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## COMMUNICATION OF THE DEAF AND HARD OF HEARING – THE POSSIBILITIES AND LIMITATIONS IN EDUCATION

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### Abstract

Communication of the deaf and hard of hearing can be verbal (oral and written) and non-verbal (primarily involving sign language as well as the use of manual alphabet – dactylography, mime, and lip-reading). Deaf people find verbal communication extremely difficult as it depends on a great number of factors (knowledge of a language, vocabulary, grammar, and sentence structure). They also experience great difficulties in understanding written and spoken words, while they communicate with each other using sign language, as their first and primary language.

Different forms of communication as well as problems which occur within it lead to social isolation, insecurity, and difficulties in learning the mother tongue as well as all other school subjects.

When discussing the possibilities of educating deaf and hard of hearing children, we have to stress that there are different attitudes, primarily of the children's parents, and, secondly, of defectology/surdology specialists, but also of teachers in regular schools.

In underdeveloped countries in particular, deaf people mainly reach a level of education which is lower than their real potential and they have difficulties in adjusting to the education system of the population with no hearing impairment.

Education in general, especially the education of deaf and hard of hearing persons, is also greatly influenced by the social context, application of new technologies and new, contemporary, living and working conditions.

**Key words:** communication, sign language, written and spoken language, education

## КОМУНИКАЦИЈА ГЛУВИХ И НАГЛУВИХ-МОГУЋНОСТИ И ОГРАНИЧЕЊА У ОБРАЗОВАЊУ

### Апстракт

Комуникација глувих и наглувих може бити вербална (усмена и писана) и невербална (која обухвата пре свега знаковни језик, затим употребу прстне азбуке-дактилологије, мимике и читања говора са усана). Вербална комуникација пред-

ставља за глуве особе велику тешкоћу, јер зависи од мноштва фактора (познавање језика, речника, граматике и структуре реченице). Они имају великих тешкоћа у разумевању писане и усмене речи, док међусобно комуницирају користећи знаковни језик, као свој први и основни језик.

Различит вид комуникације, као и проблеми који током ње настају, доводе до друштвене изолованости, несигурности и тешкоћа у стицању знања из матерњег језика, а и свих других наставних области.

Када говоримо о могућностима школовања глуве и наглуве деце морамо нагласити да постоје различити ставови, пре свега родитеља деце, затим дефектолога-сурдолога, али и наставника у редовним школама. Нарочито у слабије развијеним земљама глуве особе углавном постижу нижи ниво образовања од свог стварног потенцијала и имају тешкоћа у прилагођавању образовном систему чујуће популације.

На образовање уопште, а нарочито образовање глувих и наглувих, у великој мери утиче и друштвени контекст, примена нових технологија и нови – савремени услови живота и рада.

**Кључне речи:** комуникација, знаковни језик, писани и усмени говор, образовање

## *INTRODUCTION*

Communication is a dynamic process in which information is communicated through symbols. It may be successful only on condition that the signs which have the same meaning for the participants in communication are used. The standard mode of communication among people is speech. However, in social communication the use of hand, face, and the whole-body movements is also frequent. In certain situations, vocal and oral speech may be neglected in favour of kinetic speech (e.g. in circumstances involving intensive noise).

The process of communication involves mutual interaction of people. Unsuccessful communication occurs when the participants do not adequately convey or fail to receive a message, while its efficiency depends upon each individual participant.

Verbal communication involves consecutive stages, which are automated or semi-automated, as well as conscious mental operations which function in continuous interaction (Singleton, 2007).

People communicate by means of facial expressions and gestures, touch, visual signs and symbols, music, play, and words.

It may be said that the need for communication is almost as old as humanity. Different means of communication have developed and improved alongside the development of the human community.

*MODES OF COMMUNICATION WITH THE DEAF  
AND HARD OF HEARING*

Due to hearing impairment, difficulties occur in the learning of all aspects of language, which is to be expected because language learning, i.e. the formation of linguistic competence, develops exclusively in conditions of active speaking communication. Deaf children often learn a large number of words, but as they do not entirely understand all of their meanings, they fail to use them spontaneously in sentences or they use them in the wrong context. Such a limitation in gaining experience by means of verbal messages leads to deaf children's developing other forms of communication.

A language can be realized through analogue forms of expression (spoken, written, or sign language). They represent equal systems of language realization and are interchangeable depending on the circumstance (Bugarski, 1996).

Language, as an abstract system of symbols, is concretely realized through speech (most frequently), writing (rarely), and gesture (most rarely). All modes of language realization have their advantages and disadvantages. They complement each other and they result from human ability to communicate with other people as well as human need to communicate even in the most unfavourable conditions (Kašić, 2003).

That leads to the need to complement the study of both spoken and written language with the study of the third way of linguistic communication – sign language. The use of signs is one of the least studied aspects of communication. In the past it was believed that sign language was not really a language and that as such it did not warrant systematic study. The prevalent opinion was that sign languages were in fact merely a specific form of manifestation of spoken languages. Others, however, thought that sign language only represented a non-linguistic system of gestures and mime (Kristal, 1996).

Nonetheless, ethnic database nowadays does include sign languages, and it contains as many as 103 sign languages, which are widely used. This figure does not include all sign languages and it is relatively small but significant, as it represents the recognition of sign languages' existence as equal linguistic systems (Ann, 2006).

Spoken and sign languages are produced and perceived in a completely different way. We produce speech with the vocal apparatus and perceive it with the sense of hearing, whereas sign language is produced by movement of hands as well as head, face, and the whole body and it is perceived with the sense of sight.

