# A Comparison of *ESLE* Web-based English Vocabulary Learning Application with Traditional Desktop English Vocabulary Learning Application: Exceptional learner parents' point of view

Shima Ghobadi, Ph.D. Candidate, Shahreza Branch, Islamic Azad University, Shahreza, Iran *shimagh1987@yahoo.com* 

Shahrokhi, Mohsen\*, Assistant Professor, Shahreza Branch, Islamic Azad University, Shahreza,

Iran

shahrokhi1651@yahoo.com Ahmad Abedi, Associate Professor, Department of Psychology of Children with Special Needs, University of Isfahan, Isfahan, Iran *a.abedi44@gmail.com* 

# Abstract

The aim of this study was to compare the Exceptional Student Learning English (ESLE) web application and traditional application and the evaluation of the ESLE app mainly from the exceptional student parents' perspective. To this end, five exceptional student parents with their exceptional children were selected among 30 parents in Isfahan in Isfahan province. Openended questionnaires were sent to five parents to collect the parents' feedback on the ESLE app and their perceptions of mobile apps-assisted language learning experiences. Results indicated that, ESLE game-based app has encouraged exciting opportunities for personalized and learner-centered environments with flexible access to learning materials anytime and anywhere. The novel and enjoyable ways of learning would have a great potential to increase learning motivation and encourage lifelong learning habits. More research will be needed in the young filed of MALL in order to suggest the right direction to effective language learning. Findings have illuminative implications for teachers, exceptional students, parents, and app developers.

Keywords: ESLE app, exceptional students, learning English vocabulary, MALL

# Introduction

Clare (2020) stated that "throughout the coronavirus epidemic, learning outside of school is a challenge, but it is especially for exceptional students, who are already struggling with their education. The coronavirus creates a unique challenge for exceptional students, and teachers share recommendations for applications to help them learning at home".

Clare (2020) believes that Exceptional student's education faces serious challenges as remote education becomes the new standard of coronavirus epidemic. Providing comprehensive courses in a classroom can be influential on a day, but now that most schools are closed, or closing, teachers who work with exceptional students must completely recreate their approach (Clare, 2020).

According to Clare (2020), the most important concern for both parents and teachers is keeping students on track to gain the goals and objectives of the individualized Education Program (IEP) as they are designed for each student. Clare (2020) maintains that parents now have to work much more closely with exceptional students to support this learning at home. In some situations, exceptional students are accustomed to having assistants, in addition to teachers in the classroom. This is a great responsibility for parents to bear, but fortunately, some of the digital apps now available can help.

Herward (2012) believes that an exceptional student deviates from a regular student intellectually, physically, socially, or emotionally that students cannot take advantage of the standard curriculum. They require changes in the school curriculum, methods and need special education or additional instruction and physical accommodations to take full advantage of education (Heward, 2012). Such a student starts to show indications of exceptionality from birth or during the stages of development. All students differ from their physical characteristics and learning abilities (Yell, 2017). Others require curriculum enrichment and more challenging instruction and have difficulty generalizing and maintaining newly acquired knowledge and skills. However, the physical characteristics and learning abilities of exceptional students differ slightly from the norm that they require the special curriculum and services to ultimately benefit through education (Dela Cruz, et al, 2018). According to Dela Cruz, et al (2018), the term exceptional student includes all those students who have difficulty in learning and those whose performance is so superior that changes in the curriculum, teaching method and instructions are essential to help them fulfill their abilities. Therefore, the exceptional student is a comprehensive term that refers to students with learning and behavior difficulties, students with sensory impairments or physical disabilities, and intellectually gifted students or have a unique talent (pp.13-24).

In recent years, particular attention has been paid to students with Learning disabilities. Students have average intelligence, but they have difficulty mastering necessary skills like reading, writing, arithmetic, listening, and oral language (IGNOU, 2017). There are four stages of learning input, integration, memory, and output. Learning disabilities can occur in any of the four stages. Types of disabilities are (A) Dyslexia (Reading problem), (B) Dysgraphia (Writing problem), (C) Dyscalculia (Mathematics problem) (D) Language Learning disability (Dela Cruz, et al, 2018).

# Learning Disabilities in reading and vocabulary, Dyslexia (Reading problem) and Dysgraphia or Learning Disabilities in Writing words

Learning vocabulary involves two kinds of learning disabilities. There are two kinds of learning disabilities in learning vocabulary. One is in fundamental skills of reading and vocabulary and includes the foundational skills required to realize the connection between letters, sounds, and the words they represent. The second one is reading comprehension impairment, that comprises complicated reasoning skills such as learning words, expressions, phrases, and meanings of passages (IGNOU, 2017). According to IGNOU group (2017), in writing skills, vocabulary learning disabilities include difficulty with composing phrases and letters. Expressive writing disabilities may include organizing and comprehending written thoughts on paper. These can be expressive writing disabilities in terms of Learning disabilities in fundamental writing skills (pp.36-52).

