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Theory of Mind in deaf children in the context of inclusive education

Introduction

Deciding on a particular school setting in which to place a deaf child or adolescent is of great importance, as research indicates different social outcomes of mainstream schools as opposed to residential schools.

The specific decision depends on the questions the parents ask themselves at the very beginning, "Does my child want to be in a school with similar peers or with hearing ones?", "What particular method is best for my child?", "Will my deaf child benefit more from being surrounded by hearing peers and consequently lack communication skills which could result in its isolation from the Deaf culture or will he/she benefit more from being surrounded by deaf peers?" The parents have to make an assumption as well as a prediction of the outcomes of what will be better for the child: to function in the hearing world with lip reading abilities, talking and listening for sounds almost as a hearing person does, or to be proud to be Deaf, to be a part of the Deaf community and sign fluently, or finally to be proud of functioning in both worlds (Harvey, 1989). However, there are consequences to either decision that have long-term effects on the child's personal and career goals as well as academic achievements (Marschark, 1997). These consequences may be related to the development of Theory of Mind – the fundamental human ability of understanding the mental life of other people, which implies understanding and predicting their behaviour.

Inclusive education for the deaf

Integrative education is a form of education in which the teaching and learning process is adjusted to the individual developmental needs and educational capabilities of a deaf student. As a result, the child can go to school locally, and the learning conditions are adjusted to their individual capabilities and limitations through an individual curriculum, appropriate for their developmental rate and learning speed, special methods and forms of teaching, support of an assistant teacher, specialist help, appropriate facilities and equipment, and finally, special forms of testing. Integrative education should be considered a transitory form,

and modern educational policy towards disabled students should be aimed at promoting **inclusive education**. Inclusion does not mean that children should be placed in mainstream schools. Instead, it means changing schools so that they better serve the different needs of children and provide appropriate support. The school as a whole must change so that it offers access to the full scope of educational services and enables full social integration of all students.

According to Mittler (2000), integration is based on preparing the child for the move from a special school to a mainstream one. It is, therefore, deeply rooted in the so called "deficit model" (convergent with the medical rehabilitation model), based on the assumption that it is mostly the child's deficits that require correction, while the school does not necessarily have to change in any way to meet the individual needs of the child. The "deficit model" assumes that learning difficulties originate in the mind of the child.

Inclusion, on the other hand, does not involve placing children in mainstream schools. It means changing schools so that they better serve the children's needs, which involves helping teachers assume responsibility for teaching all children in their original schools, and preparing teachers to teach those children who are at the moment excluded from their original schools, regardless of the reason for the exclusion. It concerns all children who do not benefit from being at school, not just those deemed to have "special educational needs". Inclusion is based on the "social model", which assumes that society and its institutions are oppressive, discriminating and impairing. As a result, emphasis is put on eliminating the barriers that prevent disabled people from participating in social life. Eliminating these barriers can be expressed as changing the institutions, laws and social attitudes that contribute to the creation and maintenance of exclusion mechanisms. The social model is, therefore, based mostly on changing the teaching environment.

The differences between inclusion and integration may be summarized as presented in Table 1.

INTEGRATION	INCLUSION
Emphasizes the needs of 'Special Students'	Emphasizes rights of all students
Changes or remedies the subject	Changes the school
Benefits of integration for the special needs student	Benefits of inclusion for all students
Presence of professionals, specialist expertise and formal support	Presence of informal support and the expertise of mainstream teachers
	Quality teaching for all

Tab. 1. The differences between inclusion and integration (Thomas et al. 1997)

One of the major arguments for the inclusive education of deaf students has been the expected great benefits for them. In the inclusion setting they are able to learn how to interact with hearing peers using common ways of communication. The question is: what are those common ways of communication? Is it oral language, Total Communication or sign language? This social interaction provides the deaf students

with a context in which to develop social skills that are necessary for functioning in the hearing world (Mertens, 1989). It seems very important to stimulate the competences related to functioning in a bicultural context. Advocates of inclusion placements believe that placing deaf students in classrooms with hearing peers will enhance their social integration (Stinson and Lang, 1994). Inclusion placements also break down the stigma, isolation and social exclusion associated with attending a residential school, as well as the lack of verbal languages competencies used in many everyday life situations (Kauffman, 1993). Participating in classes with hearing peers provides regular contact with societal norms and this contact is assumed to be the primary step in the development of friendship and social acceptance (Gregory and Bishop, 1988); it might also stimulate moral development and the hierarchization of values.

