BILINGUALISM in DEAF EDUCATION and MODEL of DEAFNESS

Independent Study

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EPSY5991

DECEMBER/2016

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ABSTRACT

The aim of this study is to be able to understand educational methods for DHH students academic achievement and comprehend to Deaf culture. In deaf education, there is still ongoing debate about educational methods which are oralism and manualism. The gap between deaf and hard of hearing (DHH) students and their hearing peers are continue to increase. Each member of society has three essential incontestable rights: the right to life, right to property, and right to liberty. An individual possesses these rights from birth, and they cannot be removed. Thus, social status or disability are insignificant, because the value of each individual is equal. In deaf education, some factors that child's hearing status, their families hearing status, educational language (oralism or manualism), DHH students' hearing degree, if their hearing loss occurs before the development of speech or language, usually before the age of three, due to limited access to spoken language; whereas hearing loss occurs after the acquisition of spoken language (prelingual and postlingual) take into consideration when it comes to deaf education

Keywords: Bilingualism, Deaf Culture, oralism and manualism, deaf education

1-BILINGUALISM in DEAF EDUCATION

1.1. Introduction

Education quality has been improving, and sources are more accessible for students nowadays. Many people have started to use more than one language for communication or interaction with each other. A Turkish proverb states that "one who speaks only one language is one person, but one who speaks two languages is two people." Each language has an individual function in daily life.

We can define bilingualism as the simultaneous learning of two languages in early ages. However, when it comes to deaf people, we can say that sign language is learned first, and then the oral language is learned after the sign language. Swanwick (2016) says that "A bilingual educational approach gives deaf children the opportunity to learn languages and spoken and written languages and grants them access to the curriculum in whichever language is accessible to them in an environment that values deafness, sign language, and deaf culture" (p.2).Deaf students have the right to get an education as much as any other student. Besides all, most deaf students need different methods to reach the same education level with others. One of these methods can be considered as bilingual education. In Turkey, each student must start school when he or she is seven years old. Unfortunately, deaf students also have to start at age seven. Except for some pre-school projects, which children start at less than five years old, students who are deaf and hard of hearing start school with hearing peers without getting preliminary education. Another problem for deaf students and the Turkish deaf community was the

prohibition of the use of sign language in schools until 2005. The gap between the academic performances of deaf and hard-of-hearing students and their hearing peers continues to increase (Moores, 2001). Parents play a significant role in their children's early language acquisition process. Due to this, hearing families need to learn and use sign language. The sign language skills of hearing families are inferior to those of deaf parents with Deaf children (Mayer& Leigh, 2010). Also, students might face problems using sign language and oral language in a learning environment because of the parents, and inadequate information about Deaf community. As mentioned earlier, in this paper, I will review potential barriers to implementing a bilingual and bicultural program for deaf children by exploring the deaf students' academic growth. Mitchell and Karchmer (2004) say that "90 percent of deaf children have hearing parents" (p.140).When it comes to Turkey, Sarikaya and Uzuner (2006) defines “most deaf children's parents do not have enough information on deaf education” (p.31), specifically sign language, and most of families do not have access and use both sign and spoken language in the home environment (p.31). On the other hand, models of disability is a hot debate issues. Society has been with us for a long time, and one of its components is people with disabilities. The term ‘disability’ has had different meanings and definitions over the years. In the past, disabled people were seen as ’cursed people’, according to the religious model of disability (O'Brien,2014, p.102). Over time, the meaning of disability has changed, and different disability models have emerged throughout history. In recent years, the medical and social models have become the predominant models of disability (LoBianco & Sheppard-Jones, 2007, p.1)

For a further study, I aim to observe how bilingualism affects the children during their academic growth and also the importance of bilingualism among the parents who have deaf children in Turkey. Some studies that related to bilingualism approaches’ effect on academic

achievement for deaf students, comparison academic scores between deaf students and hearing students, parents' hearing students and impact on children's academic achievement, bilingual/bicultural approach, comparison educational and social achievement between students who have a hearing parents and non-hearing parents and finally some barriers for bilingualism approach and alternative solutions by needed to study for investigating DHH students educational success.