While acquiring language, deaf and hard of hearing children may be exposed to both spoken and sign language. It is only the ways of acquiring and using those two languages which differ. It may be said that

bilingualism with the deaf represents familiarity with and regular use of both sign and spoken language.

Being familiar with and using sign and spoken language, deaf children will realize their full potential in intellectual, spoken, and social development (Grosjean, 1992, 1996).

### *Sign Language*

Regarding deaf and hard of hearing children, the question of whether they should be taught sign language or not is inevitably raised. This question has often been a subject of numerous studies and discussions. There are many arguments for and against sign language. It could be argued that it separates and isolates deaf people from everyone except their own small community. Thus, they become marked, distinct, and different and are prevented from communicating with those who can hear. Conversely, insisting on oral speech, which is often limited and vaguely comprehensible, deepens their isolation even more.

Sign language is inseparably connected with the existence of larger communities of the deaf. Those communities may be linked with the creation and development of big cities during the industrial revolution. Before that, deaf people were scattered around villages and smaller towns and were using their own signs, which were mostly incomprehensible for other deaf people as well as for their environment.

When there are a significant number of deaf people in the same, relatively small, geographic location, they will form social bonds with each other, but also with people who can hear, by means of sign language. Ever since the 17<sup>th</sup> century and up to the mid-20<sup>th</sup> century, an island off the coast of Massachusetts was home to a significant population of deaf people living together with hearing inhabitants. In the island towns almost everyone was using a certain form of sign communication and deafness was accepted as a constituent part of everyday life. However, such communities are rather rare (Encyclopaedia of Disability, 2006).

One of the crucial moments for the creation of conventional sign languages in Europe occurred in the late 18<sup>th</sup> century, when schools for deaf children emerged. In that period, due to the formation of larger communities of the deaf in one place, children freely used sign language and learnt it from their teachers and peers, which enabled mutual communication.

In the past, it was often claimed that sign language was a primitive and inferior form of communication and that it was characteristic of tribes at a low level of development. It was emphasized that the most striking criterion to differentiate “civilized” from “savage” people was the richness and accuracy of oral language, and for that particular reason communication in gesture, which used to be dominant, is now less used. The use of gesture together with speech, or instead of it, is the token of poor intellectual powers and so the civilization must abandon it (Baynton, 1996).

Nowadays, we know that sign languages have a structure, the complexity of which is comparable to the structure of spoken and written language. In different parts of the world various sign languages are used and they are mutually incomprehensible. Different signs and different rules are used in their structuring (different sign order) as well as different sentence structure (Kristal, 1996).

Early bilingualism of hearing impaired children (familiarity with both sign and spoken/written language) is of invaluable importance for their development. The problems of limited reception of messages and limited communication are removed through sign language learning. Deaf children have more confidence, they are more communicative, more independent than others, reacting more adequately in different life situations, and they express fewer frustrations linked to their relationship with the hearing population. Children who communicate by means of sign language show more variations and flexibility in their behaviour than when they communicate by means of speech. It is important that linguistic communication be equally developed by means of sign and spoken language, and that it not be forgotten that children have the need to communicate in both languages. Knowledge acquired in the field of language and communication represents a necessary basis for education and learning in all other fields. Early acquisition of sign language is necessary for normal, i.e. well-organized, cognitive, emotional, and social development as well as for general educational success of a deaf child (Most, 2003; Most, 2004).

Deaf people communicate with each other using different forms of sign language. Sign languages are yet to be universally accepted as languages, although languages such as American Sign Language (ASL) and British Sign Language (BSL), as well as some other languages represent linguistically complete forms of communication. It is a common false belief that ASL shares grammatical and sentence structure with the spoken English language. Although it is known that certain sign languages are closely linked with spoken languages, many of them have unique grammars that cannot be translated into speech (Encyclopaedia of Disability, 2006).

National sign languages differ among one another and there is no "international sign language" which could be understood by all deaf people in the world. Moreover, they are neither simple collections of gestures nor universal. They are independent from spoken languages used by the hearing population and they are equal to other languages (Kristal, 1996).

American Sign Language is the third most-used sign language in the USA. Between 250,000 and 500,000 people in USA and Canada use this language (Baker & Cokely, 1980).

The 500,000 deaf people who use ASL do not include persons of normal hearing who have learnt it during their lifetime. They add to a number twice or three times as big. Spanish is the most frequently spoken language, followed by Italian, while American Sign Language ranks third (O'Rourke, 1975).

In the USA, the majority of the deaf exclusively use American Sign Language (ASL), far more than English (Lane, Hoffmeister & Bahan, 1996). Although many words have been borrowed from the English language, grammatical structure is entirely different from the spoken English language (Klima & Bellugi, 1979). Deaf children learn to use sign language easily and spontaneously in exactly the same manner as children who can hear learn to speak. For that particular reason deaf sign language users have a low level of English language skills (Lillo-Martin, 1999).

Sign language is a form of non-verbal communication in which words/terms are represented with signs or hand gestures, which may carry the meaning of certain thoughts, words, or whole sentences depending on the context or rather complex series of ideas – UNESCO, Paris, 1984, according to Dimić (2002).

Considering the historical development of contemporary sign languages, one of the founders of modern linguistics, William Stokoe, is worth mentioning. He initiated the introduction of sign language into the education of the deaf in the USA. He believed that sign language is grammatically separated from the English language and capable of expressing even the most complex thoughts clearly and unambiguously, aiming to shift the focus from strict oralism that prevailed at the time.