Inclusion is a very positive idea, although it requires providing all the aforementioned necessary support. The support services offered within an inclusion setting have an impact on the self-concept and social adjustment of students. Students in inclusion classes who received support from itinerant teachers for the deaf, who tutored the deaf students and consulted with their regular classroom teachers, exhibited stronger self-concepts than students without any support (Reich, Hambleton, and Houldin, 1977).

Mainstreaming does not always provide self-identity or emotional security. In contrast to the previously cited research on residential/inclusion comparisons, Stinson and Lang (1994) reported that deaf students who were placed in inclusion settings described their social experiences as lonely, rejected, and socially isolated. If deaf students are mainstreamed, they will face many frustrations due to their inability to fit into either world. It has also been shown that students who attended residential schools reported more positive social experiences than those placed in inclusion settings (Mertens, 1989) and had higher levels of self-esteem, greater maturity, and more positive social and emotional adjustments compared to students in inclusion programs (Farrugia and Austin, 1980).

According to Marschark (1997), in order to decide which school is the best for a specific child, we need to look at the development of deaf student's social skills in the context of a hearing social environment versus one that is deaf. Such differences can be found when investigating deaf student's developmental abilities and self-identity. Marschark (1997) concluded that when giving equal exposure to both mainstreamed and residential settings, social interaction with deaf peers in partial mainstreaming is much better than total mainstreaming. He emphasizes that mainstreamed settings do not increase the amount of emotional security in deaf students. On the contrary, deaf students in residential schools reported that they had more friends, felt emotionally secure, and had higher self-esteem, were accepted by their peers, and could communicate very well in sign language.

Some problems related to mainstream schools were described in detail by Ramsey (1997). The most important problems for deaf children are: isolation, lack of a language development model, secondhand information gathered through interpreters, and hearing children distancing themselves from the deaf. Teachers also had poor attitudes, such as paternalism, which deeply affect deaf children's development. The teachers expressed these attitudes by refraining from asking deaf

students to respond, by showing a lack of understanding about Deaf culture, and by having poor signing competences (about twenty words). The teacher can also misunderstand the deaf student's behaviour when he/she looks away from either the teacher or the interpreter.

The study by Obrzut, et al. (1999) presented evidence suggesting that deaf and hard of hearing children in residential schools have higher self-concepts than their peers in regular public school classes. Usually deaf adolescents from mainstream schools suffer from social isolation and have lower self-esteem than hearing adolescents because of communication difficulties (Higgins and Nash, 1987). This significant difference might also depend on the means of communication used within the family. Deaf and hard of hearing children of deaf parents appear to have better self-concepts than deaf and hard of hearing children of hearing parents (Obrzut, et al., 1999). Perhaps the reason for this outcome is due to successful academic and communication skills within the family.

Even if inclusive education might lead to positive experiences for deaf children, negative effects can show up later in life. According to Marchark (1997), inclusion is not only about becoming sociable, but also about one's academic skills, over-all mental ability, and success with the vocation of choice. Inclusion is not only related to the education system but is a life-long process with reference to different conditions and outcomes.

Deaf education in Poland

Deaf education in Poland usually takes place in phonic schools or with the use of a system based on spoken and sign languages as supporting tools. Language is the basic social communication tool. The command and use of a particular language enables and facilitates acquisition and exchange of knowledge and information. Language is not a mere expression of freedom, because it goes beyond the personal sphere and becomes a necessary tool which enables a person to function in society.

In Poland, there are four forms of education available for people with hearing impairments. A particular form is selected on the basis of the child's communication abilities and their command of Polish. Each of these four forms has its advantages and disadvantages, and each is addressed to a relatively narrow group of recipients. In theory, each of these four forms of education offers a similar curriculum, but in practice, considerable differences may occur. The first form is mainstream schools, usually attended by hard of hearing students who know the structures of the Polish language to a level that enables them to communicate freely. They are often students who, for various reasons, lost their hearing during the post-lingual period (after they have acquired the structures of speech). In a mainstream school, a deaf student is an equal member of the class, but is often treated as an addition to the class of hearing children. Such a student, however, has the same rights and responsibilities, which affect the learning process, whose scope is usually typical for that particular type of school. Deaf students in mainstream schools cover the standard primary, junior secondary, and senior secondary school curriculum without any special exemptions, apart from being exempt from learning a second foreign language – which they usually choose not to learn.

