**	**5**	**4**	**4,72**	**Completely Applicable**
Kolay İngilizce	**5**	**1**	**4**	**5**	**5**	**5**	**3**	**2**	**3**	**3**	**5**	**3,72**	**Applicable**
Johnny Grammar	**5**	**5**	**5**	**5**	**5**	**3**	**3**	**4**	**4**	**4**	**4**	**4,27**	**Applicable**
Learn Languages	**5**	**5**	**5**	**5**	**5**	**3**	**5**	**4**	**4**	**5**	**5**	**4,63**	**Completely Applicable**
Lingua Leo	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**4**	**5**	**3**	**5**	**4,72**	**Completely Applicable**
Wordly	**4**	**1**	**3**	**5**	**5**	**5**	**2**	**1**	**3**	**3**	**5**	**3,36**	**Not Sure**

According to the indications based on the statement 16: "The screen design of the mobile learning application makes login system quick (for example through

Facebook account)" (See Table 16), the applications Johnny Grammar and Lingua Leo with 4,90 averages, Busuu and Kolay İngilizce with 4,81 averages, Duolingo with 4,54 average and Wordly with 4,45 average are "completely applicable" while the application Learn Languages with 3,81 average is applicable. On the other hand, the participants are adopted as "not sure" about the application Gymglish with 2,27 average.

Table 16: *Analysis of statement 16 - The screen design of the mobile learning application makes login system quick (for example through Facebook account).*

Applications	01	02	03	04	05	06	07	08	09	10	11	Average	Evaluation
Busuu	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**3**	**5**	**4,81**	**Completely Applicable**
Duolingo	**5**	**5**	**5**	**5**	**3**	**5**	**5**	**4**	**5**	**3**	**5**	**4,54**	**Completely Applicable**
Gymglish	**5**	**1**	**5**	**2**	**2**	**1**	**5**	**1**	**2**	**3**	**3**	**2,72**	**Not Sure**
Kolay İngilizce	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**3**	**5**	**4,81**	**Completely Applicable**
Johnny Grammar	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**4**	**5**	**4,90**	**Completely Applicable**
Learn Languages	**2**	**2**	**3**	**5**	**5**	**5**	**5**	**5**	**2**	**4**	**4**	**3,81**	**Applicable**
Lingua Leo	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**4**	**5**	**4,90**	**Completely Applicable**
Wordly	**5**	**1**	**5**	**5**	**5**	**5**	**5**	**4**	**5**	**4**	**5**	**4,45**	**Completely Applicable**

According to the indications based on the statement 17: "The screen design of the mobile learning application checks comprehension after all" (See Table 17), the applications Duolingo with 4,90 average, Busuu with 4,81 average, Gymglish with 4,54 average and Johnny Grammar with 4,45 average are "completely applicable" while the applications Lingua Leo with 4,18 average and Learn Languages with 4,00 average are "applicable." Finally, the applications Kolay İngilizce and Wordly with 1,18 averages are found "definitely inapplicable."

Table 17: *Analysis of statement 17 - The screen design of the mobile learning application checks comprehension after all.*

Applications	01	02	03	04	05	06	07	08	09	10	11	Average	Evaluation
Busuu	**5**	**5**	**4**	**5**	**5**	**5**	**5**	**4**	**5**	**5**	**5**	**4,81**	**Completely Applicable**
Duolingo	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**5**	**4**	**5**	**4,90**	**Completely Applicable**
Gymglish	**5**	**5**	**5**	**5**	**5**	**2**	**5**	**5**	**4**	**4**	**5**	**4,54**	**Completely Applicable**
Kolay İngilizce	**1**	**1**	**2**	**1**	**1**	**1**	**1**	**1**	**1**	**2**	**1**	**1,18**	**Definitely Inapplicable**
Johnny Grammar	**5**	**5**	**5**	**5**	**5**	**4**	**5**	**5**	**3**	**5**	**2**	**4,45**	**Completely Applicable**
Learn Languages	**5**	**3**	**5**	**5**	**5**	**1**	**5**	**5**	**2**	**4**	**4**	**4,00**	**Applicable**
Lingua Leo	**5**	**5**	**5**	**5**	**3**	**1**	**5**	**5**	**5**	**3**	**4**	**4,18**	**Applicable**
Wordly	**1**	**1**	**2**	**1**	**1**	**1**	**2**	**1**	**1**	**1**	**1**	**1,18**	**Definitely Inapplicable**

4.4 Findings related to Part D – Interview

This part contributes screen design ideas to this study (See Appendix E). The questions below are asked to the ELTs to get answers for the future designing studies about language learning based mobile applications.

Q1: How can it be taken advantage of screen design for MALL?

Gathered by ELTs' answers, it can be inferred that as a very first impression for the user screen design can provide easy access for their needs and make learning process easy. It can also interest users to help taking attention, motivating and making the application more preferable element by increasing the usage

Q2: How can light background and dark foreground help the learner?

According to the ELTs' answers, it can be said that light background and dark foreground helps visually attracting, focusing, concentrating and keeping the attention lasting longer. It is added by a participant that it can move away being back breaking. Because the black and white color accordance makes it easy to read and follow the information, it is refrained from confusing by keeping the learner motivated.

Q3: Instead of eye-straining long written information, what can be used?

Some visual items which are icons, videos, pictures, several medias, audio-visual materials, multimedia, large fonts like calligraphic art and cartoons are given by the participants. Beside these, it can be gotten help from graphical design. Songs, games, short stories, implicit teaching and speech bubbles are among the answers that is mostly used in English Language Teaching.

Q4: What can be included to make an interface/screen more interactive?

When it comes to interaction, many communicative ways are recommended by the participants. Videos can be used and communicative ways can be provided. Online connections can be utilized and communicative tools like messages, mailing and social media. One of the suggestions among the answers was competitions and chatting through online facilities. Another suggestion can be robot teachers and peers given by the participants. Using real characters and professional players as visual items were among the other examples. Beside these visual suggestions, there are also a learning community and international speaking environment recommendations can be given from the interview answers. Last of all, forums, blogs and online chats are thought to make the mobile applications more interactive.

Q5: What can be the first attention-grabbing issue on an application screen for you? Aesthetic design or functionality concern?

One of the participants replied “Functionality. It should be direct to information.” Likewise, 5 more of them agrees on functionality so functionality is sided by in total 6 participants. On the other hand, aesthetic is preferred by 3 participants. Apart from these, it can be kept together for 2 participants, one of which stated “Functionality comes first but it cannot be underestimated the importance of the aesthetic design. I think both of them should be in a great harmony.”

Q6: What can make a screen design more individual, personalize and special for a learner/user?

It is recommended by the participants to be personalized by a profile page that users can give decisions on themes and design of the application. For instance, they can change the colors of it, design their personal information with their names and photos. Connections of social media accounts can be another solution as is put forward by one of the participants. According to another two participants, it can be corresponded to each user’s levels and their interest areas. Additionally, one of the participants stated “A part for learners can be included to spare for themselves such as vocabulary, grammar clues, photos for reinforcing remembering.” Finally, one of the recommends, which ca be entitled assessment, is as following: “The profile of the users can be detailed including the personalized topics, contents and interests.”

Q7: What can show age characteristics of the target users on the screen design?

On the basis of the ELTs’ replies, appropriate images are put account such as the design of illustrations, icons format and size of the letters, presentations, coloring ways, multimedia index and figures. For adults, they can be more simple and authentic and for young learners’ picture of cartoon characters can be served as an example. Another issue given by the ELTs is content which can show age characteristics of the target users on the interface design. Pedagogical approaches like the tasks takes the stage in this issue.

Q8: What kinds of authentic tasks can be included on the screen design?

Finally, the answers given to this question are similar to each other. Newspapers, magazines, real news web pages and many online sources are main recommendations as authentic tasks. On the other hand, some social media contents like YouTube channels, twitter accounts with real stories, real people like celebrities and their biographies. Some other suggestions are books, TV series and songs. One of the participants has come up with an idea of voice recording belonging to each user for interaction with each other as a real-life dialogue.

5. DISCUSSIONS

This chapter presents the final discussions of the study. The findings are approached in four sections: summary of the study, conclusion, limitations and recommendations for further studies.

5.1 Summary of the study

In this research, it is dealt with two concepts: MALL and designing mobile interfaces. It aims to investigate the importance of interface design principles for language learning mobile applications. Its initial establishment is prepared through the literature review section so previous studies lead to design an interview for collecting data. It was interrogated how an interface design of a language learning mobile application should be like. Therefore, 8 mobile applications for learning languages are selected in a stratified random way and11 English language teachers in between so-called generation Y evaluated them if any interface design of them meets the needs of mobile application interface design principles for language learning. There are four parts of the interview: Part A showing demographic details of the participants, Part B giving the background of the interface design principles to inform the participants, Part C tasking the mobile applications and Par D getting additional suggestions from the participants. Finally, all the data coming from the interview are analyzed in Chapter IV. Afterwards, the results are discussed in the following part.

5.2 Conclusions

In this part, the results from the interview is discussed towards conclusions. Four parts of the interview are approached one by one respectively. After the demographic first part is assessed, the data derived from the interview is discussed addressing the answers of (1) what a screen design of goal-oriented mobile applications should be like to learn languages, (2) if any interface design of mobile applications (selected in a stratified random way) meets the needs of screen design of a mobile application to learn languages and (3) what the certain features of mobile application interfaces to learn languages are.

Initially, the first part of the interview collected the demographic data from the English language teachers. In this study, the participants were born between the years 1980 and 1995 as the generation Y in common, which best helped for this research addressing the era of internet boom. Additionally, graduated from variety of foreign language departments, the participants with variety of professional backgrounds are assumed to have different views and experiences to enrich this study. Moreover, as an extra qualification 5 of them got a master degree, which was not searched for this study. When it comes to their mobile application access background as a user, both Apple store and Google Play as the most preferable application markets are used by them in a fair balance.

Secondly, Part B - Tasking collected the data addressing the answer of what a screen design of goal-oriented mobile applications should be like to learn languages as it is derived from the interviews. Before the questioning start, it is introduced to the ELTs the information from the literature review that lead to design the interview. On this respect, they answered the questions in Part B – Briefing. Initially they determined the applications (Wordly, Duolingo, Busuu, Lingua Leo, Johnny Grammar, Gymglish, Kolay İngilizce, and Learn Languages by Rosetta Stone) they have used before by answering “Question 1: which of the applications have you used before?” 7 of the participants out of 11 had never used any applications from the list (see Table 18). While Duolingo had been heard by 4 of the participants, one of which had also used Busuu too Results show that Duolingo is the mostly known application among the selected application in this study and Busuu can be occasionally known application.

Table 18: *Part B – Briefing Question 1: Which of the applications below have you used before?*

	01	**02**	**03**	**04**	**05**	**06**	**07**	**08**	**09**	**10**	**11**
Wordly											
Duolingo			*		*			*			*
Busuu											*
Lingua Leo											
Johnny Grammar											
Gymglish											
Kolay İngilizce											
Language Learning (by Rosetta Stone)											
None of them above	*	*		*		*	*		*	*	

When it comes to “Question 2: How can you describe screen design of a (language learning intended) mobile application?”, results show that the concept of screen design is matched up with their vision to be approved. The last question in the second part asked to the participants is as following: “Question 3: In recent approach, MALL is applied mostly. According to CEIT researchers it is independent on time and place. What can be your first impression about screen design of a MALL application?” This question also includes an information about learning wherever and whenever to feel like as an independent activity. According to the results, the principles can be deduced in a list as following:

- To be simple and clear,
- To have an easy access to get the main purpose,
- To be interesting and fun,

- To be helpful for teachers in means of being enjoyable to carry out the process and educationally significant,
- To be able to use autonomously,
- To be attractive and motivating,
- To design colors, font and other visuals according to the specific groups
- To be dependent on the user as a learner.

Thirdly, Part C – Tasking took place in the interview, which helped to collect the data addressing the answer to if any interface design of mobile applications (selected in a stratified random way) meets the needs of screen design of a mobile application to learn languages. In Part C, ELTs evaluated the selected 8 applications with their objectives and through the check list derived from the mobile interface designing principles in Chapter II Literature Review and developed to the aims of this study. Results show that each application has its own dynamics which are discussed in the next part under the title of each application respectively with the tasking order listed as following: Busuu, Duolingo, Gymglish, Kolay İngilizce, Johnny Grammar, Learn Languages (by Rosetta Stone), Lingua Leo and Wordly.

Finally, the contributed screen design ideas by ELTs are derived from the answers addressing the questions in Part D – Interview. This part sheds light on future designing studies about language learning based mobile applications by means of answering the third question of this research: "What are the certain features of mobile application interfaces to learn languages?" According to the results of the analyzed data in Part D - Interviews , a list of features can be made as following:

1) Taking advantages of the interface design:

- To provide easy access for the users' needs,
- To make learning process easy,

- To take attention, motivating and making the application more preferable element by increasing the usage.

2) Helping with light background and dark foreground:

- To attract visually,
- To focus concentration,
- To keep the attention last longer,
- To move away being back breaking,
- To make it easy to read and follow information,
- To refrain from confusing by keeping the learner motivated.

3) Instead of eye-straining long written information:

- To use some visual items such as icons, videos, pictures, several medias, audio visual materials, multimedia, large fonts like calligraphic art and cartoons,
- To get help for graphical design,
- To adopt songs, games, short stories, implicit teaching and speech bubbles.