The use of smartphones and other portable and wireless devices has been tremendously changing the ways of learning vocabulary (Kukulska-Hulme, 2009). Ghobadi & Taki (2018) argue that numerous mobile applications have been developed to support different aspects of second language learning, including listening, speaking, reading, writing, vocabulary, and grammar. Although these apps, usually with sound, images, and interactions, are certainly appealing to learners, the second language pedagogy that underpins these resources and activities should never be ignored.

It seems that English vocabulary Mobile apps be the supplementary support for learning English vocabulary. It could provide stress-free situations that allow unlimited tries until exceptional students feel relax and confident (Ghobadi & Taki, 2018)

As mentioned by Ghobadi and Taki (2018), mobile technology from the beginning of its existence, has been used for various instructional purposes, including English vocabulary learning and teaching. Today's generation of exceptional students is growing up in advance digital world. Using English vocabulary app every day is a massive part of their experience outside school (pp.139-158). Most of the social communications are happening online, and since the internet language has a significant impact on users' language, it would be essential to do research on these issues and their role in language learning (Ghobadi & Taki, 2018). As Stockwell (2007) maintains, in recent years vocabulary has been one of the most frequently taught through technology. We can use technology to help EFL exceptional students and teachers learn and teach better and more efficiently. Mobile apps appear to be the ideal form of vocabulary learning. It could offer private, stress-free environments that allow unlimited tries until exceptional students feel confident and relax (pp.105-122).

#### What are the benefits of using Web Applications versus Traditional Desktop Applications?

Applications are classified into web-based application and traditional desktop application based on the usability of the application or the intended users of the app. Web-based applications are a particular type of app that allows users to interact with a remote server via an interface to the web browser (lvivity, 2018). As mentioned in Lvivity site (2018), users don't have to install additional software with web-based applications, and developers don't have to write different versions of the application for various operating systems. The app can be written in different programming languages and make use of multiple frameworks and technologies. No matter which operating system is installed, a web-based application will run on the browser of the client computer. This makes web-based apps one of the today's most universal cross-platform solutions available (Lvivity, 2018). According to EDUCBA (2020), Desktop applications are installed over the personal or work computer, and such installations are necessary over each computer separately. The important disadvantages related to desktop application is that the update of such applications is very difficult and needs to be pushed on each computer where the application is installed separately (EDUCBA, 2020).

According to Lvivity (2018), "Web-based applications have a number of advantages over traditional desktop apps, their portability is most prominent". Lvivity (2018) acknowledges that users don't have to install additional software with web-based apps, and developers don't have to write multiple versions of the same application for different operating systems. The app can be written in various programming languages and make use of multiple technologies and frameworks.

On the whole, web-based applications are a unique solution that can provide the app with a wide range of multifunctional online tools that can optimize countless processes and solve multiple issues (Nation, 2020). Based on what was stated above, the following research question was addressed in the present study:

RQ. What are the strengths and weaknesses in utilizing ESLE game-based app for effective learning of English vocabulary from exceptional students parents' perspectives?

#### Literature review

English vocabulary skill is critical to be a successful and quality of life (Seo, & Bryant, 2009). Misqutta (2011) believes that, exceptional students have difficult learning vocabulary situation (pp.109-111). Although they need more time and special services in relation to their needs, the current trend in education is inclusion (Misqutta, 2011), and students do not always

benefit from instruction in inclusive classrooms (Seo & Bryant, 2009). Darling-Hammon (2010) mentions that exceptional students need more time to process when teachers teach new vocabularies and they need differentiated practices compared to their peers who are not struggling in English vocabulary (pp.35-47). However, teachers realize lack of time although they want to provide instruction based on the students' needs. Problems increase when teachers lack knowledge (Darling-Hammond, 2010). Because of problems including teacher qualifications, lack of time and resources, researchers such as Ross and Bruce (2009), support use of technology that "could provide the sequencing and scaffolding that teachers might have difficulty providing" (pp. 713-727). Technology also allows people to learn English vocabularies (Allsopp, Kyger, & Lovin, 2007).

Many exceptional students find difficulty in learning grade-level English vocabularies. Baumann and Kameenui (1991) argue that the ability to understand English vocabulary matches with the ability to understand different components of a given word (pp.117-128). For instance, root words, suffixes, prefixes and word etymology are also essential in determining meaning of word (Bryant, Goodwin, Bryant, and Higgins, 2003).