Another form of schooling, which is gaining increasing popularity, is integrative classes in mainstream schools. Assistant teachers in integrative classes may know sign language or its elements (although they are not required to), thanks to which the teaching process is more effective even in the case of completely deaf students. Hearing impaired students benefit from the presence of an assistant teacher, but the curriculum remains the same as for all mainstream school students.

The third form of education is schools for the hard of hearing. Such schools are rarely separate units; they usually constitute a part of a training and educational centre, which often requires boarding. Students are often unable to use such a special centre for economic and social reasons and attend mainstream schools regardless of their command of the spoken language.

The fourth and last form of education is schools for the deaf (training and educational centres with boarding facilities). Teachers in such schools use sign language, sometimes also phonogestures, which eliminates communication barriers and enables effective learning.

Schools for the hard of hearing and deaf offer a slightly modified curriculum. Due to the differences in teaching methods and curricula, their graduates have a lower level of general knowledge than students finishing mainstream schools.

Over the years 2003–2006 the number of deaf children in mainstream schools has dropped, while the number of hard of hearing children in such schools has increased (Table 2).

	2003/04	2004/05	2005/06	2006/07	2007/08
Blind	144	69	81	108	82
Visually impaired	950	1089	1318	1546	1529
Deaf	233	225	248	244	209
Hard of hearing	1074	1503	1683	1831	1870
Mild mental handicap	3104	4047	4543	4912	5209
Moderate and severe mental handicap	1024	1472	1638	1790	1787

Tab. 2. Number of children by type of disability in the years 2003/04–2007/08 (source: Czajkowska-Kisil, 2010)

According to Czajkowska-Kisil (2010), schools may offer actual education, as well as apparent education – when disabled students are taken care of by special needs educators and in their absence are left unsupported with no help from their teacher or peers. Inclusive education is much more beneficial than integrative education, because disabled students are dispersed in different classes, which prevents re-creating environments based on segregation.

Theory of Mind in deaf children

Human beings have a deeply-rooted mental competence for being fascinated with other people, both significant others as well as strangers, and for predicting and explaining their behaviour. The process of explaining other people's behaviour is based on understanding their mental states – their beliefs, desires and intentions.

Individuals understand the behaviour of others in terms of their beliefs about the world. The ability of attempting to understand the mental life of other people is called Theory of Mind (ToM) and was coined by David Premack and Guy Woodruff (1978), who first tested a chimpanzee's ability to predict a person's behaviour by means of mental state attribution.

ToM appears to play a very important role in human social behaviour. The history of ToM research is rather long and various theories on the nature of ToM development have been produced. One of them is a neurological theory that explains the neural mechanisms underlying ToM development, whose neural correlates have been identified in the following regions: bilaterally in the temporal poles, in the left superior temporal gyrus, temporo-parietal junction, and the posterior cingulate cortex, based on significant increases in cerebral blood flow in the aforementioned areas (Fletcher et al., 1995, Saxe and Kanwisher (2003). A second theory posits that false-belief understanding develops out of other capacities that mature during infancy. For example, pretend play (Leslie, 1987) and shared attention (Baron-Cohen et al., 1996) may be skills that precede ToM abilities. There are some specific prerequisites to Theory of Mind. First, a child must understand that individuals can have desires –this can be assessed by joint attention and protodeclarative pointing. Second, they use pretend play skills and meta-representation. Third, they begin to use mental state terms such as “think,” “know,” “want,” and “remember”.

The third theory postulates that the development of ToM is influenced by exposure to conversation about mental states (Jenkins and Astington, 1996; Perner, Ruffman, and Leekman, 1994) and verbal ability in normally developing children (Białecka-Pikul, 2002). However, communication difficulties may prevent some children from being able to successfully converse with others. De Villiers and de Villiers (2000) have emphasized that performance in false belief tasks depends on understanding complex language and that individual differences may reflect differences in language ability.

On the basis of many observations and the above-mentioned theories, it can be stated that deaf children suffer from impairments in ToM development. The first study in the field of Theory of Mind in the deaf conducted by Peterson and Siegal (1995) revealed that 65% of profoundly deaf Australian children, aged 8–13 and using Auslan (Australian Sign Language), failed the false belief test, while only 35% of them passed a version of the classic „Sally-Anne” task. The level of performance shown by deaf children did not differ significantly from that reported for autistic children of a comparable (nonverbal) mental age. These results were replicated in a later comparison of deaf and autistic children across a wider age range and using a broader range of tests (Peterson and Siegal, 1997, 1999, 2000).