1.2. Reading and Academic Achievement Between DHH and Norm Group

Lange et al (2013) examined the reading and mathematics academic growth of deaf and hard-of-hearing students with the bilingual model. In this study, Northwest Evaluation Association's Measure of Academic (NWEA) Progress assessment was used for measuring participants' academic growth rate. The participants' characteristics (gender, parents' hearing status, and secondary disabled status) and features' effects on academic growth were compared, and the study group's growth was compared with students in NWEA's 2008 norm group as the comparison group. The researchers addressed the following research questions:

> 1. To what extent does the academic growth in reading and mathematics of DHH students educated using an ASL/English bilingual model differ from a national comparison group consisting primarily of their hearing grade-level peers?
> 2. To what extent are characteristics (gender, at least one deaf parent, or a secondary disability) a factor in academic growth in reading and mathematics for DHH students educated through an ASL/English bilingual model?
> 3. After a minimum of 4 years of education through an ASL/bilingual model, what percentage of DHH students score in the average or above-average range in reading and mathematics?"(p.534)

The participants in the study were DHH students who attended the Metro Deaf School (MDS) between 1998 and spring 2011 with a possible number of 174 participants for reading

and 141 participants for mathematics. The sample size narrowed down to 61 participants for reading and 64 participants for mathematics based on the three criteria listed below:

a- enrollment at MDS for at least four years,
b- a minimum of five spring NWEA Measures of Academic Progress (MAP) reading or mathematics test records with no more than one consecutive missing spring test record, and
c- an initial NWEA RaschunIT (RIT) score that was in the NWEA reported range established for the national norm group (in few occasions students' scores were lower than RIT scores established for the norm group.

The participant criteria have ensured for the student who had exposure to minimum four years' bilingual education, no more than one-year exposure to another education delivery model, and the minimum four years of exposure could occur anytime during the education in Metro Deaf School.

The study was conducted in a charter school, MDS, which was opened in 1993 in Minnesota as one of the first charter schools in the United States and now serving students pre-kindergarten through high school, or ages 3-21. The school is located in Saint Paul and draws students from over 20 surrounding school districts. This school has a socioeconomically and racially diverse setting to some extent based on the percentage of students who annually qualifying for free and reduced lunch and who define themselves as a minority. Also, approximately 40% of the sample have documented secondary disabilities in their IEP.

The study reveals that, over time, the study group's level of academic growth in mathematics and reading went up and overcame the performance of the comparison group, while the academic growth level of study group was much less than the comparison group at the beginning of the study. Moreover, it shows that gender has an impact on the beginning academic growth of the students with evidence of males' mathematics lower than females' while there is not enough evidence to explain a relationship between academic growth and families' hearing

status or disability levels of students. Furthermore, both gender and parent hearing status did not have a significant effect on overtime academic growth of students in both content; the study showed that the students without a secondary disability had significant improved growth when compared with students with a secondary disability. The authors decided the effectiveness of these factors on both beginnings and, over time, academic growth by using the p-value interpretations.

Based on the aims and research questions, this article illustrates a positivist paradigm position. It examined the reading and mathematical academic growth of deaf and hard-of-hearing students with the bilingual model. In this study, Northwest Evaluation Association's Measure of Academic Progress Assessment (NWEA) was used for measuring participants' who were involved in the Metro Deaf School (MDS) in Minnesota's academic growth rate. The participants' characteristics (gender, parents' hearing status, and secondary disabled status) and feature effects on academic growth were compared, and the study group's growth was compared with students in NWEA's 2008 norm group(all students) as the comparison group. Crotty (1998) states that positivists hold a belief that " scientific knowledge is utterly objective and that only scientific knowledge is valid, certain and accurate" (as cited in Mertens,2015,p.11). The positivist paradigm asserts that real events can be observed empirically (Kaboub, 2008, p.787) and the study which was conducted in this article looks at things in this manner.