In addition, English vocabulary teaching can include the synonyms, definition, part of speech, antonyms, and proper use of contextual phrases. Memorizing the meaning of a word simply does not mean mastering the correct understanding of the vocabulary (Whitescarver, 2018)

As mentioned by Whitescarver (2018), students learn vocabulary terms in various ways, as each individual has unique skills and preferred learning styles. To best meet the needs of each exceptional student, educators need to use a variety of teaching materials such as auditory, visual, and kinesthetics.

According to Beach, Sanchez, Flynn, and O'Connor (2015), particular vocabulary instruction is important to enhance the success of exceptional students in various classrooms where many students are struggling readers (pp. 36-44). Beach, Sanchez, Flynn, and O'Connor previous research in 2015 showed that a concrete framework with changes for learning exceptional students ensures instruction that is more effective to struggling readers. Exceptional students with learning disabilities sometimes struggle to learn new English vocabulary.

A review of research findings for vocabulary teaching is lacking for exceptional students. Three reviews have been done within the last fifteen years. Johnson, Gersten, and Carnine (1987) searched the influence of number of vocabularies presented to exceptional students while utilizing computer-assisted instruction. Results of this study indicated that over 11 sessions of instruction, exceptional students in the small teaching set outperformed students in the large teaching set in terms of time required to reach satisfactory achievement (pp.206-2013).

In general, there are many tools to assist exceptional students in acquiring new vocabulary knowledge. According to Nahmod (2017), although exceptional students may have poor language skills, and tend to read less than their non-disabled peers, these exceptional students have right to learn the same material as their classmates. Some exceptional students may have poor verbal ability, poor retention skills, or may simply not be given enough chances to use different vocabularies in reading, writing or daily conversation (Nahmod, 2017). Condus, Marshall, and Miller (1986) examined the word mnemonic strategy as a means to enhance vocabulary learning and retention. Results improved that, exceptional students in the keyword-image exposure outperformed students exposed to the other conditions under both immediate and long-term time intervals (pp.609-613).

In today's culture technology continues to grow rapidly. Many teachers use technology in the classroom in an effort to make learning more easily accessible, creative, and fun. Musti-Rao

(2016) explains that there are gaps between meaningful curriculum and instruction and technology. Abrams and Walsh (2014) analyzed how exceptional students best learn vocabulary using adaptive technology and vocabulary instruction using online tools. The study concluded that game-like aspects of the website was an "effective hybrid teaching tool that honored independent and flexible learning opportunities (pp.49-58).

Franklin (2011) maintained that with Mobile-Learning, exceptional student can reach the content faster and efficiently. M-Learning does not need people to be in any specific location for the learning process; it brings the content to people where they are (p.261). Mobile -Learning app also supports group work, increases the opportunity of communication and cooperative learning by improving exceptional students' motivation to engage with learning activities in classrooms (Cakir, 2011). Applications on mobile devices help all exceptional students from different ages, levels, and even abilities (Jeng, Wu, Huang, Tan, & Yang, 2010).

According to Walker (2011) mobile learning provides opportunities for exceptional learners to build their own knowledge in different contexts, and help learners construct their own understanding (pp.59-63). Many of these game-based apps were developed for different purposes, but the main goal was to increase engagement of students and enhance the time students were exposed to content matter (NCTM, 2008). NCTM (2008) stated, the number of studies examined the effectiveness of applications on mobile devices to deliver elementary English vocabulary learning to improve academic achievements is few even though many studies showed positive correlation between engagement and academic success in English (Simsek, 2016).

According to Zichermann as indicated by Abrams and Walsh (2014) gamification is the process of using game mechanics and game thinking to engage audience in learning activities and solve problems. Kapp as stated by Abrams and Walsh (2014), Gamification includes game-like elements such as points, rewards, and top score leaderboards in non-game activities and environments.

Ultimately Gamification promotes learning by allowing exceptional students to monitor their own learning. Exceptional Students have a sense of control over their learning. According to Abrams and Walsh (2014), with the use of technology exceptional students can have control over learning because they can choose to play the game again outside class and could decide the amount of time, they wish to spend reviewing the material.

Using exercises by interactive games was suggested since it is natural that exceptional students in 7<sup>th</sup> to 9<sup>th</sup> grades like to play academic games in English vocabularies (Griffin, 2007); therefore, game-based learning achieve popularity among teachers in regards to teaching English vocabularies. Use of English vocabulary games promise advantages for exceptional students due to games enhance engagements and motivations of students (Carr, 2012). Taking into consideration the feature of games, and the students with vocabulary learning disabilities, these games might help them to overcome English anxiety by enhancing their motivation for trying to solve problem when they are failed.