Several studies have shown that deaf children of hearing parents who learn sign language as school-aged children (non-native late signers) and do not use sign language as their first language, tend to perform at a lower level on false-belief tasks than their hearing mental-age-matched peers (Courtin, 2000; de Villiers and de Villiers, 2000; Peterson, 2004; Peterson and Siegal, 1999, 2000; Russell et al., 1998; Woolfe et al., 2002).

The developmental delay is very significant – research showed that 60% of deaf late signers between the ages of 13 and 16 passed false-belief tasks. However,

native signing deaf children (deaf children of deaf parents) do not lag behind hearing children in Theory of Mind development (Russell et al. 1998). Theory of Mind tasks are typically administered verbally, which raises the question of whether the linguistic demands of these tasks mask some deaf children's conceptual competences. However, it is worth noticing that according to some researchers, deaf children of hearing parents show difficulties in ToM development even if the task instruction is almost nonverbal. Figueras-Costa and Harris (2001) found that oral deaf children (i.e. those using spoken-language) performed significantly better on a nonverbal false belief task than on a verbal false belief task, suggesting that verbal Theory of Mind tasks may underestimate the understanding of some deaf children. The deaf children in the Figueras-Costa and Harris study all had hearing parents, used spoken Catalan or Spanish, as well as hearing aids. However, even on the nonverbal false belief task, the deaf children's tested performance was delayed by about 4 years relative to hearing norms. Other studies have also found that deaf children of hearing parents, both signing and oral, perform poorly for their age on Theory of Mind tasks even when verbal demands are reduced (Schick et al., 2007; Woolfe et al., 2002). Woolfe et al. (2002) used "thought pictures" in their study. However, in the study by Falkman and Hjelmquist (2007), the difference between native signing and late signing deaf children in mentalizing skills remained significant even though the Theory of Mind task was made more comprehensible by using minimal verbal instructions.

Theory of Mind of deaf children in the context of education

Theory of Mind development might also be related to the **educational system**. The school environment also seems to be an important factor in ToM development in deaf children. They usually attend one of three types of schools: segregated, mainstream or regular schools for the hearing. These types differ not only in terms of the impact of social and cognitive integration but, what is more significant, in the mode of communication. Schools vary in the level of oral vs. sign language that is used. Children educated by means of total communication, bilingual communication and oral language, were compared for differences in ToM development (Courtin, 2000, Peterson, Siegal 1999).

Interestingly, research demonstrates that profoundly and pre-lingually deaf children of hearing parents who are taught in the oral language mode are also delayed in developing insights into the minds of others (Courtin, 2000; de Villiers and de Villiers, 2000; Peterson, 2004). An orally-taught deaf child is not exposed to sign language; in consequence his/her speech, vocabulary and syntax are limited and the level typically present at 4 years of age is insufficient to support elaborate mind-talk, especially in reference to others' beliefs (de Villiers and de Villiers (1999). Language and early family conversation are critical factors for ToM development so orally educated deaf children with hearing aids should be delayed in mastering concepts of false belief.

Research on ToM in deaf children has been carried out in different countries, with different views on deaf education and with children being exposed to different sign languages. Although deaf children are exposed to various forms of language in education, they are delayed in ToM development – a consistent finding across

various studies. In the majority of deaf studies from the UK and Australia, children are recruited from schools which follow the philosophy of Total Communication, where spoken language is usually combined with signed English (English is translated in a word-by-word way according to English syntax), supplemented by lip reading, finger spelling and British/Auslan Sign Language (Peterson, 2004; Peterson and Siegal, 1999; Russell et al., 1998). In other studies deaf children are recruited from mainstream schools with sign language provision or special schools with bilingual communication using both spoken English and British Sign Language (Woolfe et al., 2002), are orally taught (de Villiers and de Villiers, 2000) or educated primarily in sign language (Falkman, 2005).

Courtin (2000) conducted an analysis in order to determine any differences in ToM performance between children from institutional school settings versus hearing mainstream schools. Deaf children of hearing parents are delayed in the development of Theory of Mind no matter what communication pattern has been adopted in their education, which means that the delay is not specific or related to the teaching method at school. However, no significant differences were found that might point to differentiating aspects of the means of communication used in different school settings. Oral deaf education does not engage in the use of sign language, speech reading or Total Communication, but focuses on receptive (listening) and expressive (spoken) language. The child is usually treated behaviourally during the teaching procedure and creativity and plasticity decrease. Deaf children thus become over-controlled and there is less space for flexible and creative discussions.