The National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research (1978) stated three ethical principles and six norms in *The Belmont Report* for positivists (as cited in Mertens, 2015, p.13). The three ethical principles are beneficence, respect and justice. In this article, a longitudinal database of academic test results was collected. In this way, risk of harm for research participants was avoided and the study was

fairly administrated. In terms of norms, although a “positivist hold beliefs about the importance of objectivity and generalisability (Mertens, 2015, p.12), using quantitative methods in order to make predictions and allow generalization and as Scotland (2012) states Inferential statistics are used to generalize a sample to the population. However, participants of this study were recruited "from one school in one region of the country and cannot be generalised to the larger DHH student population" (Lange et al., 2013, p.543). Also, there is no specific information about interactions between researchers and research participants. According to the six norms, participants must agree to participate and must be informed about the study by researchers (as cited in Mertens, 2015). The position of ontological positivism highlighted by Kaboub (2008) that knowledge should be measurable (quantitative) and objective. Thus, the quantitative method is used to analyse the knowledge. Researchers collected data and interpreted them in an objective way.

In this case study, the sample size, 61 and 64 students, represents a small part of the deaf student community in the U.S. The examination of a specific (not randomly selected) charter school with a specific education program may not reflect the rest of the schools and program. In support of their findings, authors consider the significance level as .05 for hypothesis tests, and this level is associated with a 95% confidence level. This is a considerably high level for such a study and high enough to build a reliable conclusion.

1.3. Parental Hearing Status on Academic Achievement

Singleton et al. (1998) examined data that related ASL and English development for students who have hearing parents. Fifty-three profoundly deaf students who have hearing

parents, between the ages of 6 and 12, attended three years. One of three different educational settings were tested during the one school year:

> 1- ASL-English bilingual residential school. Teachers used ASL in the class and 26 students exposed. Deaf adult and child input models
> 2- Traditional residential school. Teachers used English based signing with spoken English in the classroom.11 students exposed to ASL in playground and after-school dormitory settings.
> 3- Self-contained classrooms in public schools. 16 students had virtually no contact with ASL. Hearing teachers used only English based signing with spoken English. No deaf children of deaf parents or any other ASL fluent individuals comes into regular contact with these students.

The American Sign Language Proficiency Assessment (ASL-PA) (Singleton et al. 1998) was individually administered to each student. The test was administered by an ASL specialist who is deaf. Three discourse strategies were used for testing: conversation through peer interaction, interview with an adult (ASL specialist), and storytelling.

DCDPs (deaf children of deaf parents) who attended the traditional residential school where they had virtually no contact scored very low on a test of ASL skills. While 25 percent of the students had middle ASL skills, 75 percent of them showed skill at a low level, and none of them could get high ASL skills.

For DCHPs who attended the traditional residential school where English-based signing is used in the classroom, and ASL is available for the students where outside of a classroom, 46 percent of the students had middle ASL skills, 18 percent of them showed skill at a low level. 36 percent of students belonged to high ASL skills group.

Lastly, for DCHPs who attended the ASL/English bilingual school, half of them scored high ASL skills, while 31 percent of the students had middle ASL skills, and 19 percent of them showed skill at a low level.

Chi-square test was used for determining an interaction between school age and ASL skills, and in this study, p-value is smaller than 0.001. We can reject to null that means there is no interaction between ASL skills and student age.

1.4. Bi/Bi Education and Academic Achievement

Geeslin (2007) examined the academic performance data for deaf students enrolled in the Indiana School for the Deaf that follow the bilingual-bicultural philosophy. The author established four research questions,

> 1) Is there an improvement in the academic performance (based on the students' performance on the Reading Comprehension and Total Language subtests of the Stanford-9 Achievement Test) from 1995 to 2003?
> 2) Are there any significant differences in the academic performance between Gallaudet's Stanford-9 norms for deaf students nationwide compared to the performance of the Indiana School for the Deaf students during the 2003-2004 school year?
> 3) Are there any significant differences in the academic performances of DCHP and DCDP at the Indiana School for the Deaf between 1995- 1996 and 2003-2004?
> 4) If the bilingual/bicultural philosophy has been fully implemented, has there been a decrease in the academic performance gap from the 1995- 1996 school year, when the bilingual/bicultural philosophy was initiated at the Indiana School for the Deaf, to the 2003-2004 school year?

and in order to answer them, the author used some variables: having no other disabilities, students' hearing levels (mild, moderate, or profound), age of onset (8 to 18), length of time at this school, age grouping (8-12 and 13 years old or older), and the hearing status of the mother.