#### Methodology

# Design of the study

This study has a qualitative research design, with vocabulary learning and using ESLE app as the main variables.

# **Participants**

The participants of the current study were 5 parents of exceptional students at intermediate level, and their 7<sup>th</sup> grade exceptional children in Isfahan province in summer 2020. Parents were selected because all of them have expressed their children's needs for improving English vocabulary for learning and examination. The parents were selected from among 30 individuals who sat for Oxford Placement Test (OPT) and were qualified as intermediate level.

Name	Age	Gender	Occupation	Location	English			
					proficiency			
Parent A	40	Female	Teacher	Isfahan	Intermediate			
Parent B	35	female	housewife	Isfahan	Intermediate			
Parent C	55	female	employer	Isfahan	Intermediate			
Parent D	50	Male	teacher	Isfahan	Intermediate			
Parent E	65	Male	business	Isfahan	Intermediate			

**Table 1.** profile of parents

All the parents' names and exceptional students' names are anonymous.

Name	Gender	Grade	Location	English proficiency
Exceptional student A	Girl	7 <sup>th</sup>	Isfahan	Low-level
Exceptional student B	Girl	7 <sup>th</sup>	Isfahan	Low-level
Exceptional student C	Boy	7 <sup>th</sup>	Isfahan	Low-level
Exceptional student C	Boy	7 <sup>th</sup>	Isfahan	Low-level
Exceptional student E	Girl	7 <sup>th</sup>	Isfahan	Low-level

 Table 2. profile of exceptional students

### Instruments

The research instruments consisted of the Oxford Placement Test (OPT), ESLE app, and an open-ended questionnaire.

# Vocabulary level test for exceptional students

A vocabulary test was designed to examine the exceptional students' knowledge of vocabulary items. The test items were selected from exceptional students coursebook. Then, a 20 multiple-choice item test was prepared. The test consisted of 20 multiple-choice items. The results of Cronbach's alpha analysis showed that the test was reliable ( $\alpha = 0.83$ ). The content validity of the test was evaluated through expert opinions by TEFL specialists.

# **ESLE** Application description

To use the app, exceptional students had to download it from ESLE application website and install it on their smartphone devices. Exceptional students had the opportunity to choose one out of 7 complete courses. After the exceptional students select which course they wish to learn, the app asks them to "select a course" from the list appearing before them. The app then inquires whether exceptional student already knows anything about English vocabulary, and if so, it provides the student with a pre-test(آزمون اولیه). If the exceptional student is new to the language, the student must start with the English Alphabets. It is safe to say that ESLE is a straightforward and simple app to use. Without any more questions or even registration for the course, the exceptional students can go right into their first lesson by tapping *Start*. The activities are of many types as follows:

**I**) **Matching activities**, in which exceptional students hear the word and see a picture and match it with the pictures given.



**I**) **Pairing activities**, in which exceptional students are given an even number of equivalent words and are asked to pair them.



**II**) **listening activities**, in which exceptional students listen to a word in the second language and have to select it correctly;



**IV**) spelling activities, in which learners have to write the correct words.



Each lesson contains 5-10 exercises, and most of the lessons have more than 20 games with sound. Every time exceptional students get an answer right, they hear the clap sound with laugh sticker. Every time they get it wrong, they hear the cry sound with sad sticker. It also allows the exceptional students to go back to whenever they want, whichever lesson they want, even if exceptional students have gotten all the answers right. When the exceptional students accomplish a lesson, ESLE rewards them with surprising sticker and clap sounds, making the exceptional students feel as if they have completed something important. ESLE is a very smart app. For example, if in a spelling exercise, exceptional students type incorrect word instead of

correct word, the app will know this is a mistake. The exceptional students don't pass the exercise. Another interesting characteristic of the app is the button on the corner of each page that learners can back to the homepage. It must be noted that ESLE provides many English vocabularies.

#### **Specifications of ESLE Web view applications**

There are differences among Web applications and traditional software systems, arising from the particular context in which they are managed, created, and used. In "web view app", the Internet and the Web eliminate real distances constraints in space allowing immediate access to information regardless of how far users and servers might be away from each other (Đorđević, 2017).

This quality of the Web provides advantages of ESLE app over traditional, desktop applications (Đorđević, 2017), and they include:

### - Global approach.

ESLE Web application is published centralized in one location and it can be used by the entire world. Every user who has access to the Internet can access ESLE from a home computer.

#### - Simultaneous work of group of users.

Generally, traditional desktop applications are used by one person at a certain time, while ESLE app can be used by several users simultaneously. This includes a greater need for protection and privacy, and higher performances and standards of Web applications compared to desktop applications (pp.785-802).

