Deaf Individuals and English Language Teaching[1, 2]

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ABSTRACT
This paper aims to analyze the characteristics of deaf students from a pedagogic perspective and identify potential issues in the process of teaching English to them. English is the world language now, and knowing it provides many opportunities to its users ranging from following academic issues to trading internationally. There are so many different methods and applications for learning English. Learning English has become relatively easier via the widespread use of the internet, smartphones, and applications. However, few studies specifically discuss how to teach English to deaf students, and pre- and in-service English teacher training regarding this issue is still in its infancy. Hence, deaf students cannot sufficiently make use of the opportunity to learn and benefit from learning a lingua franca. In this paper, the current situation will be discussed, and some suggestions will be made regarding what can be done to improve teaching English to deaf students.
Keywords: deaf students, special education, English language teaching, teaching English to deaf students

1. Introduction

Education is a process that lasts from birth to the end of our lives. In this process, we can acquire most of the needed knowledge and skills through our senses. For the individuals without any disabilities, having a life-long education is not a difficult task relatively. However, for the individuals with disabilities, it is more challenging to increase their knowledge, communicate with other people, and maintain their lives seamlessly. As they lack circumstantial learning, deaf students are among the individuals who have difficulties acquiring knowledge about their surroundings compared to their peers. If individuals do not have any hearing problems, they can listen to other individuals, and as a result, this is a way by which they can improve themselves (Avcıoğlu, 2015). If an individual cannot hear fully or suffers from total deafness, they may have difficulties in communicating with others and expressing themselves. Deaf individuals may be weak at developing their social adaptation skills due to their problems in establishing communication (Hallahan & Kauffman, 2000; Sarıkaya & Börekçi, 2016). In other words, deafness is a type of disability that affects an individual's development, communication, socialization, and thus his/her life (Kösgeroğlu & Bozkurt, 1996).

2. Education of Deaf Individuals

Deafness can be defined as a disability that is caused by a problem in an individual's hearing faculty due to a problem in which s/he can sense auditory signals less than usual or not at all (Girgin, 2006). So, they are one of the groups that need special education. In order for disabled people to attend education efficiently and get sufficient support from these contexts, the educators and personnel in their educational institutions should know their characteristics. According to the Support Program for Deaf Individuals by the Turkish Ministry of Education, the characteristics of deaf individuals were categorized under cognitive development, language development, emotional/social development, and motor/coordination development (MEB, 2006). Cognitive development starts from birth, and hearing has a significant place in cognitive development as it provides input to the brain. People receive much of the language input via hearing as well. The lack of hearing ability or its total absence in the development of cognitive and language development leads to various communication problems (Sarı, Aslan-Bağcı & Gökdağ, 2021). The insufficient amount of auditory input and stimuli can lead to incomplete cognitive skills in

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deaf individuals (Kocabıyık, 2015). In addition, due to the underdevelopment of language skills and concept knowledge together with lack of auditory input, especially children are negatively affected in cognitive development (Başkonak, 2019).

Hearing disability can be classified according to the degree of loss, the place of loss, and the age of loss (Sarı, Aslan-Bağcı & Gökdağ, 2021). Especially the age of hearing loss is very critical in language acquisition. Whether it is before or after language acquisition immensely affects an individual's ability to communicate and socialize. Still, deaf individuals follow a similar developmental path as people without deafness. However, in time, differences emerge in the developmental pace. Although they follow similar stages, deaf people fall behind depending on their degree of disability. In deaf people, language development, which is similar until the babbling stage, deteriorates over time due to lack or insufficiency of auditory input, and the sound babies utter decrease and disappear eventually. In case of severe deafness, this lack of auditory input leads to a gap of 4-5 years between the deaf and their peers considering language development. In other words, the difference between the deaf and their peers is that they, just as any people, try to learn their surroundings and the objects around them from birth. However, their relationship with them is different as their input is limited due to hearing loss. Also, they only depend on the other three senses. Therefore, there is a difference between deaf individuals and ordinary people in terms of interacting with the outer world, which is reflected in their communication skills (Girgin, 2006). In addition, deaf students have difficulties in academic language-related skills, specifically in reading and writing. This is probably because they lack phonological and orthographical knowledge. This naturally weakens other aspects of language skills. As information in the contemporary world highly depends on written texts, acquiring the reading skill normally is vital for deaf people to function efficiently in their daily and work life.