The school was the first state school to implement the bi-bi philosophy in the United States. In the study participated 182 students. The t-test was used to measure the gap between deaf children of hearing parents and deaf children of deaf parents through the reading comprehension and total language subtests of the Stanford-9 Achievement Test, and data was

taken from the Indiana School for the Deaf records between 1995-1996 and 2003-2004. The study's independent variables are bi-bi philosophy, age of onset, length of time at this school, students' age, and etiology. The dependent variables are the students' scaled scores on two subtests of the Stanford-9 Achievement Test: reading comprehension and total language. For research question 1, the p value found by the author is bigger than 0.5. We reject to null, which means that both samples (1996 and 2003 younger groups) have similar scores in reading comprehension. When comparing older students (1996 and 2003 groups), the p value is smaller than 0.5, and we can conclude that the 2003 older group got higher scores than the 1996 older group. For research question 2, we can conclude that the 2003 groups outperformed the 1996 groups significantly. In 1996, the older group students with deaf mothers performed better than the older group students with hearing mothers. The young students who were in the 1996 groups had similar scores. Lastly, the scores obtained between 1996 and 2003 show that the gap has been closed. The 2003 older groups showed the same level of academic performance.

1.5. Potential Barriers

In the study, Rinne (1996) attempted to contribute to the body of existing knowledge addressing the problems on bilingual education of deaf children in the United States and focused American Sign Language and English within the formal learning environment.

Two mid-Atlantic residential schools for deaf students were involved in this study and 56 participants attended the study. School A has 25 participants, of whom 3 are deaf staff, 6 are hearing staff, 2 are deaf parents, 4 are hearing parents, and 10 are high school students. School B has 31 participants, of whom 6 are deaf staff, 11 are hearing staff, 4 are deaf parents, 6 are

hearing parents, and 4 are high school students. For gathering data, the following methods were used:

1) Survey questions relating to the use of language and behaviors by teachers
2) Informal conversations with each school and all participants. (Conversations with deaf teachers and teacher aides, hearing teachers and teacher aides, deaf parents, hearing parents, and high school students were conducted within focus groups

Rinne (1996) examined the barriers to implementing a bilingual (ASL/English) educational program for deaf children in the two mid-Atlantic residential schools. fifteen barriers were identified for school A. six barriers were identified for school B. The author identified some common barriers, such as lack of ASL fluency, some parents not recognizing ASL, and the fact that learning English is difficult. Participants added extra barriers, and the author provided alternative solutions for those barriers identified by the participants. As an interesting result of the survey, all the groups in school A mentioned about not using ASL at home as a barrier for implementation, only hearing parents pointed out creation of home signs as a barrier in school B.

1.6.Social Adjustment and Educational Achievement

Weisel (1988) compared the educational achievement and social adjustment of the hearing-impaired children of two hearing-impaired parents and the hearing-impaired of two hearing parents. Of the participants, 31 belonged to the first group, and 93 participants belonged to the second group. For collecting data, a parent questionnaire, a test of reading comprehension skills, and an inventory for assessing social-emotional adjustments were used. The Ortar Test of Reading Comprehension was used to determine reading achievement. The Meadow/Kendall Social Emotional Assessment for Deaf Students was translated into Hebrew and used to measure social-emotional adjustment. The study has five dependent variables, which are reading

comprehension, social adjustment, emotional adjustment, self-image, and motivation for communication. Using 0.001 as the significance level for the hypothesis test of some dependent variables, the author provided evidence for appropriate selection of the sample. Hearing-impaired children who have a hearing parent had higher scores on all five tasks. Reading comprehension tasks can be considered the most interesting task because both groups scored below the norm on reading, and the biggest gap between the groups' scores was seen on this task.