# - Ability to work on multiplatform.

ESLE app uses publicly accessible and free Web browsers and does not rely on the user's software framework. Since there are various Web browsers for different operating systems (Internet Explorer, Mozilla Firefox, Apple Safari, Google Chrome, Opera, etc.), and since all these readers mostly consist of HTML and JavaScript formats, Web applications depend on HTML clients (Đorđević, 2017).

# - Low cost compared to the average number of users.

According to Đorđević (2017) most elements of the Internet are open for users, which also applies to Web applications. Organizations that have a need for a Web application can minimize the cost of its purchase and maintenance because employees can set up and use the Web application at home, at work or under field conditions.

# - Ease of use by end users.

ESLE app is designed for an exceptional student so they are simple to use, similarly to regular Web sites. The ease of use of Web applications facilitates public participation.

# - Centralized upgrade.

The process of updating ESLE app is quicker and easier, since the changes made are centralized in one location, so changing a program code on the Web server becomes immediately visible to all users.

#### - Different purposes of use.

Unlike desktop applications whose use is limited to a certain number of users, ESLE app can be used by a broad number of users, for a variety of purposes of classroom activity, or supplementary tool for learning English vocabulary (pp.785-802).

#### **Open-ended Questionnaire**

In order to collect information about the parent's perspective on ESLE app, an openended questionnaire was administered to parents who used ESLE app for their exceptional children. The questionnaire consisted of 10 questions about the amount of the time that their exceptional child spent on ESLE app, the extent of using the app in their home, classroom, the extent of familiarity with the definition of words and games on the app, the extent of using the app for learning English vocabulary.

#### **Collection Procedure data**

The application website was given to all parents of the study (n = 5) to install the ESLE app. Moreover, as the study concentrated on learning English vocabularies via ESLE app and in order to clarify the objectives, there was a briefing session for the parents.

Open-ended questionnaire was the key means of gathering qualitative data in this study to gain the participants' feedback on the children experiences of using the ESLE app. According to Rabiee (2004), this is because the focus group could provide various information about ideas and feelings that individuals have about certain topics, and thus could elicit deeper and richer data (pp.655-660).

Anyway, first, each parent installed an ESLE app on their mobile. They were told to use the ESLE app for teaching their exceptional child whenever their exceptional child wants and wherever they are for one week. However, to ensure that the parents could make a good judgment of the ESLE app based on sufficient time, they were instructed to use the apps for at least 20 minutes per day. Three weeks later, parents were asked to make some notes of their children using experiences and complete an open-ended questionnaire.

In an open-ended questionnaire, parents were asked to summarize their using ESLE app patterns for their children English vocabulary learning and write down three things that they like and three things that they dislike about the app their children have been using. They were also encouraged to note down what they feel they have improved in English vocabulary by using the ESLE app for exceptional students.

# Results

Learner's evaluation of this app was analyzed in three parts which are learners' use patterns of the ESLE app, their comments on this app, and their perceptions of learning English vocabulary through ESLE app.

#### Learners' Use Patterns of the ESLE App

Questions were asked from all the parents about when, where, how often, and for how long exceptional students used the app during the week. This was supposed to recognize the mobility of learners, learning, and even technology for MALL. Through analyzing the questionnaire data, all the parents confirmed that their exceptional child used the app at different time during the day and at different locations, such as at home, at school. The majority of students used the app mostly at home. Parent A stated that my child learned all alphabets of the *ESLE* app. She used ESLE app at home in the morning because morning is an efficient time period for her to learn a lesson.

My child used the *ESLE* app at home too. This is the only place where she could learn English clearly without shyness. (Parent B)

Basically, I saw the *ESLE* app as a supplementary tool for my child, so he only used it when he needed, usually at home. (Parent C)

From the responses of parents D and E, we can realize that exceptional students need a quiet and stress-free place to learn English vocabulary. However, with the mobility of smartphones, English vocabulary learning could also happen whenever it is convenient at many other places.

Since using the app was not obligatory, the frequency of English vocabulary learning through the ESLE app and the length of the time that the exceptional students spent were quite different.

Most of the exceptional students studied every day, although few of them used just three or four times during the week. It took several minutes to around thirty minutes for most of the participants, to use the app each time.

## Parents' Comments on the ESLE App

After a trial period of three-weeks, the parents already seemed to have several opinions about this app as supplementary tool for learning English vocabulary.

Almost all of the parents claimed that using ESLE game-based app is a creative way to learning English vocabulary. They also gave feedback for the future potential development of the app from their points of view.