As suggested above, deaf individuals are different from people without deafness in language and communication skills. This leads to problems when they interact with people without deafness. As a result of this, deaf people usually communicate with other deaf individuals who are similar to themselves (Kocabıyık, 2015). Hence, these individuals may isolate themselves from the rest of the society. The main reasons for this issue are that deaf individuals think that people who hear them will not understand them and will not be able to communicate with other people. This situation affects their social and emotional development negatively as well. Another development area is motor coordination. Deaf individuals show similar motor development compared to people without deafness. On the other hand, due to their specific central nervous system, they may experience difficulties in coordinating and balancing their bodies (MEB, 2006). Moreover, as deaf individuals cannot hear verbal expressions and instructions, some differences in major and fine muscle motor development may be expected.

The literature review indicates that although deaf people follow similar stages of development, they significantly fall behind other people with a gap of up to 5 years in language skills. Also, they may have some problems in motor development, and they may have difficulties in undertaking the activities in the lessons that include major muscles (e.g., moving quickly) and fine muscles (e.g., cutting out a picture). This may affect their participation in most of the typical activities undertaken in the classroom. They also have difficulties in their social and emotional development due to misconceptions, such as thinking that they cannot interact with other people except for other deaf people. Accordingly, to ensure that deaf individuals integrate into social life and catch up with their developmental weaknesses, they should not be excluded from society. Further studies should be undertaken to understand how this can be achieved through appropriate pedagogic measures. Another significant issue is that the learning environments should be adapted accordingly as it is evident that they fall behind in language skills dramatically in addition to mild underdevelopment in motor skills. With this support, deaf individuals can confront the difficulties they encounter due to their disability, and they will be able to integrate into their society rather than excluding and isolating themselves. They can also lead a more independent life without being dependent upon others.

3. Use of Technology and English Language Teaching

Thanks to the recent developments in technology, almost everybody benefits from these opportunities in their lives. Computers, the internet, tablets, smartphones, and personal digital assistants are the most common examples. These technological tools are used for many purposes in our lives ranging from entertainment to health care. They are obviously used for educational purposes as well, and there is an increasing trend, especially after the covid-19 pandemic. When the use of technology is reviewed in the literature, it is seen that computers were the primary tool in the initial years. Many computer-assisted learning environments and materials were developed, and they are/were utilized in classrooms. Thanks to computer-assisted learning, students can learn in line with their own pace and level (Şahin & Yıldırım, 2009). In addition, thanks to computer-assisted learning, students can do as many revisions as possible, and it is more enjoyable thanks to gamification. It also allows for self-control in learning, increasing students' success (Lee, 2000; Uşun, 2013; Kozikoğlu, 2013).

Thanks to technological developments, mobile devices and the learning environments designed for them have gained popularity in recent years. Mobil devices are relatively easier to use, and they can be moved around in various contexts in contrast to computers. They also tend to occupy a smaller place. Language learning applications have been adapted to or specifically created for mobile devices. Individuals have the chance to improve their language skills while they are doing sports or moving around doing different things (Özer, 2017). Mobile devices can also improve more than one skill at one go (Sung, Cang & Yang, 2015). One vital factor in language learning is the prospect of interacting with other individuals. Mobile devices are advantageous at this point as they can enable learners to contact and do practice with other learners around the world (Jung, 2015). These are the reasons that have made them more popular nowadays.

Cutting-edge applications in education provide environments where students can take notes verbally or in a written way, draw pictures, receive feedback, give feedback, have problem-based education, and use microblogs (Rogers, 2011). These aspects may be beneficial for deaf students, especially in terms of written and visual learning support. Thanks to mobile learning environments, deaf individuals can have the opportunity to benefit from visual and text-supported environments. Effective designs for students can increase their motivation as well. In addition, mobile applications are found to be effective at teaching vocabulary, improving pronunciation, improving reading, writing, listening and speaking skills, and teaching grammar (Demouy & Kukulska-Hulme, 2010; Huang, Yang, Chiang & Su, 2016; Kim, 2015; Lee & Kim, 2013; Rueckert, Kiser & Cho, 2012; Wang & Smith, 2013).