1.7. Synthesis

The idea that bilingualism helps deaf students in various ways has developed over the past few decades. Although authorities are aware of the program's benefits, the implementation process is rife with complications because of the underlying factors of the other problem, which is related to the educational achievement levels of deaf students. The ways in which bilingualism helps deaf students are explained by academic studies. For example, Lange et al. (2003)' study revealed that bilingual education for deaf students closed the academic achievement gap in reading and math between them and their hearing peers. In addition to Lange et al (2003), Geeslin (2007) supported this idea with his study, which showed that deaf students' understanding of American Sign Language helps them more effectively analyze the English in the Total Language component of the SAT-HI. Lastly and most interestingly, Singleton et al. (1998) pointed out that deaf students who attended ASL/bilingual schools were much more successful in ASL skills compared with their peers attending a traditional residential school. As for the academic achievement of deaf students not related to their hearing status, most scientists focused on parents' hearing status. While Geeslin (2007) investigated mothers' hearing status and its impacts on the Stanford-9 Achievement Test, Weisel(1988) focused on comparing the reading

comprehension and social-emotional adjustment of students who had hearing and hearing-impaired parents. The common aim of these studies was to determine the parental effects on student education in a bilingual program. As Rinne(1996) explained, bilingual education reform faces issues during the implementation process, and these issues illustrate how much we need to fully implement this program. It is a dilemma for deaf education. In most school systems, cultural differences and building school settings to serve diverse students and educators has priority. A common solution has been cultural training programs. Bilingual and bicultural philosophies may be the best way to meet deaf students' educational needs.

1.8. Discussion

Finding of studies support that using ASL/English is an effective instructional model for DHH students. However, most of the studies were implemented to one state of the country or one school except the Weisel (1988) findings. It is very hard to say that we can generalize results to the population. Some confounding variables (cultural background, income) would be considered to get appropriate results. It is clear that we need to study more on bilingualism education on deaf children and more focus on children's parent for collaboration. Besides all, teacher's knowledge, barriers, and implementation that examined the study which used survey techniques to teachers by Rinne (1996) should be more strengthened. For further studies, we can just focus on deaf students' peers. In school, students mostly talk about (NBA finals, cult movie or series, baseball game) between their peers. It might lead to a lack of communication for DHH students with hearing peers. When hearing peers emphasize and become more talkative on common

findings with DHH students, more school achievement and social adjustment might be seen rest of their life. On the other hand deaf epistemology holds a bridge in deaf education. A researcher who is interested in deaf education should bear ‘deaf epistemology’ in mind. Deaf epistemology is basically knowing the deaf individual, deaf community and studies of deafness. For example, Senghas and Monaghan (2002) state that while deaf studies were focusing on cures or treatments in the 1980's, recently, deaf studies started to focus on community identity, raising issues on deaf identity and language (p.69). Deaf epistemology shares a similarity with the epistemological position of the transformative paradigm, and it allows ‘deaf’ people to receive the right policies and get a high-quality education (improve the poor academic achievements of deaf children).

2. DEAF EDUCATION

2.1.Deaf Education and Model of Deafness

The World Health Organisation (2013) announced that the world’s population of deaf and hard-of-hearing (DHH) people is 360 million, which is only slightly less than the population of China and India. Approximately 10 percent the global DHH population is children aged under 15. Mitchell and Karchmer (2004) conducted a study to analyze the parental hearing status of DHH students aged between 6 and 19 and living in the United States. The findings of this study show that 91.7 percent of DHH have one hearing parent, while 3.90 percent have two DHH parents (Mitchell & Karchmer, 2004, p.154). Moreover, hearing parents have very little knowledge of Deaf culture and sign language (Kushalnagar et al., 2010). As stated above, most

families with DHH students have difficulties in educating their child, as DHH are regarded as being unable to hear, lacking communications skills, and having problems with listening. Two types of hearing loss can be identified in DHH: prelingual and postlingual. Prelingual occurs before the development of speech or language, usually before the age of three, due to limited access to spoken language; whereas postlingual occurs after the acquisition of spoken language (De Graaf & Bijl, 2002). Kushalnagar et al. (2010) and Ptok (2011) agree that new-born babies have an opportunity to hear spoken language, achieve language development and gain academic outcomes, if there is early intervention and diagnosis. In terms of education, deaf students have as much right to an education as any other students. However, there are big differences between the academic performance of DHH students and their hearing peers (Moores, 2001).