At first, the parents found it very flexible to use the ESLE app for English vocabulary learning since exceptional students could easily access to the English vocabulary anywhere and anytime. Exceptional students could either use it as supplementary tool for improving English vocabulary or as study reference when they need.

My child likes *ESLE app* because it doesn't take her too long to complete one unit, only about 15 minutes. So, she can simply learn a lesson. In a word, it is flexible and easy to handle. (parent A) It is very useful and helpful. My child could refer to it whenever she needs as long as she has my smartphone at hand, very convenient. (Parent B)

The parents' reports indicate that ESLE app provides English learners accessible and flexible games and activities.

Secondly, the parents like using ESLE app for English vocabulary learning because this gamebased app fitted exceptional students' needs well.

My child likes *ESLE app* since it is like supplementary tutor. The ESLE app provided English vocabularies and games that exactly what my child wanted as learning materials. This encouraged my child to keep practicing English vocabulary. (Parent C)

Parent D's statement reflects that ESLE app may provide opportunities for personalized and individualized learning. ESLE app seems to be an effective way of providing self-directed and learner-centered learning experiences, as exceptional students themselves could decide what they would learn.

Therefore game-based app may enhance exceptional students' vocabulary learning motivation and promote development of vocabulary practice and skills.

Moreover, exceptional students' anxiety was reduced significantly by using ESLE app as vocabulary learning assistance.

Finally, the ESLE app for learning English vocabulary was considered playful and engaging. The exceptional students realized the voice and recognition functions interesting and helpful, allowing them to hear the pronunciation.

Parent E really likes the presentation of each lesson. My child can have a colorful lesson on the screen with useful pictures and games. The lesson mentioned and the subtitles at the bottom of each lesson help students to better understand what the games say.

Because all the games are English and it is sometimes difficult for exceptional students to understand, the Persian subtitles are really useful. (Parent D)

The parents' comments reflect that clear presentation and multiple functions of ESLE app has greatly facilitated students' ability to learn and spell vocabularies accurately, and confidently.

# Exceptional students' parents' Perceptions of ESLE app

On the whole, the parents had a positive attitude to learning English vocabulary with ESLE app. Parents believed that both of vocabulary and spelling of their child have been improved after using the ESLE app for 3 weeks.

At first my child doesn't know the meaning of some words such as yogurt and the words related to body, after 3 weeks, she likes ESLE app because it does not take her too long to finish one lesson. So, she can easily learn the meaning of words. (Parent A)

The parents B reports show that her child likes ESLE app since it is like her tutor. Before she began learning English vocabulary, ESLE app provided different lessons. Then it provided English vocabularies with their pictures that really what my child wanted as learning materials. This encouraged my child to keep playing game and practicing English vocabularies.

Parent D comment reflects that ESLE app could provide opportunities for learner-centered learning environment. As exceptional students themselves could decide what they would learn.my child can replace the letters and make a new word. He can learn the spelling of words by using the spelling part of ESLE app.

I really like the presentation of each game. My child can have a colorful alphabet on the screen with colorful pictures. (Parent C)

I like the voice function of this app.it is very useful and it can improve his pronunciation. (Parent E)

The average rating the parents gave on the ESLE app was 4.16.



In terms of exceptional student's future use of ESLE app for English vocabulary learning, all of the parents have expressed their interests in trying this app for English vocabulary learning.

#### Discussion

This study intended to investigate the effect of leaning English vocabulary via ESLE app from exceptional student parents' perspective. The obtained results revealed that exceptional students exposed to the new English words through ESLE app had higher gains. So, presenting English vocabulary via ESLE app appears to be effective and can lead to better results. In general, it seems that the use of ELSE app is useful for exceptional students and is a tool which can assist parents and exceptional students to learn English and facilitate the learning English vocabulary (Mashhadi Heidar & Kaviani, 2016; Srinivas, 2010). The better results can be justified on the grounds that unlike the traditional way of teaching English vocabulary, ESLE app is more appealing for the exceptional students. Despite the facilitative role of ESLE in aiding exceptional students' English vocabulary learning, the number of conversations to present the essential words exceptional students need is limited.

In general, exceptional students have shown positive attitudes towards using ESLE English vocabulary App for English vocabulary learning. The parents in my study have already shown their interest for the new ways of learning English vocabulary. The parents have realized that ELSE app could provide a learner-centered English vocabulary learning opportunity with fun and flexible games and lessons. Moreover, exceptional students could easily access English vocabulary learning materials anywhere and anytime. This seems to enhance exceptional students' motivation and encourage exceptional students in learning English vocabulary.