American Sign Language is passed on from one generation to another. Children whose parents use sign language learn it as their first language, while other children learn it at school from their peers or deaf adults (Gallaudet Encyclopaedia of Deaf People and Deafness, 1987).

Nowadays, deaf students generally criticize oralism and encourage the use of sign language in education. While lip-reading and oral communication represent useful skills for them, sign language, as the primary form of communication, represents a standard to be attained in the education of the deaf (Encyclopaedia of Disability, 2006).

There are often debates in linguistic circles as to whether deaf children benefit from using signs, as it is known that the first signs can be produced before the first words are pronounced. The benefit to social and cognitive development of children is emphasized (Stokoe, 2001).

Deaf people in Serbia use Serbian Sign Language (SSL) as a means of everyday conversation, expressing desires and personal will, intellectual discussions, telling jokes, expressing personal style, etc. In Serbia there is a high level of understanding among deaf people within SSL, although there is a possibility of regional variations of certain gestures and ways of expression (Dimić, Polovina and Kašić, 2009).

Dactylogy is used in communication alongside sign languages.

Fingerspelling results from the contact with the Serbian language. Manual alphabet or fingerspelling is used in certain situations (names of people, names of countries and cities). Names of cities may also be given with one to two hand shapes (Dimić, Polovina and Kašić, 2009).

Nowadays, manual (Cyrillic and Latin) alphabet is used worldwide. Each country has its own manual alphabet – one-handed (dactylological, which is in use in most countries) and two-handed (chirological, which is in use in Great Britain and its former colonies).

### *Serbian Sign Language*

The standardization of Serbian Sign Language is still in progress. It is important to emphasize that it is not learnt in special classes, but instead children acquire it either by learning it from their deaf parents or deaf peers who they meet when they start attending preschool groups or school classes. Nonetheless, since it is a dominant means of communication among the deaf and hard of hearing people, we may perceive certain characteristics which indicate its structure, function, and particularity.

The key advantage of sign language is the fact that it is the natural first language of the deaf and their basic means of communication. This particularly relates to deaf children of deaf parents, who acquire it as their mother tongue. It is used to express their first emotions, moods, and needs, such as joy, happiness, sadness, as well as worries, desires, pleas, and demands. It enables them to establish relationships, first with their parents, and then with the social environment that surrounds them. It is for this particular reason that difficulties occur with deaf children of hearing parents. As those parents are not familiar with sign language and often express opposition to it, deaf children experience difficulties in establishing both emotional and social communication.

Serbian Sign Language consists of gestures which are very often concrete, quickly learnt, easy to remember, comprehensible and possess huge didactic value throughout formal education. It enables communication even in aggravated environmental conditions, such as loud noise and larger distance from the interlocutor.

Difficulties in understanding sign language are caused by a large number of synonymous signs. Many terms are marked with the same sign (e.g. one sign for terms such as man, people, father, male, nation), hence leading to difficulties in understanding, which has to rely on the context of the conversation to a large extent. Serbian Sign Language has three tenses – past, present, and future – which are used only as an additional sign before mentioning the action that happened (sign for now – today (the present tense), before (the past tense), and after (the future tense)). There are no persons, cases, or concordance in gender and number. Indicating gestures are used a lot (e.g. for here, there, up, down, etc.).

Word order is determined by the sequence of events and actions and to a large extent conditioned by visual perception as well as by the intensity of emotional experience. The thing that leaves the strongest impression on a sign language user will have a sentence initial position (e.g. the sentence ‘A stone fell in front of me’ would be translated into sign language as ‘A stone

fell me'<sup>1</sup>). This may cause difficulties in translation into oral speech and vice versa. Sign language cannot be used for communication in darkness or in poorly lit conditions.

Serbian Sign Language is always accompanied by speech, mime, or dactylogy, which facilitates understanding and following of the shown signs significantly.

### *Speech of the Deaf and Hard of Hearing*

It is difficult for the deaf and hard of hearing to adapt to a language system which is acquired as a combination of sound and meaning. Consequently, many linguistic deficiencies and difficulties arise, which lead to impeded or disabled communication, as well as to difficulties in acquiring knowledge.

Very little attention is given to the study of language of hearing impaired children. Spoken language is in the centre of attention with children who can hear, whereas spoken language of hearing impaired children is limited, often incomprehensible, and it is often impossible to be studied or analyzed (Dimić, Kapić and Kovačević, 1999).

A deaf child can develop verbal speech if professional and technical pre-conditions are properly provided. Differences between a child who cannot and the one who can hear will be minor, but they will always be present. The scope and outcome of those differences will be significantly determined by the treatment of such a child (Slavnić, 1996).

A child who can hear learns speech mainly through listening, while a deaf child must use more sensory inputs: hearing, sight, and movement.

Hearing impaired children have difficulties in understanding the speech of the environment (receptive aspect of speech ability) as well as in learning correct and clear speech on their own (expressive aspect of speech ability). Difficulties in speech and communication create problems in social, emotional, and cognitive development of a hearing impaired child (Brajović, Matejić-Đuričić, Radoman and Brajović, A., 1997).