Deafness is a disability and needs to be cured or treated; thus, studies of DHH people aim to understand the etiology of deafness according to the medical model of disability. Early identification, diagnosis and treatment, and degree of hearing status are related to the medical model. If there is no possibility of a cure or treatment, the medical model provides assistive technologies for DHH people. Essentially, assistive technology (AT)refers to technological products designed to help disabled people. For example, Niparko et al. (2010) aimed to understand the effect of cochlear implants on language acquisition by studying 425 students with severe to profound sensorineural hearing loss (SNHL) and children with normal hearing. The findings of the study indicate that SNHLs students achieved better spoken language scores after cochlear implant (Niparko et al., 2010). This shows that in terms of early identification and early intervention, cochlear implant is centered on the medical model of deafness. Thus, AT is not only beneficial for compensating for a deficiency, but also for gaining society's acceptance, being 'normal', and gaining job opportunities (Roulstone, 1998).

Oralism and manualism are still subject to an ongoing debate in deaf education. Oralism aims to 'prevent learning and using sign language in the Deaf community' (Ladd,2003, p.7), and to educate them orally, such as by lip-reading and mouth mimicking. The oralist approach emerged in the Second International Congress on Education of the Deaf, which was held in Milan in 1880.Among the decisions made regarding deaf education, sign language was forbidden from classroom environments, as using sign language has a negative effect on the interaction between DHH and society (Gallaudet, 1881;Padden & Humphries, 1988;Moores, 2010). In addition to this, Graham Bell's *Memoir upon the formation of a deaf variety of the human race* has influenced the propagation of oralism. Bell (1884) stated that sign language is an obstacle to learning language for DHH people, causing them to become isolated from society. Hence, articulation and speech-reading should be given to every pupil (Bell, 1884, p.47).For example, Turkish Sign Language (TID) was forbidden in classrooms until 2005, and it was finally recognised as a language in that year (Arik, 2013, p.9). In the light of the development of oralism, DHH people's education has been embodied by hearing society. In other words, there is a need to remediate deafness, to make sufferers acceptable in society, just like hearing people. Thus, the primary purpose of the medical model is to correct DHH people's audiological skills. Having oral skills is necessary for DHH people to be accepted in society and gain educational achievement, while sign language is an obstacle for the acquisition and development of literacy skills (Hoffmeister,1996). However, deafness is described by the Deaf community as a cultural identity term rather than a medical one (Munoz-Baell & Ruiz, 2000). It is also important to consider deafness as more than a deficit. For example, in the medical model of deafness, findings of studies on cultural and social aspects of deafness are ignored, as the medical approach pays attention only to medical developments (Munoz-Baell & Ruiz, 2000).

Differences between disability and impairment are central to the social model of disability. While deafness is a disability within the medical model, disabilities are in fact obstacles that are caused by the environment and society. Thus, deafness become a problem for society instead of for the individual. However, while the social model of disability categories deafness as a disability, DHH people's perspective is that 'disabled is not a primary term of self-identification, indeed it is one that requires a disclaimer' (Padden & Humphries, 1988, p.45). Inclusive education has increased with the disability movement, which aims to address all special educational needs within mainstream schools; however, DHH students are not included in this plan (Snoddon & Underwood, 2014). Hence, although the social model of deafness has contributed to Deaf culture, it is inappropriate for the Deaf community. Although the medical and social models of disability are the dominant models, a third one has also emerged, which is very important for the Deaf community.

On the other hand, the impact of pathological development on the body itself can be limited; crucially, technological aids now assist people with disabilities to be seen as acceptable in society. While people with disabilities stay in the back ground from a social aspect, they may have a limited opportunity to be in a school environment (Perrin& Gerrity, 1984). For example, Wasielewski (2016) conducted a study to examine the academic performance of disabled students and compared the results with non-disabled students. The findings of this study show that "there is a significant difference in academic performance between these two groups as measured by grade points average (GPA)" (p.146). In this point, assistive technologies have come into prominence and support people with disabilities to overcome academic problems (Mull & Sitlington, 2003). Yet again, how an early diagnose is sought is important for possible future treatment and the access to rights.