4) For making an interface more interactive:

- To provide communicative ways with videos, online connections,
- To utilize communicative tools like messages, mailing, and social media,
- To compete through chatting as an online facility,
- To manufacture robot teachers or peers,
- To adopt real characters and professional players as visual items,
- To lead to a learning community and international speaking environment,
- To interact in forums, blogs and online chats.

5) More functional but in a great harmony with aesthetic:

- To direct information with functionality,
- Not to underestimate the importance of aesthetic design.

6) For more individual, personalize and special interface design:

To get decisions of the users on themes and design of the application (by changing the colors of it, designing their personal information with their names and photos,

To connect with users' own social media accounts,

To correspond with each user's level and interest areas,

To include a private part for learners being able to spare themselves such as vocabulary, grammar clues and photos for reinforcing memory,

To entitle assessment by detailing the personalized topics, contents and interests.

7) Showing age characteristics of the target users:

- To put account appropriate images such as the design of illustrations, icons format and size of the letters, presentations, ways of coloring, multimedia index and figures.
- For adults: To be more simple and authentic,
- For younger learners: To adopt for example pictures of cartoon characters,
- To edit contents accordingly to the users features,
- (Pedagogical approaches like the tasks should take the stage in this issue.)

8) For including authentic tasks:

- To take advantage of books, newspapers, magazines, real news web pages and many online sources,
- To include YouTube channels, TED Talks, TV series, Twitter accounts with real stories, real people like celebrities and their biographies or songs,
- To facilitate voice recording belonging to each user for interaction with each other as a real-life dialogue.

5.2.1 Busuu

Results show that this application is suitable for adults. On the other hand, it depends on the user if applied properly, all levels can benefit from Busuu. It can be revealed that the target user level is most suitably beginner level. By reaching more advance levels with the help of check tests between the sections, other levels can also utilize it. It means that, this application is flexible in means of level and age groups of users. When it comes to the method, translation methods take part and the communicative tasks relieve somehow. It can be stated that General Language is in use of this application.

According to the statics resulted from the check list about this application, in average it can be deduced that it is completely applicable on keeping away from eye-straining long written information, regulating the content of education, including light background and dark foreground content, making login system quick (for example through Facebook account) and checking comprehension after all. It is applicable on being easy to understand first meet with the user, having the easiest access to the information, containing multimedia targeted index to work with the instruction, concerning less aesthetic more simplicity, being capable of individualization, focusing on modern forms of education, suiting different types of users., being consistent on graphical design (icons, buttons, typography...) and keeping things private and making it be sure to the user. Participants are not sure about having direct access to help when needed, considering the age of pedagogical features of users, including authentic tasks. There are no inapplicable or definitely inapplicable items for this application according to the participants of this research.

5.2.2 Duolingo

Results demonstrate that Duolingo is mostly for adults; but, it can be utilized by all age groups if adapted properly because it was revealed that there were fun games supporting the vocabulary activities. When it comes to the users' level, results point beginner and elementary levels in average. Beside, based on the data from the interview reveal the methods applied in the application as audiolingual methods – because of the included activities – and communicative approach. Additionally, results shown that in a meaningful way, the application provides practice with grammar translation method which makes the application more old-fashioned.

According to the statics resulted from the check list about this application, in average it can be deduced that it is completely applicable on keeping away from eye-straining long written information, regulating the content of education, including light background and dark foreground content, keeping things private and making it be sure to the user, making login system quick (for example through Facebook account), and checking comprehension after all. It is applicable on being easy to understand first meet with the user, having the easiest access to the information, containing multimedia targeted index to work with the instruction, concerning less aesthetic more simplicity, being capable of individualization, suiting different types of users and being consistent on graphical design (icons, buttons, typography...). Participants are not sure about having direct access to help when needed, focusing on modern forms of education, considering the age of pedagogical features of users and including authentic tasks. There are no inapplicable or definitely inapplicable items for this application according to the participants of this research.

5.2.3 Gymglish

According to results, all opinions about the target group is adult learners and users with higher level and learners with the purpose of academic practice are indicated. Moreover, based on results this application it is primarily a grammar targeted which includes traditional way of learning language. The reason was argued as common reading and listening materials.

According to the statics resulted from the check list about this application, in average it can be deduced that it is completely applicable on keeping things private and making it be sure to the user and checking comprehension after all. It is applicable on including light background and dark foreground content and being capable of individualization. Participants are not sure about being easy to understand first meet with the user, having direct access to help when needed, containing multimedia targeted index to work with the instruction, concerning less aesthetic more simplicity, focusing on modern forms of education, including authentic tasks and making login system quick (for example through Facebook account). It is inapplicable on having the easiest access to the information, keeping away from eye-straining long written information, regulating the content of education, suiting different types of users, considering the age of pedagogical features of users and being consistent on graphical design (icons, buttons, typography...) There is no item to be definitely inapplicable for this application according to the participants of this research.

5.2.4 Kolay İngilizce

Results demonstrate that this application with a boring design is for adult learners. It is shown that this application is for beginners in purpose of individual use. Based on results, translation method, which is not for learning the language but for utilizing like a dictionary, takes part in this application. It can only assist the users but less likely lead them to learn.

According to the statics resulted from the check list about this application, in average it can be deduced that it is completely applicable on being easy to understand first meet with the user, having the easiest access to the information, keeping away from eye-straining long written information, making login system quick (for example through Facebook account) and including light background and dark foreground content. It is applicable on having direct access to help when needed, concerning less aesthetic more simplicity and keeping things private and making it be sure to the user. Participants are not sure about regulating the content of education and being consistent on graphical design (icons, buttons, typography...) It is inapplicable on containing multimedia targeted index to work with the instruction, being capable of individualization, focusing on modern forms of education, suiting different types of users, considering the age of pedagogical features of users and including authentic tasks. And last of all, it is definitely inapplicable on checking comprehension after all.

5.2.5 Johnny Grammar

This application is indicated as a motivational competitive English learning application based on results. Target users are demonstrated as both adults and young learners by results, but mostly young and teenager users can be recommended from the level of beginner and elementary. Results also show that the application can check all levels but lacks the communicative features. Therefore, vocabulary and grammar can take the first place through assessment. Some implications of audiolingual method were observed along with the modern format with a creative design different from other applications.

According to the statics resulted from the check list about this application, in average it can be deduced that it is completely applicable on being easy to understand first meet with the user, having direct access to help when needed, keeping away from eye-straining long written information, including light background and dark foreground content, making login system quick (for example through Facebook account) and checking comprehension after all. It is applicable on having the easiest access to the information, regulating the content of education, concerning less aesthetic more simplicity, being capable of individualization, suiting different types of users, considering the age of pedagogical features of users, being consistent on graphical design (icons, buttons, typography...) and keeping things private and making it be sure to the user. Participants are not sure about focusing on modern forms of education. It is inapplicable on containing multimedia targeted index to work with the instruction and including authentic tasks. There are no items being definitely inapplicable for this application according to the participants of this research.

5.2.6 Learn Languages

About Learn Languages by Rosetta Stone, it can be deduced that it is for young and adult users but serves more to teenagers and adults. Results show that the level starts from beginner and continues. Its communicative ways unit by unit has taken the attention. According to results, provided the learning process with listening and speaking activities, a user can have a chance to practice more. Additionally, overall language abilities are observed in this which consists of grammar and vocabulary activities provided with audiolingual method as well. Additionally, with the help of direct method, it was observed that it assesses the learner directly after the instruction parts. Addition to these, the colorful, full of multimedia and modern format is indicated so Learn Languages is shown as a simple and repetitive application which is divided into lessons as if an online course book by results. It can be added that this application is suitable to be utilized both in classroom atmosphere and individually.

According to the statics resulted from the check list about this application, in average it can be deduced that it is completely applicable on keeping away from eye-straining long written information, regulating the content of education, including light background and dark foreground content, being consistent on graphical design (icons, buttons, typography...) and keeping things private and making it be sure to the user. It is applicable on being easy to understand first meet with the user, having the easiest access to the information, containing multimedia targeted index to work with the instruction, concerning less aesthetic more simplicity, focusing on modern forms of education, suiting different types of users, considering the age of pedagogical features of users, making login system quick (for example through Facebook account) and checking comprehension after all. Participants are not sure about having direct access to help when needed, being capable of individualization and including authentic tasks. There aren't any inapplicable or definitely inapplicable for this application according to the participants of this research.

5.2.7 Lingua Leo

Results show that this application is for the learners with intermediate and higher levels who are adult or teenager individuals but it can be deduced to be also able to apply with kids. Results indicates the users to be able to determine the subjects based on their own needs as a solution to their individual language learning problems served by the application because they can choose. According to results translation method, communicative skills and direct grammar learning facilities are provided together with several media supplementary such as videos, recordings and stories. On the other hand, it was found to be lack of comprehension checks.

According to the statics resulted from the check list about this application, in average it can be deduced that it is completely applicable on containing multimedia targeted index to work with the instruction, including light background and dark foreground content, being capable of individualization, being consistent on graphical design (icons, buttons, typography...), including authentic tasks, keeping things private, making it be sure to the user and making login system quick (for example through Facebook account). It is applicable on being easy to understand first meet with the user, having the easiest access to the information, keeping away from eye-straining long written information, regulating the content of education, concerning less aesthetic more simplicity, focusing on modern forms of education, suiting different types of users, considering the age of pedagogical features of users and checking comprehension after all. Participants are not sure about having direct access to help when needed. There are no items to be inapplicable or definitely inapplicable for this application according to the participants of this research.

5.2.8 Wordly

Wordly was found more focusing on one's vocabulary development. Agreed by all participants, results that it can only be used for vocabulary practice and memorization because this application provides one vocabulary each day by considering the users' level of proficiency with the meaning, pronunciation and examples in sentence of the Word but not any other components of language learning. There was one suggestion given to this application is that it could get richer and richer with more multimedia substances and icons.

According to the statics resulted from the check list about this application, in average it can be deduced that it is completely applicable on making login system quick (for example through Facebook account). It is applicable on being easy to understand first meet with the user, having the easiest access to the information, keeping away from eye-straining long written information, concerning less aesthetic more simplicity and including light background and dark foreground content. Participants are not sure about having direct access to help when needed, keeping things private and making it be sure to the user. It is inapplicable on regulating the content of education, containing multimedia targeted index to work with the instruction, being capable of individualization, suiting different types of users, considering the age of pedagogical features of users, being consistent on graphical design (icons, buttons, typography...) and including authentic tasks. It is definitely inapplicable on focusing on modern forms of education and checking comprehension after all.

5.3 Limitations

First of all, this research is limited with 11 teachers from different locations in Turkey, like İstanbul, Ankara, Tunceli and Gaziantep. Additionally, it is also limited with 8 mobile applications selected randomly stratified in 2016-2017 academic year. While time passing, the popularity of the applications may change. When it comes to the interview criteria, they are assumed to be the answers of the questions in the questionnaire and applied sincerely. ELTs are assumed to evaluate all levels in certain applications which are limited with only the beginner level and the applications are evaluated with the last updated versions. Last limitation can be considered that only Apple iPhone 6S is utilized by ELTs.

5.4 Recommendations for further studies

The improving use of mobile devices can suggest the future of language learning in means of both communicative and motivating activities. Compared with the traditional learning, MALL can change most of the theories and approaches. For instance, instead of writing a traditional model mail to an imaginary friend, a mobile user can find a real native pen friend to practice writing; or keep in touch with the other learners or even teachers online. Some says it is not appropriate for the nature of learning needed to be face to face, while others take advantages of the educational facilities. Following this study, another research can take place to find out how the learners experiences are like and a study can be applied with users instead of professionals.

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APPENDICES

Questions and gathered answers of the interview

Appendix A

Part A – Pre-Interview

Participant	Gender	Year of Birth	Academic Background	Professional Background	Mobile Application Access Background
01	Female	1989	ELT - Başkent University	11-15 age groups at Gaziantep Çağdaş Bilgi and GKV.	Apple Store
02	Female	1984	Translation and Interpreting – Okan University	Primary and Secondary schools at Gaziantep Çağdaş Bilgi Private school	Apple Store
03	Female	1980	ELT – Bilkent University	Secondary School at Acarkent Doğa School in İstanbul	Apple Store
04	Female	1993	ELT – Yeditepe University, Curriculum and Instruction Master Degree Program – Yeditepe University	British Culture Language Schools	Apple Store
05	Female	1994	ELT – Yeditepe University, ELT Master Degree – Yeditepe University	5-6 age group at Bilfen Ataşehir Kindergarten and 9-15 Age groups at İstek Belde Schools	Apple Store
06	Female	1993	ELT – Yeditepe University, ELT Master Degree – Yeditepe University	9-13 age groups at American College Language Schools, 13-14 age group Bilfen Schools, Adults at a Language Course	Apple Store
07	Female	1993	ELT – Maltepe University, ELT Master Degree – Yeditepe	5-6 Bilfen Preschool	Google Play
08	Female	1987	ELT – Middle East Technical University, ELT Master Degree – Yeditepe	Middle School at Munzur Koleji in Tunceli and 17-22 age groups at İstanbul Medeniyet University	Apple Store
09	Female	1990	ELT – Marmara University, ELT Master Degree – Yeditepe	6 age group at Mektebim private schools and Adult teenagers at Yeditepe University	Google Play
10	Male	1986	ELT – Cyprus International University	5-14 age groups at GKV Private Schools in Gaziantep.	Apple Store
11	Female	1990	ELT – Hacettepe University	11-15 age groups both at GKV private schools and TED Private Gaziantep Secondary School	Apple Store

Appendix B

Part B – Briefing

Q1: Which of the applications below have you used before?