Peterson and Siegal (1999) have found, however, that orally instructed deaf children performed better in comparison to native signing children. This result might either be confusing or understood as the glorification of oralism in deaf education. Nowadays however, there is rather weak acceptance of oral treatment compared to bilingual education (Grosjean, 2001). This result should be interpreted very carefully. One reason for these conflicting results could be the different hearing status of children included in these studies. In Peterson and Siegal (1999), the children included in the oral deaf group had a moderate to severe hearing loss, whilst in Courtin (2002) and de Villiers and de Villiers (2000), only children with severe or profound hearing impairments were included. Thus, with the resulting differences in access to everyday conversation depending on the children's hearing level, these children could develop mentalizing skills at different ages. Some hearing parents of deaf children opt for a purely oral approach to family communication as well as for mainstream or regular oral-only schooling. Language development is generally delayed in orally educated, profoundly deaf children who use conventional hearing aids (Svirsky, Robbins, Iler-Kirk, Pisoni, and Miyamoto, 2000) so they would also be expected to have a delay in ToM. However, only about 25% of deaf children develop speech skills sufficient for full educational access. Language delays in oral settings are typical, even with intensive speech therapy. There is much less evidence supporting oral methods than is generally assumed (Marscharck, 1997). Along with delayed language, restrictions upon the oral deaf child's opportunities to exchange information about thoughts, feelings, or intentions with hearing parents, peers and siblings may curtail ToM development. An orally-taught deaf child who is not exposed to sign language, experiences a language development delay in reference

to limited speech, vocabulary and syntax. In a typical developmental path for these children, language is so simple at age 4 that it is insufficient to support elaborate mind-talk, especially in reference to others' beliefs (de Villiers and de Villiers 1999). Consequently, if language and early family conversation are critical factors for ToM development, orally educated deaf children with hearing aids should be delayed in mastering concepts of false belief.

Findings show that education in a Total Communication classroom where sign is used along with speech, neither enhance nor detract from ToM development, relative to mainstream schooling (Peterson 2004).

In the context of the established finding that Theory of Mind growth is seriously delayed in late-signing deaf children, and some evidence of equivalent delays in those learning speech with conventional hearing aids, the study by Peterson (2004) explores ToM development in deaf children with cochlear implants. Implants can substantially boost auditory acuity and rates of language growth. Despite the implant, there are often problems in socializing with hearing peers and some difficulties with language, lending special theoretical interest to the present comparative design. No significant ToM differences emerged between deaf children with implants and those with hearing aids or between those in oral-only versus sign-plus-oral schools. Nor did the deaf children perform any better on ToM tasks than their age-matched autistic peers. Overall, it would seem that false belief performance by oral deaf children with implants or hearing aids closely parallels that of late-signing deaf children from hearing families (Peterson and Siegal, 2000).

Research on ToM development in deaf children thus suggests that, provided a child's hearing loss is severe to profound, and provided that there is no fluently signing family member, there is a delay of 3 to 5 years in comparison to hearing children.

This might be an argument in favour of bilingual education (Marscharck, 1997) which assumes that sign language is the primary basis of deaf children's development, both in cognitive and emotional-social aspects. It provides a good framework for the development of a second language, which for the deaf means the oral national language used by the hearing majority.

In American research it was found that there was no significant effect of the predominant language of school instruction, ASL versus oral English, on verbal ToM tasks. ToM performance of two groups of deaf children of hearing parents (oral deaf as well as ASL signers) were significantly worse than that of comparative groups: a control group with hearing children and deaf children of deaf parents using ASL (Schick, et al. 2007).

Cross-country comparisons of ToM in Estonian, Italian and Swedish deaf children were presented in interesting studies (Meristo, 2007; Meristo, Hjeltnquist, 2009; Meristo, Falkman, 2007) on the important role of education conducted in a native language environment in order to maintain the expression of mind-reading skills through practice. Four groups of deaf children aged 7-16 years with different language backgrounds at home and at school, i.e. bilingually instructed native signers, orally-instructed native signers, and two groups of bilingually instructed late signers from Sweden and Estonia, respectively, were measured on ToM. The

bilingually instructed native signers performed at a significantly higher level on the ToM measures than the other groups of deaf children.