2.2.Cultural/Linguistic Model of Deafness

Although members of the Deaf community cannot hear, they have their own language which has systematic and grammatical features: namely, sign language (Brennan, 1992). As a disability, deafness is associated with language and community, according to deaf people (Padden & Humphries, 1988). Thus, deafness can be regarded as being part of a linguistic minority, rather than a disability. For example, with regard to DHH students' education, while the social model of disability aims to remove educational barriers and social isolation, it nevertheless ignores Deaf culture and sign language (Snoddon & Underwood, 2014). In deaf education, there are more hearing educators than non-hearing educators, and hearing educators' teaching methods are disposed to eliminate cultural and linguistic values (Reagan, 1995). It is very important for hearing educators to understand and respect Deaf culture. In terms of cultural values, the cultural/linguistic model of deafness is different from the social model of disability. Furthermore, Young (1999) indicates that 'sign language, Deaf model, and Deaf culture' are distinctive features of the cultural/linguistic model of deafness (pp.159–160).

Early acquisition of sign language has an effect on gaining vocabulary as the expected time, phonological knowledge and visual intelligence (Emmorey,1993). Thus, a child who is deaf should grow up with sign language as soon as possible after birth (Snoddon & Underwood, 2014). After early identification, families of DHH children need to know how to use sign language; furthermore, both parents and infants should be exposed to sign language and encouraged to use it (Young, 1999). For example, Padden and Humphries (1988) show how deaf children are excluded from society due to the 'mainstreaming movement', which was shaped by the Children Act of 1974. Many deaf students were not able to access a rich environment (such

as being exposed to sign language and deaf peers), and once again were automatically excluded from society (Padden & Humphries, 1988). In this point, a residential (manual approach) school which is designed for 'deaf children from as young as preschool through high school' (Padden & Humphries, 1988, p.5) becomes a key way of accessing the world of deaf people and introducing them to earlier generations' experience (Padden &Humphries, 1998). However, with regard to educational success, Lange et al. (2013) conducted a study to examine DHH students' academic growth in mathematics and reading, comparing them with 'a nationally normed group that consisted primarily of hearing peers who started at the same academic level' (Lange et al., 2013, p.541). In this study, participants were selected from bilingual charter schools (sign language and English) where they received at least four years of bilingual education. The findings of this study show that while the DHH students had lower skills than the comparison group, participants showed better performance than the comparison group over time. The reading performance of participants became better than the comparison group after 8.2 years, and 2.5 years for mathematical performance (Lange et al., 2013). The most interesting point in this study was that 'parents' hearing status was not a significant factor' (Lange et al., 2013, p.542). As Cummins (1989) stated, it is very important to support minority groups (in this context, DHH) in using their first language (L1) and second language (L2), and to respect their cultural identity in educational settings. The findings of Lange et al. (2013) support Cummins' statement that sign language (L1) is important for gaining English(L2) skills.

Communication is always a primary requirement to give deaf people opportunities in the world. When deaf people start their education, communication becomes a key way of gaining information, a social role, and access to the real world. As stated in first section, more than 90 percent of DHH people have hearing families. In this respect, most families have a limited idea

about what deafness means, and struggle to understand their children after they are diagnosed (Rogers & Young,2011). There is a myth that deafness is an unwanted condition for most parents; however, when they learn and start to use sign language and interact with a Deaf role model, they become more familiar with Deaf culture, understand what is like to be deaf, and have a strong family relationship (Mohay, Milton, Hindmarsh and Ganley, 1998).For example, Rogers and Young (2011) started a Deaf Role Model (DRM) project in UK: its findings shows that a DRM contributes to how parents of deaf children become familiar with being deaf. Deaf children sing songs with sign language, have a job in universities, have a baby like the rest of society; thus, deaf children's concerns about being alone are reduced after meeting and sharing experiences with role models (Rogers & Young, 2011).

Once again, it is clear that sign language is an essential component of Deaf culture. Although the medical model of deafness is not accepted by the Deaf community, Deaf people are unwilling to use assistive devices to assist their hearing; nevertheless, 'closed-captioned programs, doorbells and alarms tied to lights' are used by both the Deaf community and DHH and " voluntary network of social organizations serving the Deaf, which effectively maintains the cohesiveness of the Deaf community and provides, to a very significant extent, for the companionship needs of group members" (Reagan, 1995, pp.244–245).