	01	02	03	04	05	06	07	08	09	10	11
Wordly											
Duolingo			*		*			*			*
Busuu											*
Lingua Leo											
Johnny Grammar											
Gymglish											
Kolay İngilizce											
Language Learning (by Rosetta Stone)											
None of them above	*	*		*		*	*		*	*	

Q2: How can you describe screen design of a (language learning intended) mobile application?

Interviewee 01 “This is what you see when you start to use the smartphone.”

Interviewee 02 “It is a kind of short way to reach information.”

Interviewee 03 “It helps to take attention of the user.”

Interviewee 04 “It should motivates the user and be suitable for the user. It can make it easier to learn.”

Interviewee 05 “Screen design is the visual representation of the presentation of a mobile app.”

Interviewee 06 “Screen design is the first glance that should appeal the users. Since it is language based, it should contain elements of language specifically categorized to make it user friendly."

Interviewee 07 "Whether it is appealing in terms of color and font style. It is specific to the user group. For adults, it should be more elegant and simple in style, while young learners will look for colors and enjoyable animations. My impression will depend on the group I am working with."

Interviewee 08 "It is the combination of icons, colors, different categories of the language."

Interviewee 09 "Screen design is a colorful, interesting and eye catching render procedure."

Interviewee 10 "Colorful, lively, it must take interest of the students. It must look modern and fashionable and easy to use."

Interviewee 11 "A mobile application should include all the summarized but needed buttons to convey the aim."

Q3: In recent approach, MALL is applied mostly. According to CEIT researchers it is independent on time and place. What can be your first impression about screen design of a MALL application?

Interviewee 01:It should be clear and simple to use it efficiently.

Interviewee 02:Screen design is so interesting and it should be created effectively.

Interviewee 03:It'sWhether it is appealing in terms of color and font style. It is specific to the user group. For adults, it should be more elegant and simple in style, while young learners will look for colors and enjoyable animations. My impression will depend on the group I am working with. necessary to have fun for the learner.

Interviewee 04:I think it is helpful for teachers. It can be enjoyable and makes teacher's teaching process easier and more fun.

Interviewee 05:The screen icons are to be attractive to motivate language learner's to click on.

Interviewee 06:Whether it is appealing in terms of color and font style. It is specific to the user group. For adults, it should be more elegant and simple in style, while young learners will look for colors and enjoyable animations. My impression will depend on the group I am working with.

Interviewee 07:It should serve an easy access to every user.

Interviewee 08:I was happy for my students since they could study autonomously.

Interviewee 09:It is fun and educationally significant.

Interviewee 10:It might be interesting and easy to use, not confusing for the students.

Interviewee 11:At a very first impression, an application should be clear enough to get the main purpose.

Appendix C

Part C – Tasking

1. Please write the objectives of each application below:

BUSUU:

01: “It is for adult learners. It teaches on communicative ways.”

02: “This application is for beginners because the questions are too easy.”

03: “It is for beginner learners. Translation method is used.”

04: “It is useful for the beginners. Translation and communicative method is used.”

05: “It aims to teach English through the use of genuine language which may not be authentic. Direct assessment and direct correction, communicative language teaching without interaction is used. It is included grammar translation method.”

06: “The aim is to give the language elements as chunks. Mostly based on translations, but provides pronunciation as well. It is designed for adults.”

07: “Its aim seems to serve as teaching general English. Learners need to pass each level and progress over time. It looks like transformation of classroom instruction to a digital platform.”

08: “It aims to teach grammar in a communicative way. All ages can be the target user.”

09: “It aims to develop daily communication and to learn new vocabulary. It is suitable for all level students because there are many levels.”

10: “Better for adult learners, quite good for all levels and suitable for main skills.”

11: “This application is appropriate for the teenagers or adults who wants to move forward in English.”

DUOLINGO:

01: “This application is useful for adult learners. It is not appropriate for young learners.”

02: “This application is for kids because of the visual aids.”

03: “It is for beginner to elementary level learners. Communicative and grammar translation methods are mixed.”

04: “It is suitable for adults. Grammar translation and audiolingual methods are used.”

05: “It aims to assess certain structures or units in language through visual or written materials. Communicative language teaching method is included.”

06: “The aim is not to teach, but rather to practice what is already known.”

07: “Grammar translation method seems to dominate. It includes more clear and authentic forms of audio. Its target audience may include young learners mostly.”

08: “It aims to teach language in a meaningful way.”

09: “It aims to develop vocabulary with fun games and it regulates according to the learner's levels. It is suitable for all learners from different background knowledge.”

10: “Suitable for teenagers. It looks vocabulary based. Limited to improve other skills.”

11: “The application is a good option for both the young learners and adults as it includes many graphics, avatars and little images of the contents. It helps the learner to practice the target language using an old fashioned method.”

GYMNGLISH:

01: “The aim of this application is teaching grammar. It can be useful for adult learners.”

02: “This application is for adults because all information is English.”

03: “It is for higher levels. Content of language learning method that includes different skills together (listening, read, grammar...) takes place in this application.”

04: “It is suitable for higher level adult learners. It is a traditional application.”

05: “It is teaching English through the use of various use of materials such as stories, recordings. There is direct assessment after teaching part.”

06: “It is designed for adults, for at least intermediate level. Aim is to test language skills e.g. Reading, listening, not the language itself. Could be used to practice before proficiency exams.”

07: “It serves to a specific audience which has linguistic background at a certain level of the target language. It includes more writing less pictures. But it seems to contribute overall language ability.”

08: “It aims to gain technical knowledge on English. There are no communicative activities.”

09: “It is designed for improving all parts of English including reading, listening, vocabulary and grammar. It has a test format, it can help learners to prepare for an exam like TOEFLY, IELTS.”

10: “It is ok for high school students. Looks like a course book content. It is better having it in the classroom atmosphere.”

11: “The application is for the users who is interested in more academic contents and level.”

KOLAY İNGİLİZCE:

01: “It is useful for adult learners. Grammar translation method is used in this app.”

02: “This application includes only translation into the target language so it is not an efficient learning tool.”

03: “It is like a dictionary for communication in daily speech.”

04: “It is a kind of dictionary that can be used when you go abroad. It is useful for adults.”

05: “It aims to provide easy access to the most desired communicative structures which can help not necessarily to the language learners but may help for travelers.”

06: “Follows audiolingual method, for adults. Based on translations. Serves for communication purposes.”

07: “It aims to include a learner who wants to learn chunks of language and use language in a practical and fast way. It looks like more of a dictionary.”

08: “It aims to use daily English, for specific purposes lies shopping while travelling abroad.”

09: “Its purpose is to develop communication skills especially for adult learners. It only focuses on pronunciation and translation of words. It doesn't give feedback and its design is a little bit boring.”

10: “Suitable for individual learners, quick real life needs. Helpful for beginners.”

11: “The application assists the learners when they need help. It's not engaging and useful for the ones who want to learn somethıng new."

JOHNY GRAMMAR:

01: “The app is useful for learners who are 11-12 years old.”

02: “This application is for adults. Users can learn English through competing.”

03: “It includes from beginners to elementary levels. It checks all skills.

04: “It is suitable for both young learners and adults. Competitive method is used.”

05: “It aims to teach vocabulary/ grammar through testing daily use of the language units. Reinforcement is included.”

06: “It does not teach the content but assessment is the base. There are some chunks, it has some implications of audiolingual method. Both adults and kids can use it.”

07: “It aims to focus on grammar of the user. It is based on reading and partly writing. It lacks the communicative features of a language.”

08: “It aims to teach vocabulary and grammar in competitive ways.”

09: “It has a modern format and includes many kinds of activities. Its design is creative and fun. Its format is a kind of competition and it is motivational.”

10: “Good for young learners and teenagers. It is mainly based on grammar but we can improve other skills except some of them.”

11: “The application is appropriate for the young learners to practice the simple steps of the target language.”

LEARN LANGUAGES:

01: “It is useful for both young learners and adult learners. It teaches English in communicative ways.”

02: “This application is useful for beginners because the content is very easy.”

03: “It includes all skills from speaking to reading, listening and writing. It starts from beginners and continues.”

04: “It is suitable both young learners and adults. Communicative method is used. It goes unit by unit.”

05: “It aims to teach English by providing short genuine sentences and assess directly after the instruction part. It is included direct method.”

06: “To practice more than to teach. Mostly based on listening and speaking.”

07: “It aims to develop overall language ability. It serves more to teenagers and adults. It is like a text book. It includes 4 skills of the language and authentic tasks.”

08: “It aims to teach grammar and vocabulary in an audiolingual way.”

09: “It has a colorful, full of multimedia and a modern format. It is simple and repetitive teaching style. It is suitable for all kinds of ages.”

10: “suitable for all levels and all learners. We can use the application both in the classroom atmosphere and individually.”

11: “The application is useful and in modern shape as each unit are divided in lessons according to the core skills. (modern and online course-book)”

LINGUA LEO:

01: “It is suitable for intermediate level learners.”

02: “This application contains lots of things that learner needs: Vocabulary tasks, Listening practice, Grammar parts, Authentic multimedia, etc.”

03: “It is for higher level learners. Translation method takes place.”

04: “It is suitable for teenagers and adults. Communicative method is used.”

05: “It aims to teach English through direct grammar teaching and facilitate communicative skills by providing several media such as videos, recordings and stories. Comprehension checks may not be sufficient for some content.”

06: “It is not based on language components, but is it based mostly on reading and listening skills. The content of the video is suitable for both adults and kids. Instructions are in Turkish; it is easy to use.”

07: “It seems to focus on individual language learner problems and offers immediate solutions by giving you exercises. Learners have the chance to learn and practice at the same time.”

08: “It aims to teach language in a communicative way.”

09: “It is interesting and it includes authentic materials. And also it is easy to follow and suitable for learners from different backgrounds but especially for adult learners. It contains lots of multimedia index and activities from films, series, books. Learners can choose subjects based on their interests. It is a kind of international application.”

10: “Suitable for adult and teenagers. It is better for individual use. Enjoyable for teenagers and adults.”

11: “The application focuses on practicing rather than teaching something new.”

WORDLY:

01: “It is only for teaching vocabulary.”

02: “This application depends on vocabulary. By that way you can learn new words.”

03: “It is daily vocabulary learning application.”

04: “It is a daily vocabulary application. It makes vocabulary learning process fast.”

05: “It aims to provide learners to have a chance to learn a vocabulary each day by considering their level of proficiency.”

06: “It is based on vocabulary memorization. Does not include any other component of language. But it is practical to learn vocabulary.”

07: “It is like dictionary. It seems more to focus on one's vocabulary development.”

08: “It aims to give daily words to help with memorizing.”

09: “It is only focuses on vocabulary. It has a traditional format. It can be richer in format and contain more multimedia and icons.”

10: “It is a simple application suitable for teenagers and adults. Generally based on vocabulary and it is better using for homework and word practice.”

11: “It's a good but classic way to learn a new word. “

Appendix D

The gathered data from the check list

2. Please give points from 1 to 5 for each criteria about the applications below: (5 completely applicable, 4 applicable, 3 not sure, 2 inapplicable, 1 definitely inapplicable)

The screen design of the mobile learning application...								
1....is easy to understand first meet with the user								
2....has direct access to help when needed								
3....has the easiest access to the information								
4....keeps away from eye-straining long written information								
5....regulates the content of education								
6....contains multimedia targeted index to work with the instruction								
7....concerns less aesthetic more simplicity								
8....includes light background and dark foreground content								
9....is capable of individualization								
10. ...focuses on modern forms of education								
11. ...suits different types of users								
12. ...considers the age of pedagogical features of users								
13. ...is consistent on graphical design (icons, buttons, typography...)								
14. ...includes authentic tasks								
15. ...keeps things private and make it be sure to the user								
16. ...makes login system quick (for example through Facebook account)								
17. ...checks comprehension after all								

BUSUU:

The screen design of the mobile learning application...	01	02	03	04	05	06	07	08	09	10	11
1...is easy to understand first meet with the user	5	2	3	4	3	4	5	3	5	4	4
2...has direct access to help when needed	5	1	2	5	2	2	5	4	4	4	1
3...has the easiest access to the information	5	4	4	5	5	3	4	5	4	4	5
4...keeps away from eye-straining long written information	4	5	4	5	5	5	5	5	5	5	4
5...regulates the content of education	4	5	5	5	5	5	5	5	5	5	3
6...contains multimedia targeted index to work with the instruction	3	3	4	3	4	4	3	1	4	4	5
7...concerns less aesthetic more simplicity	4	4	3	5	3	5	4	5	5	1	2
8...include light background and dark foreground content	5	5	5	5	5	5	5	4	5	4	5
9...is capable of individualization	5	3	2	2	5	5	5	3	4	5	1
10...focuses on modern forms of education	3	2	3	4	4	4	5	3	3	4	3
11...suits different types of users	3	5	3	5	4	5	3	3	4	4	4
12...considers the age of pedagogical features of users	5	1	3	3	1	4	5	4	4	2	1
13...is consistent on graphical design (icons, buttons, typography...)	5	4	4	5	5	5	5	4	4	4	3
14...includes authentic tasks	3	5	2	5	2	2	4	3	4	4	3
15...keeps things private and make it be sure to the user	5	5	3	5	5	4	5	4	4	4	4
16...makes login system quick (for example through Facebook account)	5	5	5	5	5	5	5	5	5	3	5
17...checks comprehension after all	5	5	4	5	5	5	5	4	5	5	5