One of the resources of technology that can be used in educational contexts is mobile games. They can increase students' motivation at any age, and today, there is almost a game that is appropriate for each context or level. The significant issue is, of course, not having only fun, but at the same time using games for educational purposes. On the other hand, it is true that playing mobile games also takes a considerable amount of time. Hence, it is a good idea to design pedagogic games in a way by which they answer learners' needs in educational contexts. The reason is that the games that are pedagogically designed from the beginning not only contribute to the improvement of students' skills, but they also comprise the specific information/knowledge needed in their subject area (Kocadağ & Aksoy, 2015). Hence, it may be stated that learning requires significant physical and cognitive effort and self-control (Bozyer & Aslan-Bağcı 2018). Educational games enable individuals to have a good time and also undertake their learning sessions successfully. Considering this from a language teaching perspective, games can be used for both deaf individuals and also others who show normal development. Especially, educational games can be really beneficial for deaf people. Games can increase their satisfaction with the environment, and as a result, this may increase active participation. As argued above, deaf people may isolate themselves from society due to their misconceptions. However, games, especially those that require collaboration and interaction with others, can motivate them to learn another language. It may be suggested that visual support is essential in games and mobile applications for deaf individuals. Educational games/activities such as matching, contests, and earning rewards can be quite motivating.

With the development of the internet, technology is used for different proses ranging from health to education, and this is increasing each day. People can have education in different places and times via the opportunities the internet provides. One primary opportunity of the internet is online learning environments. Thanks to online learning, individuals of various ages can access learning opportunities regardless of time and place restrictions. At the same time, different individuals can interact and collaborate while doing activities. Therefore, they can learn from each other as a part of peer learning, which is precious pedagogically. This is also valid for deaf students. Visual and written activities can support their learning, and they can socialize, interact, and collaborate. There are already some distance education applications in the world designed for deaf children. For example, the distance education platform of the Royal Institute for Deaf and Blind Children (RIDBC) developed in Australia is used to support the education and development of deaf and blind children and their families. Thanks to this platform, an educator can track a child's development and realize the participation of the family directly. The ABC software developed for the disabled in California consists of three themes. In the reading and writing theme, deaf students are taught reading in English, and American Sign Language is resorted to in order to satisfy children's interaction needs. In the second theme, the phonetic symbols are the focus, and teaching them to the families and teachers who will work in this area via visuals is the goal. In the final theme, games and videos about American Sign Language are provided, and the goal is to achieve speaking and reading.

4. Special Education and Foreign Language Education
Thanks to globalization and the new world order that emerged after World War II, English has become the world language (Sifakis & Bayyurt, 2018). Obtaining up-to-date information about issues such as technological developments, novelties in medicine and culture is much easier when one knows English. The reason is that most articles and books on especially academic and technological studies are published in English. Due to this international status of English, today, around one billion people are learning/speaking English, in addition to nearly

400.000 native speakers (Atar & Amir, 2020). For these reasons, it is evident that English is the lingua franca (i.e., the world language), and if individuals aim to act, live and work internationally, it is essential to know and use English.

As discussed in the previous sessions, the unique case of special education for the disabled has only recently been acknowledged, and the case is much more recent in the field of English language teaching. When the literature is checked, it is seen that there are so few studies throughout the world. In this sense, teaching English to the deaf and learners with other disabilities is still in its infancy. Still, some suggestions may be made regarding this issue.

Firstly, and most importantly, pre-service teacher education and in-service teacher education programs should be revised per this need. To exemplify, when the curriculum of the ELT programs in Turkey is checked (CoHE, 2018), it is seen that there are no courses allocated for teaching English to learners with special needs except for an elective course named inclusive education. However, this course deals with theories, descriptions, and regulations regarding inclusive education rather than focusing on how to teach English to the students that need special education. Some universities (e.g., Sakarya University) provide a special education course, but again it mostly focuses on the characteristics of these students, and it provides implications for pedagogy in a general sense rather than specific implications for English language teaching. So, currently, in the case of Turkey, the only solution is to provide elective courses in which this issue may be covered, which is mostly true for other countries. If there is not a specialized department, it is improbable to find these kinds of courses in undergraduate English language teaching programs around the globe. Providing these kinds of courses is, in fact, only possible as long as there is a lecturer specialized in this issue or at least knowledgeable regarding this issue. Then, it is suggested here that there is a dire need for teachers who can teach English for special education groups, and more importantly, this problem is not expected to be solved easily or in the short term as there is a lack of teacher trainers as well.