Over the past thirty years fundamental improvements have been made in the field of understanding early vocal development and development of speech of deaf children. The use of digital hearing aids as well as cochlear implants has led to many new theoretical and practical studies (Oller, 2006)

The starting point of amplification is in a positive correlation with the initial stages of babbling (Eilers and Oller, 1994). In addition, a study by a group of authors on children without a cochlea suggests that even children with complete lack of hearing information may enter a babbling stage. Visual information, lip reading, and tactile information play a crucial role here. The authors concluded that the effects of hearing loss are relative

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<sup>1</sup> N.B. In Serbian, adverbials may come at the beginning of a sentence.



and have to be observed in the light of possible influences of other sensory modalities (Lynch, Oller and Steffens, 1989).

Despite the progress in theory and practice, studies clearly show that children with congenital or early developed hearing impairments develop oral speech significantly late, even if undergoing intensive oral training (Cole & Paterson, 1984). Children with minor hearing impairment are more likely to develop speech than children with graver impairment (Fry, 1966), although prolongation occurs even when hearing loss is slight to moderate (Carney & Moeller, 1998).

Inadequate results of deaf or hard of hearing students in semantic tests are caused by meagre knowledge of language, concreteness, and undeveloped language associations (Isaković and Kovačević, 2009).

One of the major tasks of surdo-pedagogists is teaching of logical speech. Hearing impaired children learn articulation more easily than logical speech. Even after completing formal education and learning articulation, hearing impaired children express their thoughts with difficulty. It has been observed that they do not use grammatical and syntactic categories in their speech (Savić, 1986).

#### *Written Language of the Deaf and Hard of Hearing*

It is a known fact that there is a great difference between written linguistic expression of deaf and hard of hearing children and children who can hear. Many studies have shown significant backwardness of hearing impaired children in the development of written expression in comparison to children who can hear and are much younger.

Written speech represents a significant aspect of communication for hearing impaired children. Their spoken language is extremely limited, so it is important to enable children to use written language in different life situations. Using written language, they enrich their vocabulary, acquire new knowledge and develop the ability to communicate with their environment through written words. In the initial stages of written language development, the demands should be adjusted to the abilities and capabilities of children.

The belief that the written word is more readily available to hearing impaired children than to their peers who can hear is wrong. It is abstract and not previously learnt, but rather encountered in text form for the first time. Hearing impaired children use it for speech development, as opposed to their peers, who can hear and possess developed speech and know numerous words. However, written language is easier for the hearing impaired persons than spoken language. The written word is more visible, it can be parsed and repeated, and the hearing impaired may return to it so as to comprehend its meaning, whereas the pronunciation of the spoken word is momentary. It is a known fact that children who can hear first develop spoken language and only later develop written language, systematically during school training. Children who can hear start school with considerable

speaking experience. In comparison to them, hearing impaired children simultaneously learn spoken and written language. One of the school's main tasks is to allow the hearing impaired children to learn and adopt the process of written language (Dimić, 1996).

Written language expression by hearing impaired children is characterized by the following: extremely poor vocabulary, stereotypical choice of vocabulary, lexical deficiency (especially in the use of closed classes of words: pronouns, prepositions, conjunctions, particles, and interjections), and disproportion in the use of nouns and verbs in comparison to other parts of speech.

Written expression of hearing impaired students is agrammatical. Students do not adequately link words in a sentence or one sentence with another, and the biggest problem is the correct use of gender, number, person, and case in particular (the nominative case is usually used). During an assessment of basic tense use by hearing impaired children, a special inconsistency has been observed in the production of the past (or perfective) tense (use of the elliptical form of the tense which consists of the main verb only) and the future tense (incomplete future tense consisting of the infinitive verb form only). The students were unable to use reflexive verbs correctly, and they used verbal aspects and auxiliary verbs inadequately. The use of meaningless lexemes and non-existent verb forms was also common (Dimić, 2003).

Hearing impaired children learn written signs with relative ease, but although they may write legibly, they write agrammatically and slowly and they fail to perceive the relations between sentences, to link words in a sentence adequately, and to link one sentence to another. Thus, both reading and writing lose their purpose (Dimić, 1996).

#### *OPPORTUNITIES FOR EDUCATING THE DEAF AND HARD OF HEARING*

For many years, there have been debates, both in Serbia and abroad, on the best possible way in which the education of deaf and hard of hearing children should be approached, as well as on the model of education and the approach which would be the most effective and contributing to adequate achievements and knowledge acquisition. It is necessary to improve the existing educational system with a view to developing such a model which would address the children's specific needs and limitations caused by the primary impairment.

The inclusion of deaf and hard of hearing children in regular educational institutions may pose a challenge to everyone involved in the educational process, considering the difficulties in the process of communication, which require understanding and a special approach to the work with these children.

Hearing and speech impairment leads to certain particularities and difficulties in the development of these children, which requires proper methods and procedures in the process of rehabilitation and education and strong support and encouragement of the family, school, and the environment. Deaf and hard of hearing children attending regular school require a specific treatment adjusted to their individual capabilities and skills (a special programme, teaching resources, types of work which are optimally adjusted to each student).

The population of hearing impaired children is rather heterogeneous. It comprises children of different levels of hearing impairment. According to the classification of the World Health Organisation (WHO, 1980), these levels include: slight hearing impairment (26-40 dB), moderate hearing impairment (41-55 dB), moderate to severe hearing impairment (56-70 dB), severe hearing impairment (71-90 dB), profound hearing impairment (91 dB or greater), and complete deafness (no remnants of hearing).

Hearing impaired children use different kinds of amplification: individual hearing aids and cochlear implants.

Individual hearing aid is a device which should provide hearing impaired children with social contact auditively. A cochlear implant is a device designed only for a certain percentage of deaf people, who must meet several selection criteria so that the procedure can yield the expected or desired results (Ostojić, 2004; Ostojić et al., 2011; Kovačević, Dimić and Isaković, 2013).