DUOLINGO:

The screen design of the mobile learning application...	01	02	03	04	05	06	07	08	09	10	11
1...is easy to understand first meet with the user	3	4	4	4	3	4	5	5	3	3	3
2...has direct access to help when needed	2	1	2	5	2	3	5	5	3	4	3
3...has the easiest access to the information	2	4	3	5	2	2	5	4	4	3	5
4...keeps away from eye-straining long written information	4	5	4	5	5	4	5	5	4	3	5
5...regulates the content of education	3	5	5	5	5	5	5	5	5	3	3
6...contains multimedia targeted index to work with the instruction	2	4	4	3	4	3	4	3	4	2	5
7...concerns less aesthetic more simplicity	2	3	5	5	2	4	5	5	4	3	3
8...include light background and dark foreground content	4	4	5	5	5	5	5	5	5	3	3
9...is capable of individualization	4	5	2	3	5	3	5	4	5	4	1
10...focuses on modern forms of education	1	1	4	4	5	3	4	3	2	1	1
11...suits different types of users	1	2	5	4	4	3	4	5	4	3	4
12...considers the age of pedagogical features of users	2	4	3	5	1	3	4	4	4	3	3
13...is consistent on graphical design (icons, buttons, typography...)	3	3	5	5	5	4	5	4	5	2	3
14...includes authentic tasks	1	5	2	2	3	2	4	3	3	2	1
15...keeps things private and make it be sure to the user	5	5	4	5	5	5	5	4	5	4	4
16...makes login system quick (for example through Facebook account)	5	5	5	5	3	5	5	4	5	3	5
17...checks comprehension after all	5	5	5	5	5	5	5	5	5	4	5

GYMNGLISH:

The screen design of the mobile learning application...	01	02	03	04	05	06	07	08	09	10	11
1...is easy to understand first meet with the user	4	2	5	3	1	2	3	3	5	3	2
2...has direct access to help when needed	2	1	5	3	2	2	4	3	3	3	5
3...has the easiest access to the information	2	3	5	3	2	1	4	2	2	3	3
4...keeps away from eye-straining long written information	1	1	3	2	1	1	3	1	2	3	2
5...regulates the content of education	4	2	3	2	1	1	1	2	2	4	3
6...contains multimedia targeted index to work with the instruction	3	1	2	2	4	1	2	1	2	4	2
7...concerns less aesthetic more simplicity	2	1	5	3	1	4	4	3	2	3	2
8...include light background and dark foreground content	4	5	5	4	5	5	5	4	4	2	5
9...is capable of individualization	4	5	5	4	5	5	5	4	3	3	5
10...focuses on modern forms of education	1	4	3	3	5	3	3	1	2	4	3
11...suits different types of users	1	3	2	3	2	1	2	1	2	4	2
12...considers the age of pedagogical features of users	2	1	5	4	2	5	2	1	4	4	5
13...is consistent on graphical design (icons, buttons, typography...)	1	1	2	3	4	1	4	1	2	3	3
14...includes authentic tasks	3	5	2	2	4	1	5	3	2	3	2
15...keeps things private and make it be sure to the user	5	5	5	5	5	5	5	4	4	5	4
16...makes login system quick (for example through Facebook account)	5	1	5	2	2	1	5	1	2	3	3
17...checks comprehension after all	5	5	5	5	5	2	5	5	4	4	5

KOLAY İNGİLİZCE:

The screen design of the mobile learning application...	01	02	03	04	05	06	07	08	09	10	11
1...is easy to understand first meet with the user	5	5	4	5	5	5	5	4	4	5	5
2...has direct access to help when needed	5	1	3	5	3	3	5	4	4	4	1
3...has the easiest access to the information	5	5	5	5	5	5	5	4	5	4	5
4...keeps away from eye-straining long written information	5	5	4	4	5	5	5	5	5	5	5
5...regulates the content of education	3	1	5	5	1	1	2	2	3	3	1
6...contains multimedia targeted index to work with the instruction	2	1	2	3	2	2	2	1	2	3	1
7...concerns less aesthetic more simplicity	5	5	2	4	4	4	5	4	4	4	5
8...includes light background and dark foreground content	5	5	4	5	5	5	5	4	3	3	5
9...is capable of individualization	2	1	2	3	2	2	3	1	2	4	1
10...focuses on modern forms of education	2	1	2	3	1	1	5	1	2	2	1
11...suits different types of users	3	1	4	4	1	1	5	1	2	2	1
12...considers the age of pedagogical features of users	5	1	2	4	1	1	4	3	4	3	1
13...is consistent on graphical design (icons, buttons, typography...)	4	2	3	3	3	3	5	4	2	3	1
14...includes authentic tasks	1	1	2	2	1	1	3	1	1	1	1
15...keeps things private and make it be sure to the user	5	1	4	5	5	5	3	2	3	3	5
16...makes login system quick (for example through Facebook account)	5	5	5	5	5	5	5	5	5	3	5
17...checks comprehension after all	1	1	2	1	1	1	1	1	1	2	1

JOHNNY GRAMMAR:

The screen design of the mobile learning application...	01	02	03	04	05	06	07	08	09	10	11
1...is easy to understand first meet with the user	5	5	5	5	5	5	5	4	4	5	5
2...has direct access to help when needed	5	5	5	5	5	3	5	4	5	4	4
3...has the easiest access to the information	5	5	5	5	4	3	4	4	4	4	5
4...keeps away from eye-straining long written information	5	5	4	5	5	4	5	4	5	5	5
5...regulates the content of education	5	2	4	5	2	5	5	5	5	5	3
6...contains multimedia targeted index to work with the instruction	3	1	3	2	2	4	2	1	3	4	1
7...concerns less aesthetic more simplicity	5	1	5	4	3	5	4	4	4	3	4
8...includes light background and dark foreground content	5	5	5	5	5	5	5	4	4	3	5
9...is capable of individualization	5	5	5	5	4	3	5	2	2	4	1
10...focuses on modern forms of education	4	5	5	5	2	1	2	1	2	4	2
11...suits different types of users	3	5	5	5	3	4	5	4	4	4	2
12...considers the age of pedagogical features of users	5	1	5	5	2	4	3	3	5	5	1
13...is consistent on graphical design (icons, buttons, typography...)	5	5	4	4	5	3	5	4	2	5	2
14...includes authentic tasks	2	1	2	2	2	1	2	3	2	4	1
15...keeps things private and make it be sure to the user	5	5	5	5	5	3	3	4	4	4	4
16...makes login system quick (for example through Facebook account)	5	5	5	5	5	5	5	5	5	4	5
17...checks comprehension after all	5	5	5	5	5	4	5	5	3	5	2

LEARN LANGUAGES:

The screen design of the mobile learning application...	01	02	03	04	05	06	07	08	09	10	11
1...is easy to understand first meet with the user	2	4	5	5	3	5	5	3	2	4	5
2...has direct access to help when needed	5	1	3	5	1	2	4	3	2	4	2
3...has the easiest access to the information	1	5	5	5	1	3	5	3	2	4	5
4...keeps away from eye-straining long written information	5	5	5	5	5	5	5	4	4	4	5
5...regulates the content of education	5	5	5	5	4	5	5	5	4	5	5
6...contains multimedia targeted index to work with the instruction	5	5	3	5	3	3	5	5	3	4	5
7...concerns less aesthetic more simplicity	5	5	5	5	2	5	5	3	4	4	2
8...includes light background and dark foreground content	5	5	5	5	5	5	5	4	4	4	5
9...is capable of individualization	5	1	5	3	3	4	5	3	2	4	1
10...focuses on modern forms of education	5	1	5	5	3	4	5	4	4	4	5
11...suits different types of users	5	5	4	5	2	3	4	4	4	4	5
12...considers the age of pedagogical features of users	5	3	4	5	2	4	4	4	4	4	2
13...is consistent on graphical design (icons, buttons, typography...)	5	4	5	5	5	4	5	5	3	4	4
14...includes authentic tasks	3	5	3	5	2	1	5	5	2	5	4
15...keeps things private and make it be sure to the user	5	5	5	5	5	3	5	4	4	5	5
16...makes login system quick (for example through Facebook account)	2	2	3	5	5	5	5	5	2	4	4
17...checks comprehension after all	5	3	5	5	5	1	5	5	2	4	4

LINGUA LEO:

The screen design of the mobile learning application...	01	02	03	04	05	06	07	08	09	10	11
1...is easy to understand first meet with the user	5	5	5	5	3	4	5	4	3	4	4
2...has direct access to help when needed	5	1	4	5	1	3	4	4	2	4	2
3...has the easiest access to the information	5	4	4	5	2	5	5	5	4	4	2
4...keeps away from eye-straining long written information	4	2	4	5	2	5	5	4	4	4	3
5...regulates the content of education	3	5	5	5	4	4	5	5	4	2	3
6...contains multimedia targeted index to work with the instruction	5	5	5	5	5	5	5	5	5	4	5
7...concerns less aesthetic more simplicity	5	4	4	5	3	4	4	4	4	3	2
8...includes light background and dark foreground content	5	5	5	5	5	5	5	5	5	4	5
9...is capable of individualization	5	4	5	5	3	5	5	5	4	4	1
10...focuses on modern forms of education	4	5	5	5	4	5	4	5	5	2	5
11...suits different types of users	4	1	5	4	2	5	5	5	4	2	5
12...considers the age of pedagogical features of users	5	5	4	5	2	4	4	5	5	2	3
13...is consistent on graphical design (icons, buttons, typography...)	5	5	5	5	5	5	5	4	5	3	4
14...includes authentic tasks	4	5	5	5	5	4	5	5	5	4	5
15...keeps things private and make it be sure to the user	5	5	5	5	5	5	5	4	5	3	5
16...makes login system quick (for example through Facebook account)	5	5	5	5	5	5	5	5	5	4	5
17...checks comprehension after all	5	5	5	5	3	1	5	5	5	3	4

WORDLY:

The screen design of the mobile learning application...	01	02	03	04	05	06	07	08	09	10	11
1...is easy to understand first meet with the user	3	5	3	5	5	5	5	3	4	3	5
2...has direct access to help when needed	2	1	3	5	2	4	5	4	3	4	1
3...has the easiest access to the information	5	5	4	5	2	5	5	1	5	4	5
4...keeps away from eye-straining long written information	4	1	3	5	5	5	5	4	4	2	5
5...regulates the content of education	2	1	2	2	2	3	5	1	2	1	1
6...contains multimedia targeted index to work with the instruction	2	1	1	2	2	1	2	1	1	1	2
7...concerns less aesthetic more simplicity	4	5	2	5	5	5	5	4	5	3	5
8...includes light background and dark foreground content	4	2	3	5	5	1	5	4	4	2	5
9...is capable of individualization	2	1	2	2	1	2	3	2	1	3	1
10...focuses on modern forms of education	2	3	2	3	1	1	1	1	2	1	1
11...suits different types of users	2	4	2	4	2	3	5	1	3	3	1
12...considers the age of pedagogical features of users	2	2	2	4	1	3	3	1	3	1	1
13...is consistent on graphical design (icons, buttons, typography...)	2	1	2	3	5	1	5	1	1	2	2
14...includes authentic tasks	2	4	2	2	1	1	1	1	1	1	1
15...keeps things private and make it be sure to the user	4	1	3	5	5	5	2	1	3	3	5
16...makes login system quick (for example through Facebook account)	5	1	5	5	5	5	5	4	5	4	5
17...checks comprehension after all	1	1	2	1	1	1	2	1	1	1	1

Appendix E

Part D – Interview

Q1: How can it be taken advantage of screen design for MALL?

01: “It provides us to access easily.”

02: “May be it can take attention.”

03: “It helps learner to understand easily.”

04: “As it motivates the user, screen design is significant. It makes application more preferable.”

05: “For increasing motivation. In a world where people cannot get away from their cell phones, having an attractive screen design may increase the use of the app.”

06: “ıt is like a book basically. The design helps, if correctly done, to access to what is needed.”

07: “It helps to gather the attention of users and gives motivation.”

08: “It can be motivated with its graphical visuals.”

09: “It can interests learners.”

10: “It can be used as a motivating element with colors.”

11: “Interface design is the very first impression of the application as it presents the main steps and aims.”

Q2: How can light background and dark foreground help the learner?

01: “It helps to focus on learning the content.”

02: “It can help the learner to concentrate to learn.”

03: “It attracts attention.”

04: “It moves away being back breaking for the user.”

05: “It may increase the concentration rate.”

06: “light background may make the attention span last longer. This help to keep the user active.”

07: “It helps users to read easily and refrain from confusion.”

08: “It can help with taking attention and concentration.”

09: “It helps to keep motivated and by this means easy to follow information.”

10: “Visually, it is very important to take students' attention. Because some students find some programs tiring.”

11: “Light background and dark foreground is easy to read and recognize.”

Q3: Instead of eye-straining long written information, what can be used?