The study confirmed that deaf children from hearing homes lag several years behind hearing children in developing mentalizing skills, and that it is an advantage for deaf children to have deaf parents when it comes to understanding the minds of others. However, it presented a very complex environment, with the language environment being the common thread. The Estonian and Italian studies were conducted in a group of deaf children with deaf parents, where the children did not use sign language at school, and it was found that the advantage of having deaf parents is not independent of other factors. Deaf native signing children from an oral school performed worse on Theory of Mind tasks than deaf native signing children from a bilingual school. These results provided strong evidence that bilingual education is a better background for ToM development than oral education, even for native early signers who have non-restrictive contact with a significant other who uses sign language in everyday communication. On the other hand, the Swedish health, rehabilitation and educational systems promote – in comparison to other countries – the idea of defending the rights of minorities to live and develop their own culture. Many procedures are adopted for this purpose, such as very early diagnosis of deafness and sign language instruction immediately offered to hearing parents if they expect to give birth to a deaf child, together with early sign language experience at preschool for deaf children. Results of a study conducted by Meristo (2007) showed that these practical interventions were generally very useful, but were, however not enough for the group of late signing children to be put on the same developmental track as deaf children of deaf parents and to develop ToM on the same level as native signers. It seems that there are some important differences in the early coordination of minds and introduction to the minds of others in the two communication environments and family backgrounds (deaf and hearing), because mentalizing is sensitive to specific kinds of early experiences. These differences, however, are yet to be found.

Conclusions

1. Summing up, deaf studies consistently suggest that deaf children from hearing families, educated in either oral or sign language, are delayed in developing mentalizing skills compared to their native-signing and hearing age-matched peers. The results of some studies point to the importance of participation in everyday conversations with family members and friends, which in one way or another facilitate the understanding of others as mental agents (Woolfe et al., 2002).
2. Secondly, it is possible that Theory of Mind skills are important for the development of social interaction skills, particularly those skills required at school. Astington and Pelletier (1998) argue that there may be a relation between children's level of Theory of Mind development and their ability to learn by instruction and collaboration. They suggest that Theory of Mind understanding is also linked to the development of scientific thinking and critical thinking.
3. Education requires children to talk about mutual understanding and misunderstanding, to reflect on their own beliefs as well as the beliefs of others, and to

shift perspectives when evidence suggests that another point of view is valid. All these require Theory of Mind skills.

4. There is also evidence that teachers of the deaf, as well as hearing teachers of hearing children, vary a great deal in how much they talk about the mind. Given that many deaf children often have a limited range of social partners who they can communicate fluently with, restricted input is a serious issue for many children.
5. The education of deaf children living in an integrated environment needs to look beyond functional communication and academic skills and ensure there is also a focus on more complex aspects of social and emotional understanding and development.

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Theory of Mind in deaf children in the context of inclusive education

Abstract

Making decisions about particular school settings for deaf children or adolescents is of great importance due to the varied results of research that assess the social outcomes of mainstream schools versus residential schools.

However, there are consequences to either decision that have long-term effects on the child's personal and career goals as well as academic achievements. The consequences might be related to Theory of Mind development, the important human ability of understanding the mental life of other people, which implies understanding and predicting their behaviours. The paper presents a developmental pathway for Theory of Mind in deaf children in the context of education.

Teoria umysłu u dzieci głuchych w kontekście edukacji włączającej

Streszczenie

Podejmowanie decyzji o umieszczeniu głuchych dzieci lub nastolatków w określonej szkole jest bardzo ważne, gdyż istnieją zróżnicowane wyniki badań, porównujące szkoły integracyjne ze szkołami z internatem pod względem opanowanych przez uczniów kompetencji społecznych.

Każda z decyzji ma swoje konsekwencje oraz długotrwałe skutki wpływające na osobiste i zawodowe cele dzieci, jak również na osiągnięcia w nauce. Konsekwencje te mogą mieć związek z rozwojem teorii umysłu, która stanowi istotne umiejętności człowieka, pozwalające na nadawanie znaczenia życiu umysłowemu innych osób, co pociąga za sobą zrozumienie oraz przewidywanie ich zachowania. Niniejsza praca przedstawia drogę rozwoju teorii umysłu u dzieci głuchych w kontekście edukacji.

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