Heterogeneity of the population of deaf and hard of hearing children has increased with the emergence of children with cochlear implants. Various approaches in the education of deaf children are necessary in order to effectively meet their communication and educational needs.

It is widely believed that the best results in the listening and speech of children with cochlear implants are achieved through education in which the oral method is used. Considering the fact that learning oral language is more efficient if there is previous sign language experience, some experts recommend combining sign language learning and cochlear implantation (Lane, 1993, according to Ivasović, 2002). This enables children to establish communication with their environment at an early age, long before they could benefit from cochlear implantation, so that they have the system which would enable them to develop cognitively and emotionally (Ivasović, 2002; Kovačević, Dimić and Isaković, 2013).

Nowadays, there are around 80% of cochlear implanted children in the developed world, which enables them to gain access to sound at an early age and helps them develop speech. However, due to the changes in brain plasticity in early childhood, children who did not acquire language at the earliest age cannot be fluent in any language. If their early exposure to the natural language is omitted, their later cognitive development may be insufficient (Humphries et al., 2012).

An alternative approach to language acquisition is the use of sign language, such as American Sign Language (ASL). Sign language is subject to the same limitations of the speech and language development. There are no reliable predictors of success with cochlear implants. The family of a deaf child is frequently advised against exposing the child to sign language. These absolutely ideological positions put pressure on the parents and may actually jeopardise the developmental needs of deaf children (Humphries et al., 2012; Kovačević, Dimić and Isaković, 2013).

Over the past few decades, there is a constant rise in the number of deaf and hard of hearing students in regular educational conditions both in Serbia and in the developed countries.

Deaf and hard of hearing children experience difficulties in communication in regular educational conditions. Difficulties in communication of deaf students are visible to teachers, who use interpreters/translators, while difficulties of hard of hearing students are often not observed. Hard of hearing students use the verbal mode of communication. Their communicative and educational needs may be predicted due to the belief that they have fewer needs for support and assistance than deaf students. Poor acoustic conditions in the classroom and difficulties in lip reading may cause considerable difficulties for hard of hearing students and make the availability and acquiring academic contents and knowledge harder (Marschark et al., 2002; Ross et al., 1982, according to Radić-Šestić, 2013).

The support that affects the achievements of deaf and hard of hearing students involves the level and the type of support provided by teachers and defectologists, adjusted communication, adequate amplification, and accurate translation into sign language (the services provided by interpreters/translators), as well as appropriate visual and acoustic surroundings (Schick et al., 2006; Luckner and Muir, 2001, according to Radić-Šestić, 2013).

Regarding the educational possibilities of the deaf and hard of hearing students, we must emphasise that there are different opinions, primarily those held by children's parents, as well as those held by defectologists/surdologists, but also by teachers at regular schools.

The parents of hearing children usually express strong prejudice, believing that deaf and hard of hearing children would have a negative influence on their children, impede the classes, and interfere with the progress of their children. On the contrary, the parents of deaf and hard of hearing children become very cautious as they are the most familiar with their children and the possibilities and obstacles they may encounter. The main obstacle is communication and the problems of understanding written and spoken words. A large number of deaf children fluently communicate exclusively in sign language, which teachers as well as students at regular schools do not know. These obstacles in communication

prevent deaf children from acquiring knowledge and from establishing adequate relations with their peers and cause a great number of frustrations for them. Their involvement in a regular class is most often reduced to mere physical presence in the classroom, which leads to their withdrawal and some form of isolation.

Being physically present in the classroom with the peers of normal hearing does not guarantee social integration, as the communicative and social models of many deaf children are relatively limited.

Throughout the history of education, habilitation, and rehabilitation of hearing impaired children, the domination of oral (verbal) communicative method alternated with sign (gesture) method.

The studies in support of the affirmative approach to sign language point to the importance of sign language and its use as well as to the need for parallel use of oral and sign method in the form of bilingualism (Gregory et al., 1999; Spencer and Marschark, 2010; Wilbur, 2000, according to Radoman Nikolić, 2013).

The recognition and the acknowledgment of sign languages in the world resulted in the change in policy on upbringing and education of deaf children. Bilingual schools for deaf children (Neal Mahshie, 1995; Bradarić-Jončić and Ivasović, 2004, according to Bradarić-Jončić and Mohr, 2010), in which sign language has the status of the first language, whereas deaf children learn the language of the hearing surroundings as a foreign language, only emerged thirty years ago. In bilingual schools deaf children learn both languages (sign and spoken), and the teachers know both forms of expression. The evaluation of such types of education of deaf children has revealed excellent results.

A large number of deaf and hard of hearing children are educated at the so-called oral schools (regular schools). The learning of spoken language (language of the hearing surroundings) in such schools is based on the use of the remnants of hearing (alongside adequate amplification – hearing aids and cochlear implants). The oral approach in the education of deaf children has increased in importance with the emergence of cochlear implants (Bradarić-Jončić and Mohr, 2010).

The recognition of sign language as the language of choice in the community of the deaf is the first necessary step towards the integration of the deaf. This recognition should be accompanied by the corresponding rights for the sign language users, such as the right of free choice between oral and bilingual school systems, introduction of sign languages as a communication channel into general and vocational education, and the adoption of practical measure for the provision of full participation of the deaf minority in the community. This would enable the increase in the number of translators and facilitate the access to public and private services, education, and recreational and social activities, and thus contribute to the considerable improvement in the quality of life and human rights of deaf

people (Timmermans, 2003). Education is one of the main paths towards personal development and self-fulfilment, as well as towards the labour market and integration into society. Effective efforts taken towards the inclusion of persons with disabilities in the education system may prevent many mechanisms of exclusion which the persons with disabilities would otherwise encounter later in life.