01: “ Icons can be used.”

02: “ There can be pictures.”

03: “ Icons.”

04: “ Getting help from graphic design.”

05: “Several medias or implicit teaching”

06: “Icons and simple pictures could be used to give instruction within the app.”

07: “Icons, pictures, audio-visual materials can be used.”

08: “Icons, graphical visuals, audios can be used.”

09: “Multimedia, videos, songs, games, short stories etc.”

10: “Pictures, videos, large fonts, speech bubbles, cartoons.”

11: “The visual items can be added to the app and multimedia aids can also be helpful.”

Q4: What can be included to make an interface/screen more interactive?

01: “Videos can be added. Communicative ways can be provided.”

02: " It can be a kind of online connection."

03: " Robot teacher/peer."

04: " Getting help from social media."

05: " It may have online options which enables language learners to interact through competitions or chatting."

06: " Online vocabulary games, grammar competition"

07: " A language learning community, common aims with the audience."

08: " Social media connections and communication tools like messages and mailing can be included."

09: "An international speaking environment can be added. Checking accuracy of speaking can be used. In this way users can have chance to practice."

10: " Visual things can move, real characters can appear and professional players can act."

11: " The forums, the blogs or the online chat forms can be integrated into the application to turn it into a more interactive form."

Q5: What can be the first attention-grabbing issue on an application screen for you? Aesthetic design or functionality concern?

01: "I think both of them are important."

02: "Functionality."

03: "Functionality concern"

04: "Functionality."

05: "Aesthetic design and the name"

06: "Aesthetic"

07: "Functionality"

08: “Functionality”

09: “Functionality. It should be direct to information.”

10: “Aesthetic design”

11: “ Functionality comes first but I cannot underestimate the importance of the aesthetic design. I think both of them should be in a great harmony.”

Q6: What can make a screen design more individual, personalize and special for a learner/user?

01: “It can use my picture and name.”

02: “It can be connected by social media accounts and use the personal information.”

03: “To be suitable for the level of each user.”

04: “User should have a personal profile page that can show his or her process.”

05: “A part for learners can be included to spare for themselves such as vocabulary, grammar clues, photos for reinforcing remembering.”

06: “A revision section specific for each user, a revision test after a month.”

07: “Themes, color selection”

08: “Accounts are needed to make it individual. Additionally personal selections can work.”

09: “Activities for individual level, vocabulary tests, for your interest areas can be taken into consideration.”

10: “ It can have a different design for each user like color of the page, writing style can be preferable.”

11: “The profile of the users can be detailed including the personalized topics, contents and interests.”

Q7: What can show age characteristics of the target users on the screen design?

01: “For young learners it can use images which are appropriate for them. For the adult learners it can use authentic materials.”

02: “ Content.”

03: “The icons, content and design can show the age characteristics.”

04: “For example, for child users the app should be more colorful and have more games and design.”

05: “Colors and figures”

06: “The use of pictures and what they contain. For adults, it should look more simple and authentic, clear sections.”

07: “Pictures of cartoon characters can be used. But for adults more authentic pictures van be utilized.”

08: “The pedagogical approaches like the tasks, the visuals using for activities and authentic inputs can show it.”

09: “Colors, type of writing, icons and multimedia index.”

10: “Colors, pictures, shapes, coloring way, drawings, presentations of the content.”

11: "The illustrations, graphics, media and the colors, the format and the size of the letters show the age characteristics.”

Q8: What kinds of authentic tasks can be included on the screen design?

01: “Since screen of smartphone is not large enough to add authentic task. However, social media contents and visuals can be included.”

02: “Maybe as teachers we can add newspaper and some magazine visuals.”

03: “Newspaper visuals, real stories or real people conversation videos.”

04: “YouTube, newspaper and real news websites can be used.”

05: “Familiar characters (e.g. Cedrick), you tubers, bloggers, computer games, online games, celebrities etc. can be used.”

06: “Links to e.g. Twitter accounts, YouTube channels related to the topic.”

07: “They should be taken directly from the native speaking community. They can be such as conversations, news, pictures taken from real environments.”

08: “YouTube videos, real life visuals, magazines, news feed, popular social sires like twitter can be included.

09: “Newspaper, magazines, books, TV series, biographies, songs, video clips.

10: “Videos, games, pictures, photographs and movies.”

11: “The learners can record their own voices, they can interact and chat with the other users of the app, be a part of the real-life dialogues.”

Appendix F

Interview

Dear English Language Teacher;
For improving the screen design of mobile applications under the language learning category, we are collecting data for a research called **the Role of The Interface Design on Foreign Language Learning Through Mobile Applications.** Your personal answers will not be shared, please do not hesitate to give the most suitable answer for you. Thanks for your care.

Aslı Büyükbeşe
English Language Teacher,
Visual Communication Desing Researcher
Yeditepe Universtiy

PART A: Pre-Interview
(This part is for the validity of this research.)

1. Please select one:
( )Male
( )Female

2. Year of birth: 19 ___ **.**

3. Academic background:

	Department	University
( )Undergraduate:	______________	______________
( )Graduate:	______________	______________
( )Postgraduate:	______________	______________

4. Professional background:

	Age group	School Name / Type	Inter-annual
Example:	11-15 years	Bilfen Secondary School/Private	2011-2017
	______	______________	______
	______	______________	______
	______	______________	______
	______	______________	______

5. Which of the markets do you use to download an application on your mobile device?

( ) Apple Store
( ) Google Play
( ) Windows
( ) Other:______________________________

Date:____/___/______

Interview no: _______

PART B: Briefing
(Purpose of this part is to sufficiently inform the interwee about the screen design and MALL (Mobile Assisted Language Learning). The interviewer shares the literature review and ask related questions below for ensuring.)

1. Which of the applications below have you used before?

( ) Wordly
( ) Duolingo
( ) Busuu
( ) Lingua Leo
( ) Johny Grammar
( ) Gymnglish
( ) Kolay İngilizce
( ) Language Learning (by Rosetta Stone)

2. How can you describe screen design of a (language learning intended) mobile application?

____

____

____

____

____

3. In recent approach, MALL is applied mostly. According to CEIT reseachers it is independent on time and place. What can be your first impression about screen design of a MALL application?

____

____

____

____

____

____

Date:____/___/_____

Interview no: _______

PART C: Tasking

(Purpose of this part is to evaluate each application from the view of screen design factors. Interviewee is given enough time to evaluate each application listed below and evaluate according to the check list.)

1. Please write the objectives of each application below:

BUSUU:

DUOLINGO:

GYMNGLISH:

KOLAY İNGİLİZCE:

JOHNY GRAMMAR:

LEARN LANGUAGES:

LINGUA LEO:

WORDLY:

Date:____/___/______

Interview no: _______

2. Please give points from 1 to 5 for each criateria about the applications below :
(5 completely applicable, 4 applicable, 3 not sure, 2 inapplicable, 1 definetely inapplicable)

The screen design of a mobile learning application should...								
...be easy to understand first meet with the user								
...have direct access to help when needed								
...have the easiest access to the information								
...keep away from eye-straining long written information								
...regulate the content of education								
...contain multimedia targetted index to work with the instruction								
...concern less aesthetic more simplicity								
...include light background and dark foreground content								
...be capable of individualization								
...focus on modern forms of education								
...suit different types of users								
...consider the age of pedegogical features of users								
...be consistent on graphical design (icons, buttons, typography...)								
...include authentic tasks								
...keep things private and make it be sure to the user								
...make login system quick (for example through facebook account)								
...check comprehension after all								

Date:____/___/______

Interview no: _______

PART D: Interview
(This part contributes screen design ideas to this research.)

Questions:

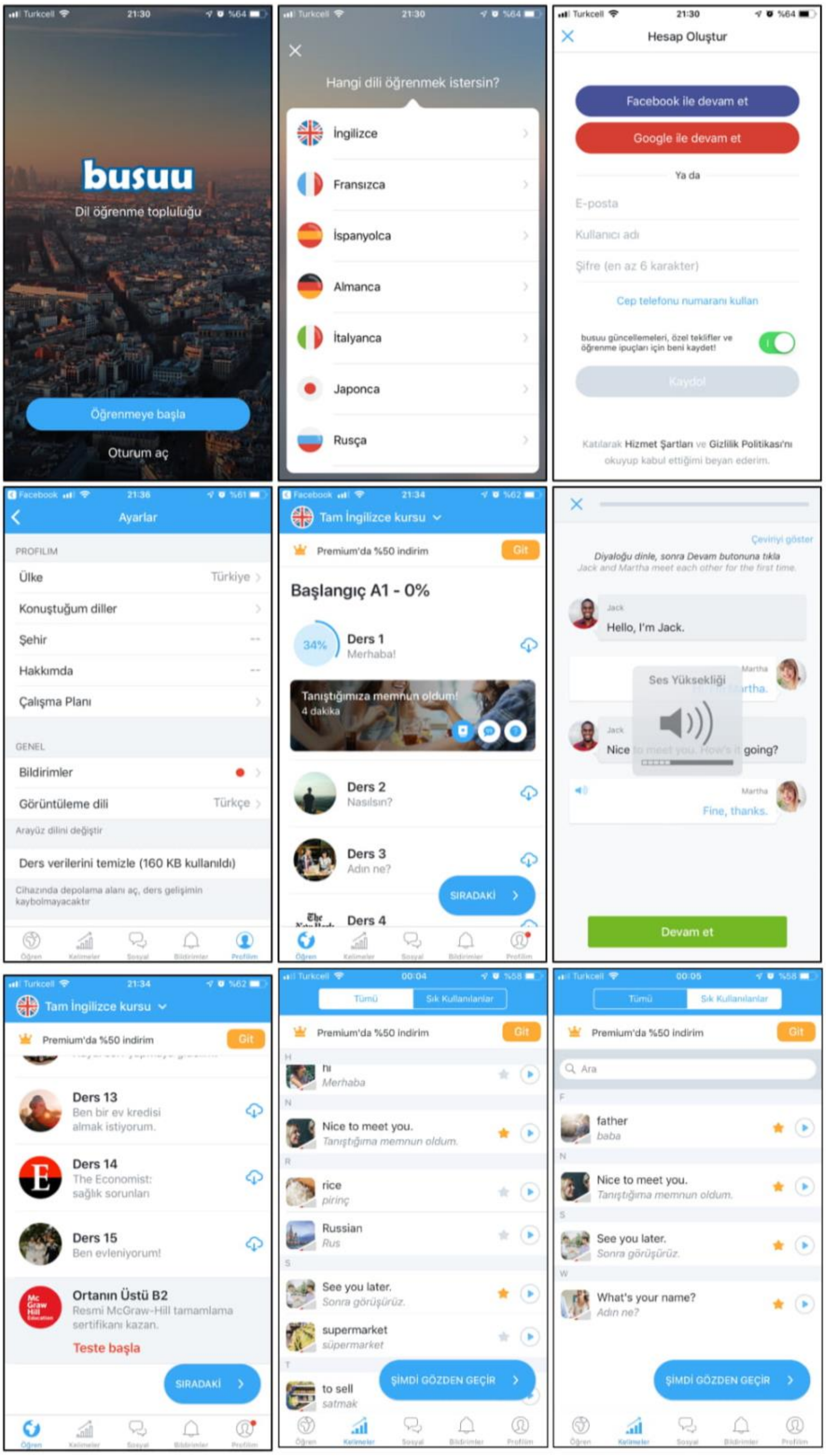
1. How can be taken advantage of screen design?
2. How can light background and dark foreground help the learner?
3. Instead of eye-straining long written information, what can be used?
4. What can be included to make an interface/screen more interactive?
5. What can be the first attention-grabbing issue on an application screen for you? Aesthetic design or functionality concern?
6. What can make a screen design more individual, personalize and special for a learner/user?
7. What can show age characteristics of the target users on the screen design?
8. What kinds of authentic tasks can be included on the screen design?