#### Conclusion

This study aimed to compare the ESLE web application and traditional application and the evaluation of the ESLE app mainly from the exceptional student parents' perspective. As it has been mentioned, web-based app does not require installed software on the computer. They can be accessed on any device with internet connection. When you have a web application, then you can access the program through almost any browser or operating system. In this situation there is never need to update web application. You receive the upgrades for the app as the development team rolls them out. By using web-based software you can be sure you are using the latest version which is always updated automatically. Research findings showed that vocabulary learning could be facilitated through presenting the words through ESLE app. Generally, it could be argued that due to the effectiveness of ESLE app as a web application which has already proved to be welcomed by exceptional students and their parents, learning English vocabularies can be further facilitated as exceptional students can easily match words with interesting pictures.

Generally speaking, this study proved that ESLE app, as a web application for learning English vocabulary, is a free access mobile app and, is the first vocabulary app for exceptional students. Vesselinov and Grego study (2012) have shown statistically significant improvements in English vocabulary learning as a result of using the ESLE app. The app also leads to improve levels of confidence in learning a new vocabulary (Vesselinov & Grego, 2012).

ESLE app helps exceptional students to improve their vocabulary and reduces their fear of learning vocabularies. With 15 to 20 minutes of daily practice, ESLE helps exceptional students believe they have achieved something, a feeling that motivates them. By "game-based" learning, ESLE has been able to keep the exceptional students engaged and less self-conscious of vocabulary learning.

Despite these good features in ESLE, the lack of conversation in the ESLE app needs to be mentioned. ESLE may give exceptional students the word and its definition, but since they have not used the phrases or the sentences they have learned, their lexical knowledge will only be passive and difficult to retrieve.

In sum, parents have shown favorable attitudes towards using ESLE app for their exceptional students learning English vocabulary. This may be because ESLE is a creative tool for learning English vocabulary and smartphone users are willing to see the potential functions of their smart mobile devices can offer for learning. The parents have found that ESLE app could provide a learner-centered learning opportunity with flexible games and activities for exceptional students. Moreover, the exceptional students could easily access English vocabulary learning games and activities anytime and anywhere. This seems to increase their learning motivation and confidence in English vocabulary learning, and encourage exceptional students to develop life-long learning habits.

## References

Abrams, S. W., S. (2014). Gamified vocabulary: online resources and enriched Language learning. *Journal of Adolescent & Adult Literacy*, 58(1), 49-58. doi: 10.1002/jaal.315.

Allsopp, D. H., Kyger, M. M., & Lovin, L. H. (2007). Teaching meaningfully: Solutions for reaching struggling learners. *Brookes Publishing Company*. PO Box 10624, Baltimore, MD 21285.

Beach, K., Sanchez, V., Flynn, L., O'Connor, R., (2015). Teaching academic vocabulary to adolescents with learning disabilities. *Teaching Exceptional Children*, 48(1), 36-44. doi: 10.1177/0040059915594783.

Bryant, D. P., Goodwin, M., Bryant, B. R., & K. Higgins. (2003). Vocabulary instruction for students with learning disabilities: a review of the research. *Learning Disability Quarterly*, 26, 117-128. doi: 10.2307/1593594.

Çakır, H. (2011). Mobil ogrenmeye ilişkin bir yazılım geliştirme ve değerlendirme. [A software development and evaluation of mobile learning] *Cukurova University Faculty of Education Journal: 40*, 01-09.

Carr, J. (2012). Does math achievement h'APP'en when iPads and game-based learning are incorporated into fifth-grade mathematics instruction? *Journal of Information Technology Education: Research*, 11(1), 269-286.

Clare, J., (2020). Apps for Students with Special Needs-As school Building Shutter. *Edutopia, George Lucas Education Foundation*.

Condus, M. M., Marshall, K.J., & Miller, S.R. (1986). Effects of the keyword mnemonic strategy on vocabulary acquisition and maintenance by learning disabled children. *Journal of Learning Disabilities*, *19*(*10*), 609-613.

Darling-Hammond, L., (2010). Teacher education and the American future. *Journal of Teacher Education*, 61(1-2), 35-47.

Dela Cruz, C., R. Arenas, M., D. Palaoag, T., & M. Berba, E., (2018). Game-Based Learning System: An Exceptional Learners Motivation for Better performance., *1*(*1*), 13-24. Doi: https://doi.org/10.21512/ijbx.v1i1.248.

Đorđević, N., (2017). Evaluation of the usability of Web-based applications, *VOJNOTEHNIČKI GLASNIK / MILITARY TECHNICAL COURIER*, 3(65), pp.785-802.

EDUCBA, (2020). What is Desktop Software? https://www.educba.com/what-is-desktop-software/.