The members of minority communities (the community of the deaf) and the members of majority communities do not have equal opportunities for achieving social and economic status (education, employment, earnings, advancement at work). Due to the low level of language knowledge, inadequate educational and rehabilitation programmes, inaccessibility of higher education, and unavailability of vocational choice, deaf persons, especially those in underdeveloped countries, often complete their education at a level lower than the one matching their true potential (Lane, Hoffmeister and Bahan, 1996).

The recommendations for the development and protection of national sign languages and provision of education of deaf children in sign language have been cited in several important international documents: Salamanca Statement (UNESCO, 1994), the UN Standard Rules on the Equalization of Opportunities for Persons with Disabilities (1994), and the Parliamentary Assembly Recommendation on the Protection of Sign Languages in the Member States of the Council of Europe (2003).

The mentioned documents state that sign languages are an expression of European cultural heritage, so the member states of the European Union should be encouraged to officially recognize their own sign language as the language of minority, to train and educate teachers, translators, and interpreters of sign language, to educate the deaf in sign language, to broadcast TV programmes in sign language, to inform the deaf of their rights and opportunities of using sign language, to provide financial support for publishing literature for learning sign language, and to officially allow the deaf children's parents to choose between oral and bilingual approach to education (Bradarić-Jončić and Mohr, 2010; Išmiragić, 2012).

What is important for communication with deaf and hard of hearing persons is the equal access to information, such as the one the persons who can hear have – *equal access to information* at all public events (Bradarić-Jončić and Mohr, 2010; Išmiragić, 2012). It should be ensured that the translation is provided for the deaf persons who use sign language; for those who use written languages, subtitling of texts in national sign language should be provided; for persons who prefer lip reading in combination with listening, the support from a speaking (oral) interpreter is necessary. Optimal conditions for the reception of acoustic information, e.g. by means of FM (frequency modulation) systems in classrooms with hearing impaired children or an inductive loop at public places, should be provided for the hard of hearing persons.

One of the factors which may have an effect on the long-term success of deaf and hard of hearing students is the educational environment, i.e. the type of school which the child attends (regular or special school). The individual approach to a deaf and hard of hearing student, the adapted teaching method, support from a defectologist, and communicational, audiological, and family factors may affect the student's performance at school (Convertino et al., 2009; Radić-Šestić, 2013; Kovačević and Radić-Šestić, 2014).

*Education and upbringing of the deaf and hard of hearing in Serbia* – The education system in Serbia includes (according to the Law on the Foundations of the Education System) *preschool education* (preparatory educational programme is compulsory for all children aged from five and a half to six and a half), *primary education* for children aged from six and a half to sixteen, and *secondary education*, which is not compulsory. *Preschool education* of deaf and hard of hearing children takes place in regular preschool institutions with other hearing children, in developmental groups within regular preschool institutions, and in preschool groups within the specialized schools for deaf and hard of hearing students.

*Primary education* of deaf and hard of hearing students is organized in the form of: special schools for deaf and hard of hearing students; special departments for deaf and hard of hearing students within regular schools; and inclusion of deaf and hard of hearing students in regular schools and regular classes (Kovačević and Radić-Šestić, 2014).

The aims and objectives of teaching programmes in primary schools for the deaf and hard of hearing are identical to the aims and objectives of regular teaching programmes. Due to the special functioning of the deaf and hard of hearing, specific aims and tasks are also fulfilled through teaching programmes at schools for the deaf and hard of hearing.

Specific aims and tasks involve the instruction of deaf and hard of hearing children on how to use all the remaining undamaged senses in the process of education and socialisation, mobilise all compensatory mechanisms and physiological potentials in order to overcome secondary consequences of the primary impairment, and develop working habits for the purpose of professional qualifications, as well as the education of the family and the wider environment on the opportunities and abilities for this population.

Bearing in mind the specific nature of the consequences of the primary impairment, special principles, methods, and teaching resources and aids are applied in teaching. Apart from the required courses taught at regular primary schools, the curriculum in schools for the deaf and hard of hearing also includes specific subjects which form a constituent part of extracurricular activities, such as listening and speaking exercises and phonetic rhythm. In addition to the specific nature of the courses taught, there are also certain exceptions as regards the number of classes. The

curriculum which defines the content of certain subjects is specific as compared to regular schools (Kovačević and Radić-Šestić, 2014).

There are substantial individual differences between deaf and hard of hearing students in relation to chronological age, the level of hearing impairment, the time when the hearing impairment occurred, speech and language status, adequate rehabilitation treatment, and the support from the family and the environment. When choosing the volume of content and teaching methodology, individual skills and capabilities of deaf and hard of hearing children should be taken into account.

According to its complexity and volume, the content of the curriculum is adjusted to psychophysical, primarily cognitive and speech and language skills and capabilities of deaf and hard of hearing students. Special attention is given to classes with students with multiple disabilities, who are primarily hearing impaired, but whose development is also impeded by other disabilities (e.g. intellectual disability, physical disabilities, or visual impairment). Tutoring accompanied by individual work prevails in such classes so that the abilities and capabilities of students with multiple disabilities could be tracked.