Answers and notes:

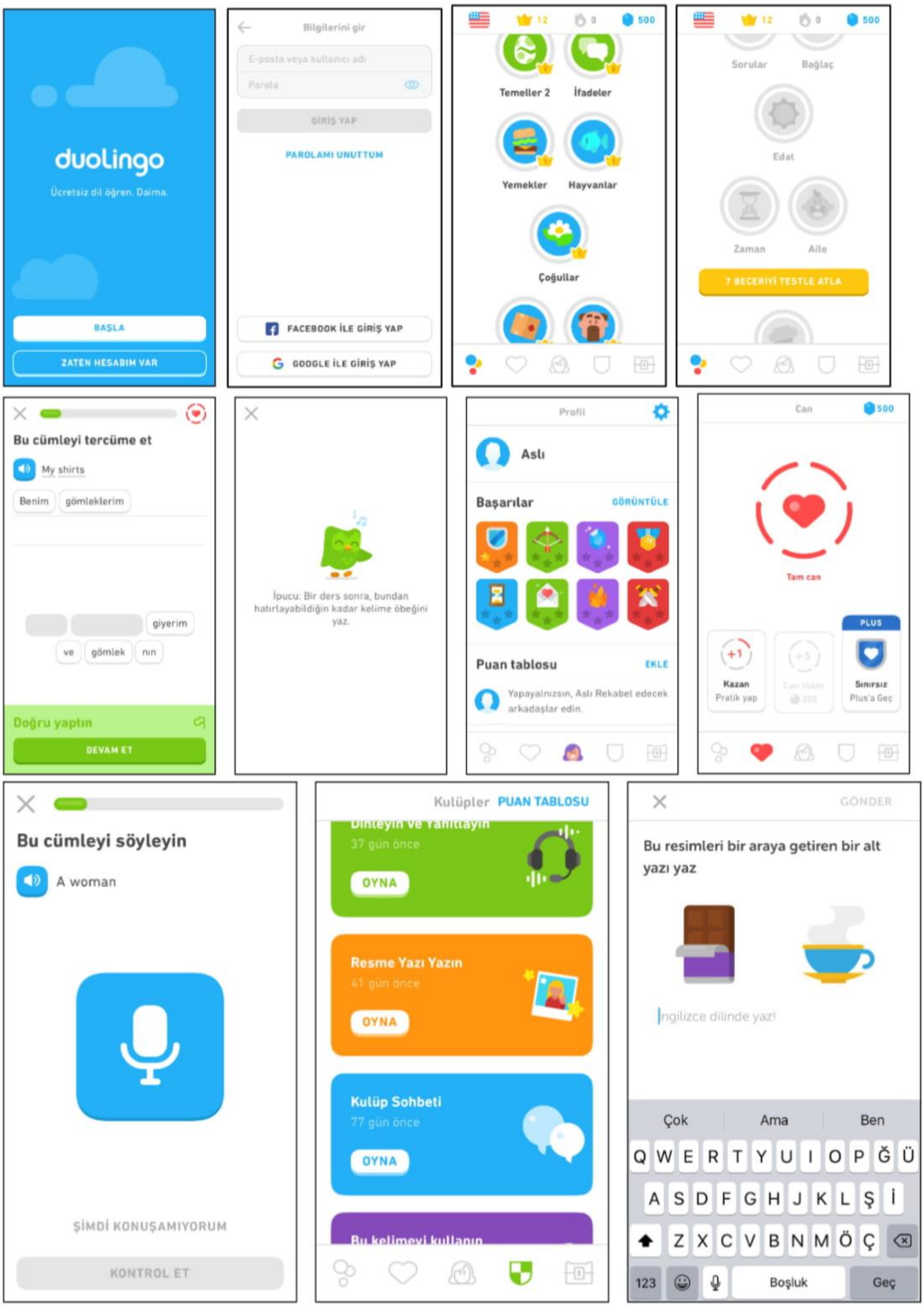
Appendix G

Interface design of 8 mobile applications

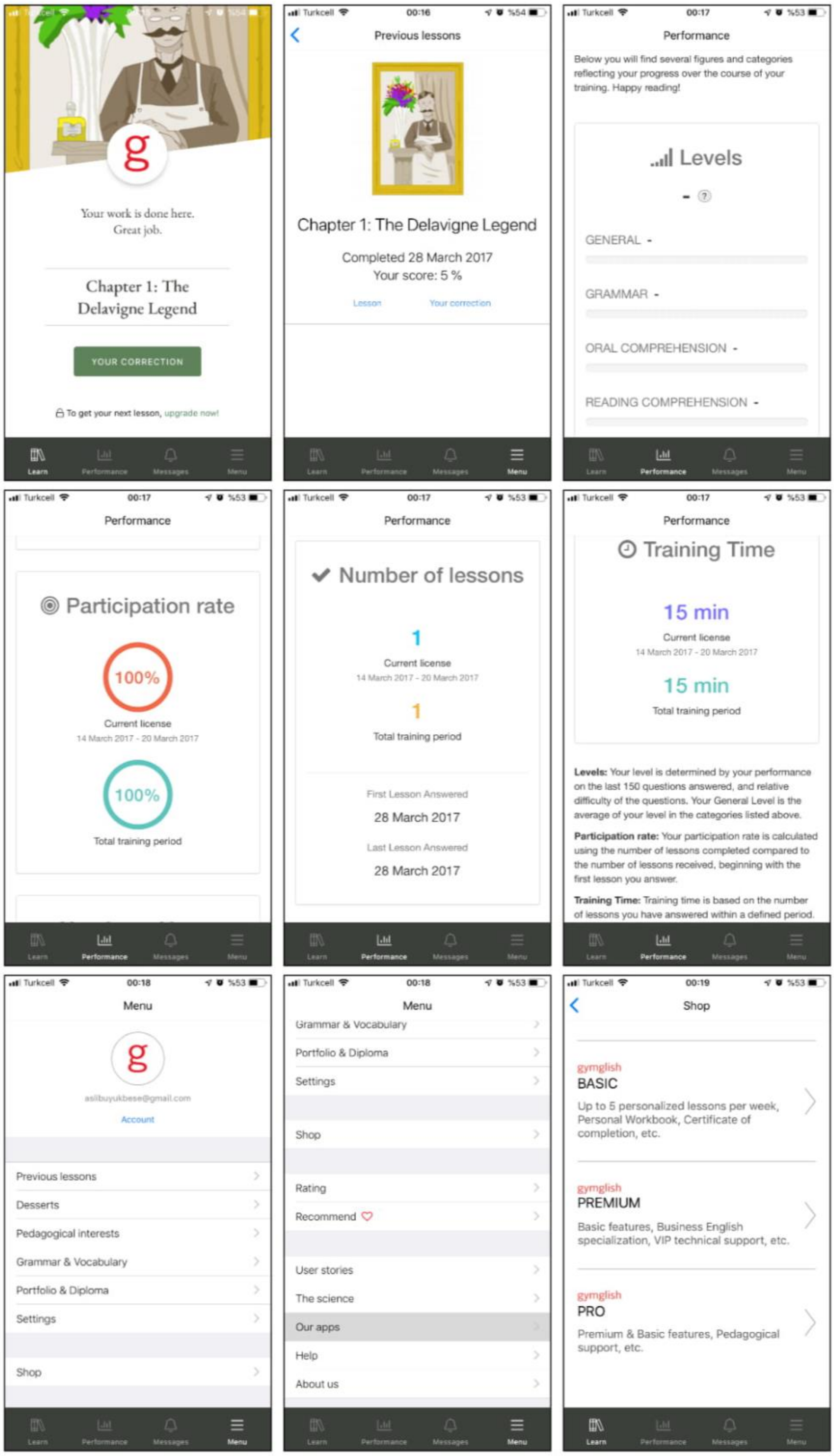
1) BUSUU



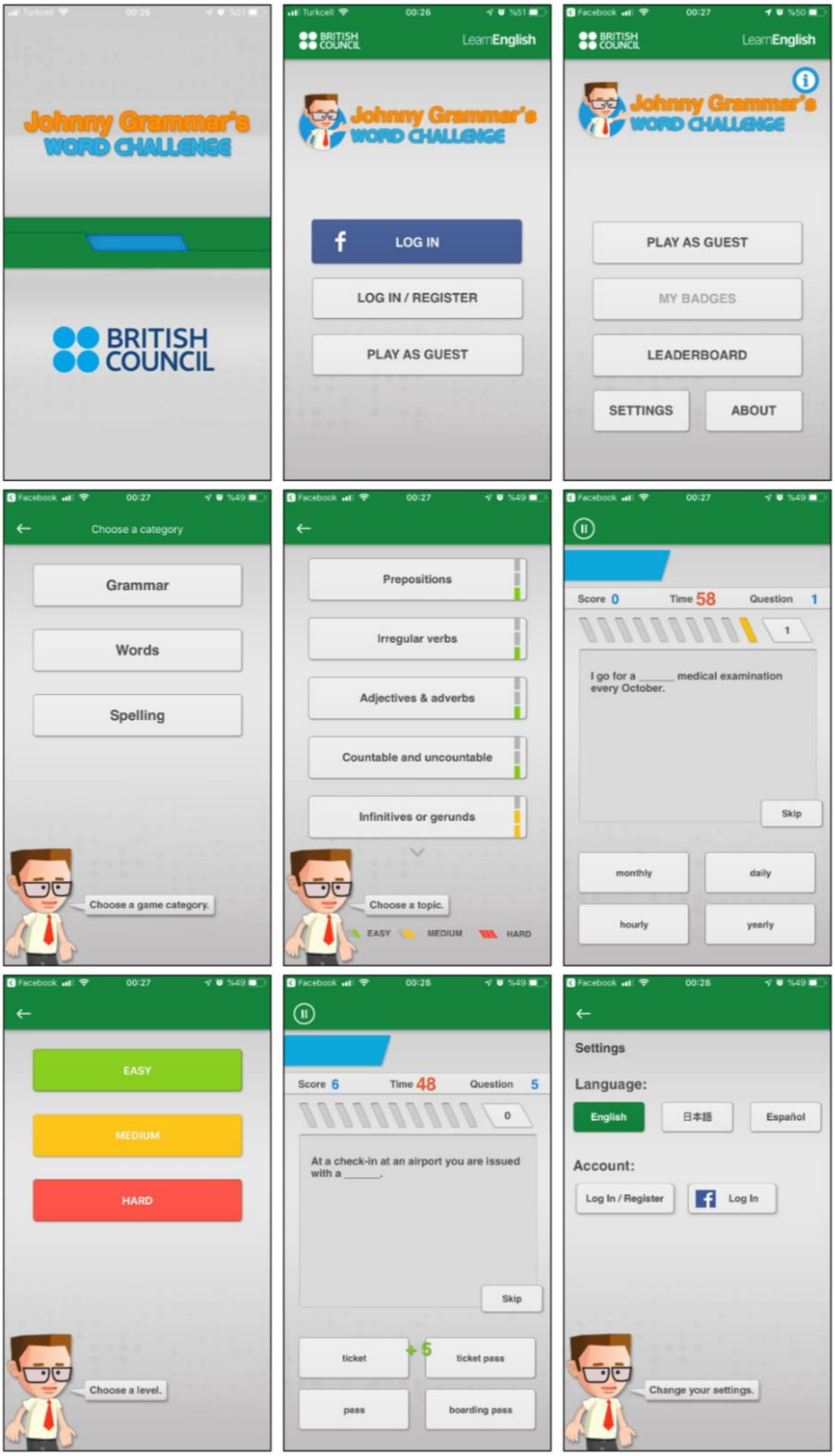
2) DUOLINGO


duolingo
Ücretsiz dil öğren. Daima.
BAŞLA
ZATEN HESABIM VAR
Bilgilerini gir
E-posta veya kullanıcı adı
Parola
GİRİŞ YAP
PAROLAMI UNUTTUM
FACEBOOK İLE GİRİŞ YAP
GOOGLE İLE GİRİŞ YAP
Temeller 2
İfadeler
Yemekler
Hayvanlar
Çoğullar
Sorular
Bağlaç
Edat
Zaman
Aile
7 BECERİYİ TESTLE ATLA
Bu cümleyi tercüme et
My shirts
Benim
gömleklerim
giyerim
ve
gömlek
nın
Doğru yaptın
DEVAM ET
İpucu: Bir ders sonra, bundan hatırlayabildiğin kadar kelime öbeğini yaz.
Profil
Aslı
Başarılar
GÖRÜNTÜLE
Puan tablosu
EKLE
Yapayalnızsın, Aslı Rekabet edecek arkadaşlar edin.
Can
500
Tam can
Kazan
Pratik yap
PLUS
Sınırsız
Plus'a Geç
Bu cümleyi söyleyin
A woman
ŞİMDİ KONUŞAMIYORUM
KONTROL ET
Kulüpler
PUAN TABLOSU
37 gün önce
OYNA
Resme Yazı Yazın
41 gün önce
OYNA
Kulüp Sohbeti
77 gün önce
OYNA
GÖNDER
Bu resimleri bir araya getiren bir alt yazı yaz
İngilizce dilinde yaz!
Çok
Ama
Ben
Boşluk
Geç