Having argued the necessity of increasing knowledge and skills of the teacher trainers, in-service teachers, and pre-service teachers, now the focus is students. As argued in the initial part, deaf students have unique physical, psychological, social, and cognitive characteristics due to their disabilities. One of the obvious problems is the listening skill. In the case of deaf students, they cannot listen to English, and thus they cannot acquire one of the four main communication skills. In addition, they miss one of the two receptive skills (listening and reading), and in this sense, they are disadvantageous in being exposed to the language, which is critical for acquiring a language (Lighbown & Spada, 2013). Consequently, it may be argued here that English language teachers should utilize the only remaining receptive skill (i.e., reading) much more effectively, and the vocabulary should be developed via implicit and explicit methods to ensure that they can compensate for their lack of exposure.

In Turkey, the students who have hearing and mental disabilities or those with autism can be exempt from taking foreign language classes at any level of their schooling with a written request of the guardians (MEB-ÖEHY, 2020). Although this seems to be an advantage for them, this, in fact, severely worsens their career and chances of participating in social life. They also miss the chance of benefitting from various resources ranging from books to internet web pages in foreign languages. When the literature is checked, only one study that specifically focuses on the teaching of English to deaf students was detected in the Turkish context. Birinci (2014) investigated the effect of visual materials on deaf students' vocabulary acquisition. She found that visual materials led to more effective vocabulary retention in the immediate and delayed post-tests than sign language, which lacks visual support. This suggests that visual materials may be benefitted from when deaf students are taught English. Then, it is concluded that there are really few studies specifically discussing how to teach English to deaf students and pre- and in-service English teacher training, especially with the help of technology.

5. Conclusions

This paper set out to underline the characteristics of deaf individuals concerning pedagogic issues as it is essential to understand their special case to adapt English language teaching accordingly. As there is a massive gap in the literature, this paper aims to increase awareness regarding this issue in the field of English language teaching and underline some initial steps to take. It is suggested that deafness as a disability is not only a problem in one of the senses. Instead, it negatively affects individuals' intellectual capacity mainly because it limits their exposure to input, interaction with their surroundings, and communication with other individuals. These lead to relatively weaker adaptation skills in establishing communication, which are critical, especially from a socio-constructivist learning perspective. The problems mentioned above are much more salient while learning a foreign language. Learning English provides learners many opportunities to benefit from technology, academic studies, and many other cutting-edge developments.

On the other hand, teaching and learning English have been transformed dramatically, and it has started to depend on technology more and more, especially after the Covid-19 pandemic. Distance, mobile, and computer-assisted

language learning tools have shown remarkable improvements. Mobile learning tools obviously offer many benefits and opportunities for learners, despite having some disadvantages as well. Today, it is really easy and convenient to find many quality English learning web pages, mobile applications, YouTube channels, and many other resources for free. However, as argued throughout the paper, studies that aim to teach English to deaf students are limited, and this situation is worse when it comes to benefitting from technology. Studies and practices that offer a systematic way for training and educating pre- and in-service teachers are also lacking. Considering these problems, it is vital to support academic studies in English language teaching for special education, and then, the findings should be implemented to educate pre-service teachers and train in-service teachers via courses, workshops, and so on. More importantly, undertaking substantial work such as Ph.D. studies on special education and English language teaching is really advisable. Therefore, future studies on these issues will be a precious contribution to the field of English language teaching. Moreover, from a practice point of view, English language teaching departments should consider providing elective courses that focus on teaching English to students with special needs. Ideally, as deaf students are a part of inclusive education, and as there can be students needing special education in any classroom, providing a specific special education course to pre-service teachers should be mandatory. Moreover, the issue of teaching English for disabled students must be a topic to be included in in-service teacher training workshops.

To our knowledge, there is not a mobile application that specifically aims to teach English as a foreign language to deaf students. Consequently, it is suggested here that using a mobile application to teach English to deaf individuals, who are already disadvantaged in communication and use of language with others, can be an effective way of empowering them. As mentioned in the previous parts, deaf individuals have a significant problem in getting sufficient stimuli and exposure from the outside world, which cripples their receptive language learning skills. They also suffer from social and emotional problems. Mobile applications may enable them to find friends and interact with them more easily, considering the less face-threatening feature of online platforms. Also, as deaf students cannot listen, the other receptive skill, which is reading, may be exploited more to level this lack of exposure. In conclusion, the benefits of technology, especially mobile learning, should be resorted to as they may simply be more accessible to individuals with disabilities physically in addition to many pedagogic advantages.

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