Nowadays, the application of traditional teaching models with the frontal form as the most frequent form of passing knowledge prevails in teaching deaf and hard of hearing students (Kovačević, 2000). The main weaknesses of traditional teaching methods are: verbalistic character, scarcity as to the applied forms and methods of work, and passive (memory-based and reproductive) role of students.

The analysis of the existing organization and implementation of the teaching process of hearing impaired students (Kovačević and Maćešić-Petrović, 2008) has revealed that the teaching is strictly limited by the curriculum and focused on implementation through clearly defined segments, subjects, and units. There is inadequate connection of acquired knowledge, skills, and abilities in relation to the subjects. Traditional forms of teaching prevail, primarily the frontal method of teaching including the dialogue method and lecturing. The analysis of the existing special education of hearing impaired students also shows that teaching is mostly oriented towards speech and language development, that a lot of time is dedicated to the production of sounds and the adoption of isolated terms, and that little attention is given to the learning techniques and acquisition of knowledge from the social surroundings.

### *CONCLUSION*

The method of communication which deaf and hard of hearing children will use and develop largely depends on whether they come from a family of deaf or hearing parents. Nevertheless, throughout schooling and their stay in boarding school, the children study and learn sign language



from one another. Despite the above-mentioned shortcomings, it significantly facilitates understanding, studying, and learning. We believe that in certain situations even the so-called oral children – deaf children who primarily use oral speech in their communication and have managed to learn it – must be given explanations in sign language. Accordingly, the training of teachers in regular schools as well as of sign language interpreters and translators should be promoted. It is also important that the parents be given freedom to choose the oral or bilingual approach to education depending on the abilities of their children.

### REFERENCES

- Ann, J. (2006). *Bilingualism and language contact*. Oxford: University Press
- Baynton, C.D. (1996). *Forbidden Sign: American Culture and the Campaign against Sign Language*, University of Chicago Press.
- Baker, C. & Cokely, D. (1980). *American Sign Language: A teacher's resource text on grammar and culture*. Silver Spring, MD: T.J. Publishers.
- Bradarić-Jončić, S. and Mohr, R. (2010). Uvod u problematiku oštećenja sluha [Introduction to Hearing Impairment]. *Vjesnik bibliotekara Hrvatske*, 53(2), 55-62.
- Brajović, Lj., Matejić-Đuričić, Z., Radoman, V. and Brajović, A. Z. (1997). *Sluh i slušna oštećenja [Hearing and Hearing Impairments]*. Beograd: Zavod za udžbenike i nastavna sredstva.
- Bugarški, R. (1996). *Uvod u opštu lingvistiku [Introduction to General Linguistics]*. Beograd: Čigoja štampa XX vek.
- Carney, A.E. and Moeller, M.P. (1998). Treatment efficacy: Hearing loss in children. *Journal of Speech, Language, and Hearing Research*, 41, 61–85.
- Cole, E. & Paterson, M.M. (1984). Assessment and treatment of phonologic disorders in the hearing-impaired. In J. Castello (Ed.), *Speech disorders in children* (pp. 93-127). San Diego: College-Hill Press.
- Convertino, C. M., Marschark, M., Sapere, P., Sarchet, T. & Zupan, M. (2009). Predicting academic success among deaf college students. *Journal of Deaf Studies and Deaf Education*, 14(3), 324-343.
- Dimić, D.N. (1996). *Specifičnosti u pisanju slušno oštećene dece [Writing particularities of the hearing impaired children]*. Beograd: Defektološki fakultet.
- Dimić, N.D., Kašić, Z.N. and Kovačević, T.R. (1999). Specifičnosti upotrebe otvorene klase reči u jeziku gluve i nagluve dece [Particularities of the Use of Open-Class Words in the Language of Deaf and Hard of Hearing Children]. In: Dani defektologa Jugoslavije, januar, Novi Sad.
- Dimić, N. (2002). *Metodika artikulacije [Methodology of Articulation]*. Beograd: Centar za izdavačku delatnost, Defektološki fakultet.
- Dimić, D. N. (2003). *Govorno – jezički deficiti kod gluve i nagluve dece [Speech and Language Deficiencies in Deaf and Hard of Hearing Children]*, Beograd: Društvo defektologa Srbije i Crne Gore.
- Dimić, N., Polovina, V. and Kašić, Z. (2009). O Srpskom znakovnom jeziku [On Serbian Sign Language]. *Beogradska defektološka škola*, 1, 1-28.
- Eilers, R.E. & Oller, D.K. (1994). Infant vocalizations and the early diagnosis of severe hearing impairment. *Journal of Pediatrics*, 124, pp. 199–203.
- Encyclopaedia of Disability (2006). Ed. Albercht, G.L., Sage Publications.
- Encyclopaedia of Disability (2006). Ed. Albercht, G.L., Sage Publications.