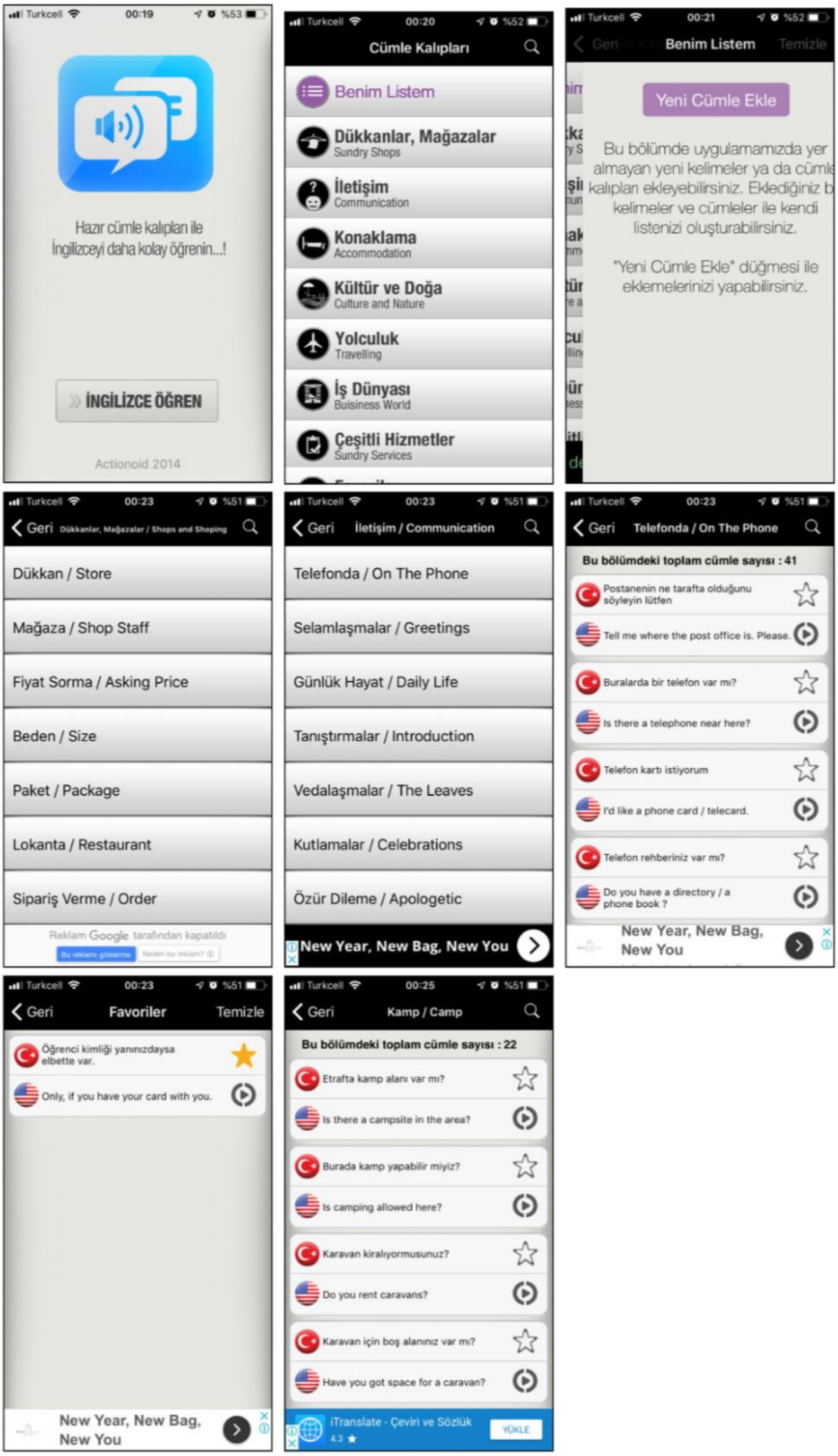
3) GYMGLISH


Your work is done here.
Great job.
Chapter 1: The Delavigne Legend
YOUR CORRECTION
To get your next lesson, upgrade now!
Previous lessons
Chapter 1: The Delavigne Legend
Completed 28 March 2017
Your score: 5 %
Lesson
Your correction
Performance
Below you will find several figures and categories reflecting your progress over the course of your training. Happy reading!
Levels
GENERAL -
GRAMMAR -
ORAL COMPREHENSION -
READING COMPREHENSION -
Participation rate
100%
Current license
14 March 2017 - 20 March 2017
100%
Total training period
Number of lessons
1
Current license
14 March 2017 - 20 March 2017
1
Total training period
First Lesson Answered
28 March 2017
Last Lesson Answered
28 March 2017
Training Time
15 min
Current license
14 March 2017 - 20 March 2017
15 min
Total training period
Levels: Your level is determined by your performance on the last 150 questions answered, and relative difficulty of the questions. Your General Level is the average of your level in the categories listed above.
Participation rate: Your participation rate is calculated using the number of lessons completed compared to the number of lessons received, beginning with the first lesson you answer.
Training Time: Training time is based on the number of lessons you have answered within a defined period.
Menu
Account
Previous lessons
Desserts
Pedagogical interests
Grammar & Vocabulary
Portfolio & Diploma
Settings
Shop
Rating
Recommend
User stories
The science
Our apps
Help
About us
Shop
gymglish
BASIC
Up to 5 personalized lessons per week, Personal Workbook, Certificate of completion, etc.
gymglish
PREMIUM
Basic features, Business English specialization, VIP technical support, etc.
gymglish
PRO
Premium & Basic features, Pedagogical support, etc.
Learn
Performance
Messages
Menu