Ultimately, it is a common idea among most hearing parents of DHH children that the only way to deal with deafness is to remediate it (Reagan, 2005). Hearing parents feel traumatized when their children are diagnosed as deaf, and they attempt to treat their children as hearing infants by using cochlear implants to enhance spoken language development. However, the medical model of deafness take account of whether an infant has conductive or sensorineural hearing loss. Moreover, DHH people might regard using cochlear implants or hearing devices as

shameful, even though such devices enable them to hear as well as their hearing peers. Thus, social oppression still continues. On the other hand, deafness has linguistic and cultural values, according to the cultural/linguistic model of deafness. Thus, being Deaf does not mean having a disability, but belonging to a linguistic minority.

2.3.Discussion

Models can resemble two sides of the same coin; thus, the medical and social model of disability regarded as a heads or tails. While the medical model of disability contributes to possible treatment, the social model of disability pays attention to disabled people's living conditions, and aims to reduce the challenges that created by society. Thus, both the medical and social model can resolve the deficit of each other. Within the context of the social model, the term disability is not related to the body, but relates to the component of society where in disabled people are exposed to exclusion and oppression. Thereby, the social model raises a remarkable point, which is distinguishing between disability and impairment. In general, the oppression and exclusion that disabled people face has resulted in the emergence of the required policy actions to fight against these in the social model (Mercer & Barnes, 2004). However, although the policies for disabled people aim to care for them and secure their rights, they often feel an absence of rights in daily life Thus, the important question is, "who is responsible for policies?"Generally, disability policies are designed by policy makers who are not disabled people. For example, a government has influence on disability policies and policy makers according to their beliefs, and their influence on policies will continue until there is a change of government. However, the change will only be the government, not necessarily the policies that have been pursued. A further question is raised in the social model: Is being normal a privilege?

A privilege can be defined as something that everyone may have a right to, but specific groups cannot access. For example, while society may have rights to healthcare, a job, an education, and access to other sources, often disabled people are excluded from enjoying these rights. However, being privileged in itself should not restrict the rights of "others".

One such social debate is related to deafness. As a minority within special education, the culture of deafness is that it is represents neither a disability nor an impairment, but rather that it is representative of a linguistic/cultural minority. For example, Padden and Humphries (1988) states that deaf children are, of course, exposed to exclusion and deprivation before “they discover the language and the culture of Deaf people" (p.120). The three models mentioned are like a piece of a puzzle and each is necessary to provide a whole picture of society and Deaf culture. This social and cultural picture will not be complete if one model has dominance over the other. In defining an individual disability condition, of course, it is important to find a possible treatment, and in doing so establish whether the person shares similarities with others, which results in labelling, for example ‘deaf’. However, being deaf will not change the fact that the individual is part of a minority group and barriers will continue throughout their life. The ‘deaf’ can adapt to social life by removing oppression and barriers, however, the identity of ‘deaf’ will never change.

Aristotle (1975) states that an individual who does not live in society cannot belong to any state, country, or society. Such an individual would have to be an “animal” or a "god". Aristotle also defines humans as a "zoon politikon" (a political animal). When individuals get together, they create families and families create society. An individual is born into both a society and culture, and if we consider people as “zoon politikon", an individual must take into consideration society's beliefs and must live within the norms of that society. It is a process,

where all individuals are exposed to beliefs of both society and nature. A disabled is born into a society, and so the disabled person must consider what society thinks about them. In this way, social oppression becomes a further barrier for disabled people. For DHH, decisions about DHH infants are made by parents and people in the medical field. DHH have a voice and can determine how DHH infants can integrate into society and reduces barriers. However, the cultural/linguistic model of deafness is different. The deaf community has already been labelled as not able to hear and not having the ability to communicate. Yet sign language is ignored in both the social and medical models. Being Deaf does not mean denying treatment or not being able to hear, but it is being linked with Deaf people's culture and language (Padden & Humphries, 1988). If you do not know your past, you do not know your future and a language, including sign language, should be protected to live with its own identity.

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