Franklin, T. (2011). Mobile learning: At the tipping point. *Turkish Online Journal of Educational Technol- ogy*, 10(4), 261-275.

Ghobadi, Sh., Taki, S., (2018). Effects of Telegram Stickers on English Vocabulary Learning: Focus on Iranian EFL Learners. *Relp* 6(1), 139-158.

Ghobadi, Sh., Taki, S., (2018). Evaluating current Mobile Applications for English Vocabulary Learning: Based on Hubbard's framework. *First national conference on fundamental reserches in language and literature studies*. <u>https://www.civilica.com/Paper-CELPA01-CELPA01\_209.html</u>.

Griffin, S. (2007). Early intervention for children at risk of developing mathematical learning difficulties. In D. B. Berch & M. M. Mazzocco (Eds.), Why is math so hard for some children? *The nature and origins of mathematical learning difficulties and disabilities* (pp. 343-345). Baltimore, MD: Paul H Brookes.

IGNOU, (2017). Exceptional child in School. *eGyanKosh*, *Indira Gandhi National Open*. http://egyankosh.ac.in//handle/123456789/23721.

Jeng, Y. L., Wu, T. T., Huang, Y. M., Tan, Q., & Yang, S. J. (2010). The add-on impact of mobile applications in learning strategies: A review study. *Journal of Educational Technology* & *Society*, *13*(3), 3-11.

Johnson, G., Gersten, R., & Carnine, D. (1987). Effects of instructional design variables on vocabulary acquisition of LD students: A study of computer-assisted instruction. *Journal of Learning Disabilities*, 20(4), 206-213.

Learning Disabilities, 20(4), 206-213. Kukulska-Hulme, Agnes (2009). Will mobile learning change language learning? ReCALL, 21(2), pp. 157–165.

Lvivity, (2018). Web-Based Application: What It Is, and Why You Should Use It, full-cycle software development. https://lvivity.com/web-based-applications.

Misquitta, R. (2011). A Review of the literature: Fraction instruction for struggling learners in mathematics. *Learning Disabilities Research & Practice*, 26(2), 109-119.

Musti-Rao, Shobana. (2017). Introduction to special issue: integrating technology within classroom practices. *Intervention in School and Clinic 2017*, *52(3)*, 131-132. doi.org/10.1177/1053451216644824.

Nahmod, D., (2017). "Vocabulary gamification vs traditional learning instruction in an inclusive high school classroom". *Theses and Dissertations*. 2467. <u>https://rdw.rowan.edu/etd/2467</u>.

Nation, D. (2020). Improve your understanding of web-based application programs. Lifewire: *Internet, Networking, & Security*.

National Council of Teachers of Mathematics (NCTM). (2008). Position statement on equity in mathematics education. Retrieved from www.nctm.org/?about/content.aspx?id=8452.

Rabiee, F., (2004). Focus Group Interview and Data analysis. *Proceedings of the Nutrition Society*, 63, 655–660.

Ross, J. A., & Bruce, C. D. (2009). Student achievement effects of technology-supported remediation of understanding of fractions. *International Journal of Mathematical Education in Science and Technology*, 40(6), 713-727.

Seo, Y. & Bryant, P. (2009). Analysis of Studies of the Effects of Computer-Assisted Instruction on the Mathematics Performance of Students with Learning Disabilities. *Computers & Education*, *53*, 913-928.

Simsek, O., (2016). "Use of a Game-Based App as a Learning Tool for Students with Mathematics Learning Disabilities to Increase Fraction Knowledge/Skill". *Graduate Theses and Dissertations*. http://scholarcommons.usf.edu/etd/6390.

Stockwell, G. (2007). A review of technology choice for teaching language skills and areas in the CALL literature. *ReCALL*, 19(2), 105-120.

Vesselinov, R., & Grego, J. (2012). Duolingo effectiveness study: Final report. New York: City University of New York. Retrieved May 12, 2106 fromhttp:// static. Duolingo .com /s3/ DuolingoReport\_Final.pdf.

Walker, H. (2011). Evaluating the effectiveness of apps for mobile devices. *Journal of Special Education Technology*, 26(4), 59-63.

Whitescarver, Erin L., (2018). "Effect of mnemonics on the vocabulary acquisition and retention of high school students with learning disabilities". *Theses and Dissertations*. 2567. https://rdw.rowan.edu/etd/2567.

Yell, M., (2017). "Individualization Is Special Education: A Response to Czapanskiy." *Journal of Law and Education*, 46(2), Jefferson Law Book Company, p. 245.

ژ<sub>و</sub>ب گاه علوم انسانی و مطالعات فر طبخی رتال حامع علوم انسانی