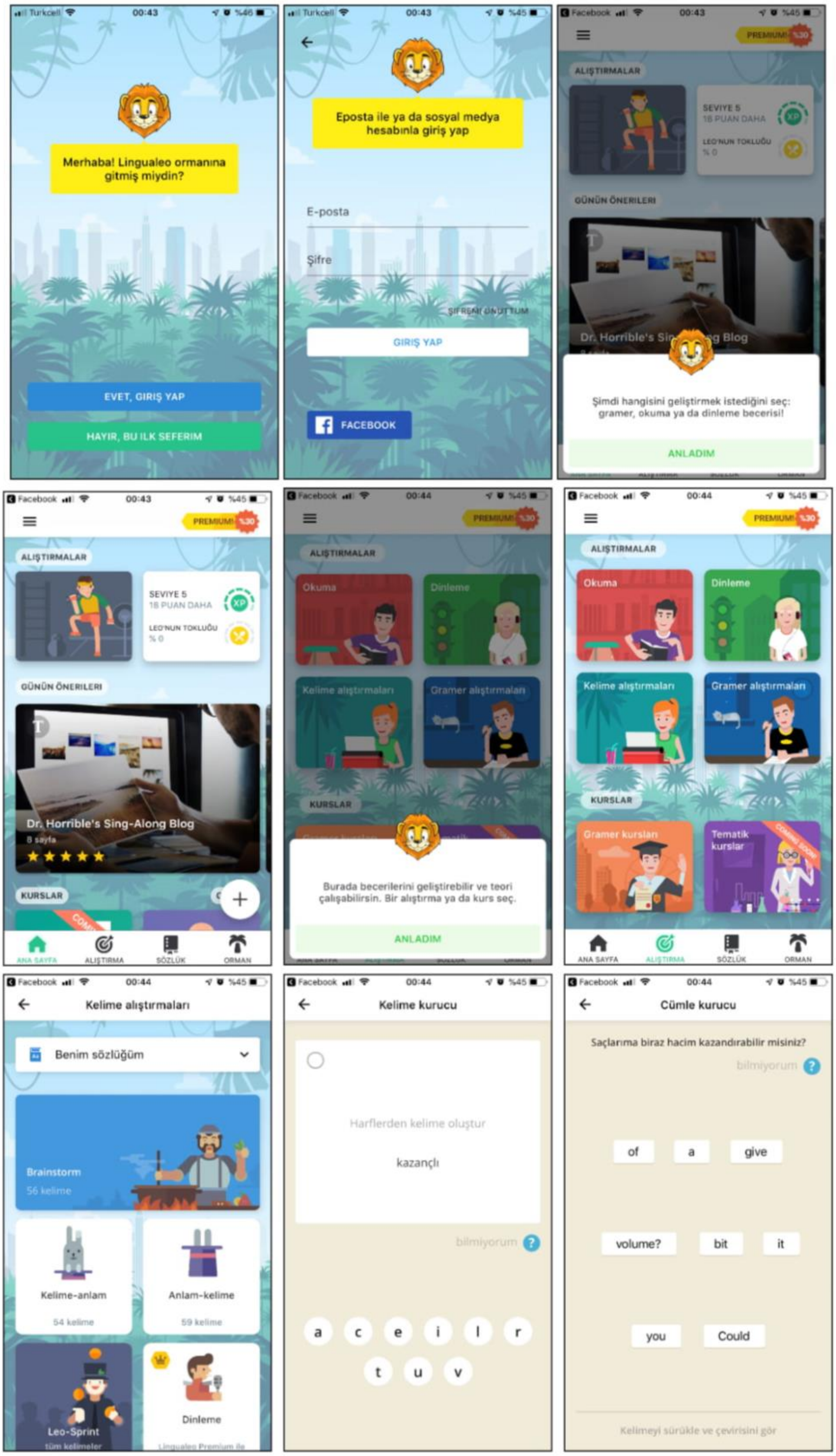
4) JOHNNY GRAMMAR

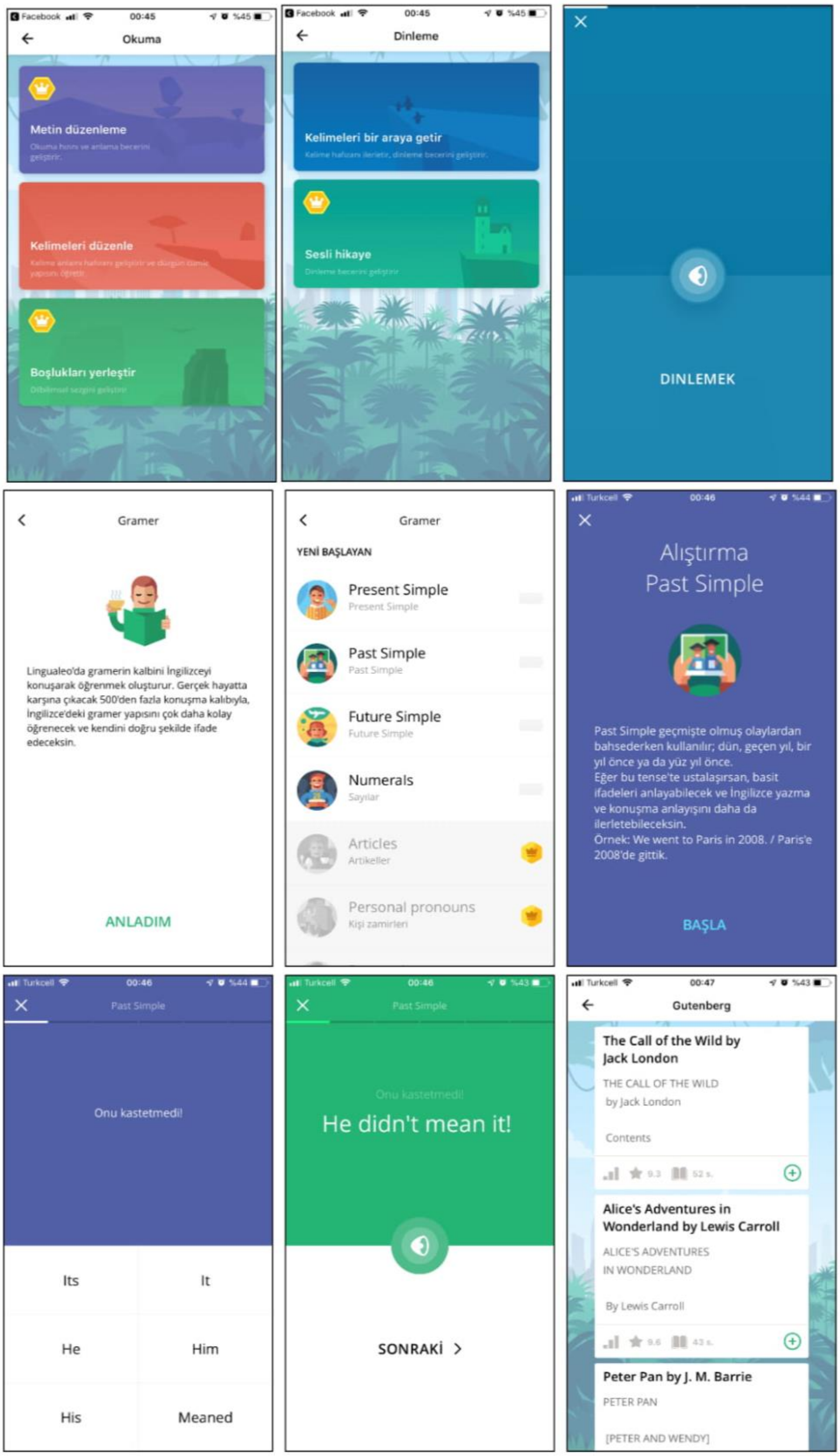


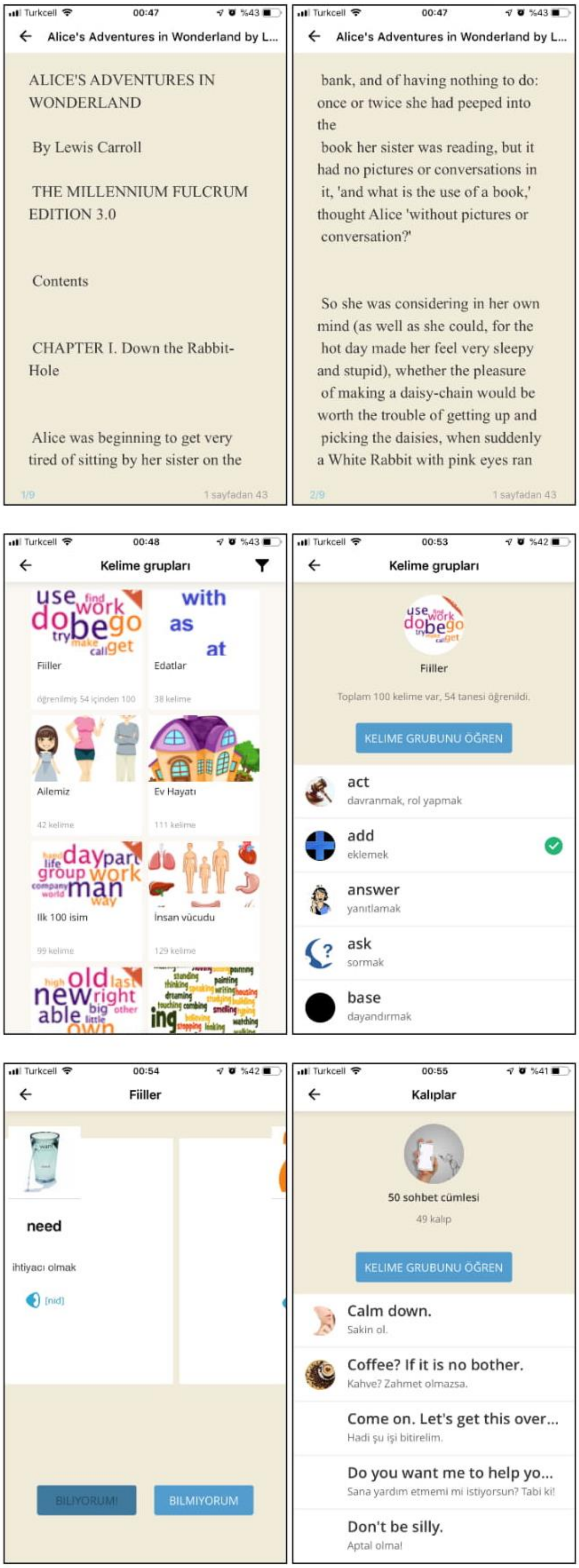
5) KOLAY İNGİLİZCE



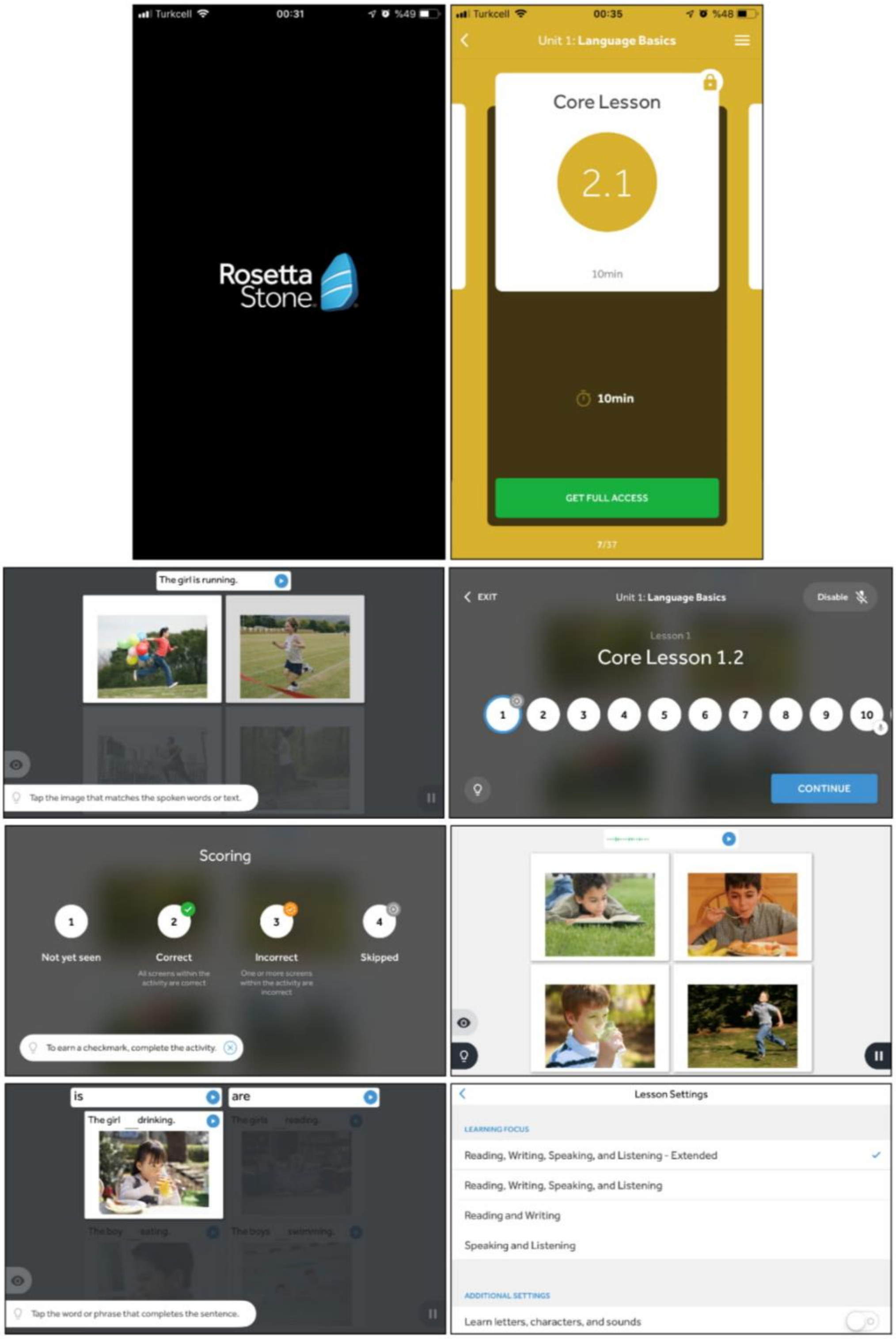
6) LINGUA LEO


Merhaba! Lingualeo ormanına gitmiş miydin?
EVET, GIRIŞ YAP
HAYIR, BU ILK SEFERIM
Eposta ile ya da sosyal medya hesabınla giriş yap
E-posta
Şifre
ŞİFREMİ UNUTTUM
GIRIŞ YAP
FACEBOOK
PREMIUM!
ALIŞTIRMALAR
SEVIYE 5
18 PUAN DAHA
LEO'NUN TOKLUĞU
GÜNÜN ÖNERILERI
Şimdi hangisini geliştirmek istediğini seç: gramer, okuma ya da dinleme becerisi!
ANLADIM
Dr. Horrible's Sing-Along Blog
KURSLAR
ANA SAYFA
ALIŞTIRMA
SÖZLÜK
ORMAN
Okuma
Dinleme
Kelime alıştırmaları
Gramer alıştırmaları
Burada becerilerini geliştirebilir ve teori çalışabilirsin. Bir alıştırma ya da kurs seç.
ANLADIM
Gramer kursları
Tematik kurslar
Kelime alıştırmaları
Benim sözlüğüm
Brainstorm
56 kelime
Kelime-anlam
54 kelime
Anlam-kelime
59 kelime
Leo-Sprint
Dinleme
Kelime kurucu
Harflerden kelime oluştur
kazançlı
bilmiyorum
a c e i l r
t u v
Cümle kurucu
Saçlarıma biraz hacim kazandırabilir misiniz?
bilmiyorum
of a give
volume? bit it
you Could
Kelimeyi sürükle ve çevirisini gör

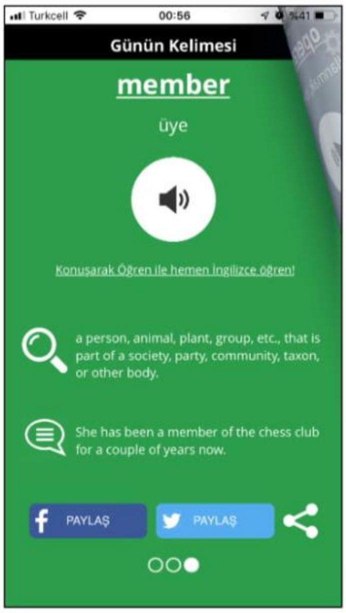

Okuma
Metin düzenleme
Kelimeleri düzenle
Boşlukları yerleştir
Dinleme
Kelimeleri bir araya getir
Sesli hikaye
DINLEMEK
Gramer
Lingualeo'da gramerin kalbini İngilizceyi konuşarak öğrenmek oluşturur. Gerçek hayatta karşına çıkacak 500'den fazla konuşma kalıbıyla, İngilizce'deki gramer yapısını çok daha kolay öğrenecek ve kendini doğru şekilde ifade edeceksin.
ANLADIM
Gramer
YENİ BAŞLAYAN
Present Simple
Present Simple
Past Simple
Past Simple
Future Simple
Future Simple
Numerals
Sayılar
Articles
Artikeller
Personal pronouns
Kişi zamirleri
Alıştırma
Past Simple
Past Simple geçmişte olmuş olaylardan bahsederken kullanılır; dün, geçen yıl, bir yıl önce ya da yüz yıl önce.
Eğer bu tense'te ustalaşırsan, basit ifadeleri anlayabilecek ve İngilizce yazma ve konuşma anlayışını daha da ilerletebileceksin.
Örnek: We went to Paris in 2008. / Paris'e 2008'de gittik.
BAŞLA
Past Simple
Onu kastetmedi!
Its
It
He
Him
His
Meaned
Past Simple
Onu kastetmedi!
He didn't mean it!
SONRAKİ
Gutenberg
The Call of the Wild by Jack London
THE CALL OF THE WILD
by Jack London
Contents
Alice's Adventures in Wonderland by Lewis Carroll
ALICE'S ADVENTURES IN WONDERLAND
By Lewis Carroll
Peter Pan by J. M. Barrie
PETER PAN
[PETER AND WENDY]

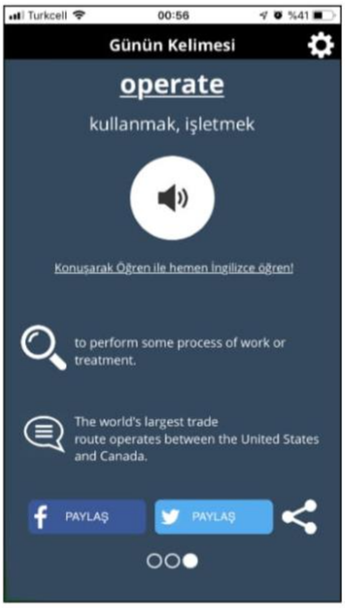

Turkcell
00:47
%43
Alice's Adventures in Wonderland by L...
ALICE'S ADVENTURES IN WONDERLAND
By Lewis Carroll
THE MILLENNIUM FULCRUM EDITION 3.0
Contents
CHAPTER I. Down the Rabbit-Hole
Alice was beginning to get very tired of sitting by her sister on the
1/9
1 sayfadan 43
Turkcell
00:47
%43
Alice's Adventures in Wonderland by L...
bank, and of having nothing to do: once or twice she had peeped into the
book her sister was reading, but it had no pictures or conversations in it, 'and what is the use of a book,' thought Alice 'without pictures or conversation?'
So she was considering in her own mind (as well as she could, for the hot day made her feel very sleepy and stupid), whether the pleasure of making a daisy-chain would be worth the trouble of getting up and picking the daisies, when suddenly a White Rabbit with pink eyes ran
2/9
1 sayfadan 43
Turkcell
00:48
%43
Kelime grupları
use find work do be go try make call get
Fiiller
öğrenilmiş 54 içinden 100
with as at
Edatlar
38 kelime
Ailemiz
42 kelime
Ev Hayatı
111 kelime
day part life group work company world man way
Ilk 100 isim
99 kelime
İnsan vücudu
129 kelime
high old last new right big other able little own
ing
Turkcell
00:53
%42
Kelime grupları
Fiiller
Toplam 100 kelime var, 54 tanesi öğrenildi.
KELIME GRUBUNU ÖĞREN
act
davranmak, rol yapmak
add
eklemek
answer
yanıtlamak
ask
sormak
base
dayandırmak
Turkcell
00:54
%42
Fiiller
need
ihtiyacı olmak
[nid]
BILIYORUM!
BILMIYORUM
Turkcell
00:55
%41
Kalıplar
50 sohbet cümlesi
49 kalıp
KELIME GRUBUNU ÖĞREN
Calm down.
Sakin ol.
Coffee? If it is no bother.
Kahve? Zahmet olmazsa.
Come on. Let's get this over...
Hadi şu işi bitirelim.
Do you want me to help yo...
Sana yardım etmemi mi istiyorsun? Tabi ki!
Don't be silly.
Aptal olma!

7) LEARN LANGUAGES BY ROSETTA STONE



8) WORDLY


Turkcell
00:56
Günün Kelimesi
member
üye
Konuşarak Öğren ile hemen İngilizce öğren!
a person, animal, plant, group, etc., that is part of a society, party, community, taxon, or other body.
She has been a member of the chess club for a couple of years now.
PAYLAŞ
PAYLAŞ


Turkcell
00:56
%41
Günün Kelimesi
operate
kullanmak, işletmek
Konuşarak Öğren ile hemen İngilizce öğren!
to perform some process of work or treatment.
The world's largest trade route operates between the United States and Canada.
PAYLAŞ
PAYLAŞ


Turkcell
00:56
%40
Ayarlar
Profil Bilgileri
Konuşarak İngilizce Öğrenin!
Uygulama Dili
Türkçe
E-posta Adresiniz
Haftalık kelime listesi için e-posta adresinizi giriniz
İngilizce Seviyeniz
İş
Bildirim Ayarları
E-posta ile bildirim
Mobil bildirim
Sesli bildirim
Bildirim saat ve sıklık ayarları
Günde 12 Kez
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Kategori Tercihinizi Yapın
1
İngilizceyi yeni öğreniyorum. Başlangıç kelimelerini öğrenmek istiyorum.
2
İngilizceyi biraz biliyorum. Orta seviye kelimeleri öğrenmek istiyorum.
3
İngilizceyi çok iyi biliyorum. İleri seviye kelimeleri öğrenmek istiyorum.
İş İngilizcesi kelimelerini öğrenmek istiyorum.


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