- Fry, D. B. (1966). The development of the phonological system in the normal and the deaf child. In F. Smith & G. A. Miller (Eds.), *The genesis of language*. Cambridge, MA: MIT Press.
- Gallaudet Encyclopaedia of Deaf People and Deafness (1987). Ed. Van Cleve, J.V., McGraw-Hill Book Company, USA.
- Grosjean, F. (1992). The bilingual & the bicultural person in the hearing & in the deaf world. *Sign Language Studies*, 77(1), 307-320.
- Grosjean, F. (1996). Living with two languages and two cultures. In Paransis, I. (Ed.). *Cultural and Language Diversity and the Deaf Experience*. Cambridge: Cambridge University Press.
- Humphries T., Kushalnagar P., Mathur G., Napoli D., Padden C., Rathmann C. and Smith S.R. (2012). *Language acquisition for deaf children: Reducing the harms of zero tolerance to the use of alternative approaches*. *Harm Reduction Journal*, 9 (1), 16.
- Ivasović, V. (2002). Psihološke implikacije kohlearne implantacije [Psychological Implications of Cochlear Implantation]. *Suvremena psihologija*, 5, (1), 85-104.
- Isaković, Lj. and Kovačević, T. (2009). Neke specifičnosti semantike kod gluvih i nagluvih učenika [Some Particularities in the Semantics of Deaf and Hard of Hearing Students], In: D.Radovanović (Ed.): *Istraživanja u specijalnoj edukaciji i rehabilitaciji*, [Research in Special Education and Rehabilitation], (pp. 313-331). Beograd: Univerzitet u Beogradu, Fakultet za specijalnu edukaciju i rehabilitaciju.
- Išmiragić, A. (2012). Humane pretpostavke inkluzivnog obrazovanja učenika oštećenog sluha [Humane Assumptions of Inclusive Education of Hearing Impaired Students], *Život i škola*, 27 (1), yr. 58, pp. 94-103.
- Kašić, Z. (2003). *Fonetika*, udžbenik za studente Defektološkog fakulteta [*Phonetics*, a textbook for the students of the Faculty of Defectology]. Beograd: Defektološki fakultet.
- Klima, E.S. and Bellugi, U. (1979). *The signs of language*. Cambridge, MA: Harvard University Press.
- Kovačević T., Dimić N. and Isaković Lj. (2013). Znakovna i govorna komunikacija dece predškolskog uzrasta sa slušnim aparatima i kohlearnim implantom [Signing and Verbal Communication of Preschool Children with Hearing Aids and Cochlear Implants], In: M. Gligorović (Ed.). *Novine u specijalnoj edukaciji i rehabilitaciji*, *Tematski zbornik radova*, (pp. 361-381). Beograd: Univerzitet u Beogradu, Fakultet za specijalnu edukaciju i rehabilitaciju.
- Kovačević, J. (2000). *Oblici nastavnog rada u školovanju gluvih*. Beograd, DDSCG.
- Kovačević, J. and Maćešić-Petrović, D. (2008). Efekti interaktivne nastave u obrazovanju dece oštećenog sluha [Effects of Interactive Teaching in the Education of Hearing Impaired Children]. *Pedagogija*, LXIII (3), 456-464.
- Kovačević, J. and Radić-Šestić, M. (2014). *Pristupi u obrazovanju gluve i nagluve dece* [Approaches to the Education of Deaf and Hard of Hearing Children]. Beograd: Univerzitet u Beogradu, Fakultet za specijalnu edukaciju i rehabilitaciju, CIDD.
- Kristal, D. (1996). *Kembrička enciklopedija jezika* [The Cambridge Encyclopaedia of Language]. Beograd: Nolit.
- Lane, H., Hoffmeister, R. and Bahan, B. (1996). *A journey into the Deaf-World*. Down Sign Press: San Diego, (CA).
- Lillo-Martin, D. (1999). Modality effects and modularity in language acquisition: The acquisition of American Sign Language. In W. C. Ritchie and T. K. Bhatia (Eds.), *Handbook of child language acquisition* (pp. 531-67). New York: Academic Press Alexandria, VA: National Association of State Directors of Special Education.

- Lynch, M.P., Oller, D.K. and Steffens, M. (1989). Development of speech-like vocalizations in a child with congenital absence of cochleas: The case of total deafness. *Applied Psycholinguistics*, 10, 315-333.
- Most, T. (2003). The use of repair strategies by deaf children using sign language and spoken language. *The American Annals of the Deaf*, 148, 308-314.
- Most, T. (2004). The effects of degree and type of hearing loss on children's performance in class. *Deafness and Education International*, 6(3), 154-166.
- Oller, D.K. (2006). Vocal Language Development in Deaf Infants: New Challenges. In E.P. O'Rourke, T.J. (1975). National Association of the deaf communicative skills program. *Program for the Handicapped* (Publication No. 75-2, pp. 27-30). Washington, DC: Department of Health, Education, and Welfare, Office for Handicapped Individuals.
- Ostojić, S. (2004). *Auditivni trening i razvoj govora nagluve dece [Auditive Training and Speech Development of Hard of Hearing Children]*. Defektološki fakultet, Beograd.
- Ostojić, S. Đoković, S., Mikić, B. and Mikić, M. (2011). Kohlearna implantacija (u Srbiji i svetu) – istorijski razvoj [Cochlear Implantation in Serbia and Abroad – Historical Development]. *Beogradska defektološka škola*, 3, 379-394.
- Radić-Šestić, M. (2013). Teškoće u obrazovanju, zapošljavanju i socijalnoj integraciji nagluvih umetnika [Difficulties with Education, Employment and Social Integration of Hard of Hearing Artists]. *Specijalna edukacija i rehabilitacija*, 12(4), 501-521.
- Radoman, V. and Nikolić, G. (2013). Uloga znakovnog jezika u unapređivanju komunikativne sposobnosti i školskog uspeha dece sa oštećenim sluhom [Role of Sign Language in the Improvement of Communication Skills and School Success of Hearing Impaired Children]. *Psihologija*, 46 (1), 77-91.
- Savić, Lj. (1986). *Metodika učenja govora gluve dece [Methodology of Teaching Speech to Deaf Children]*. Beograd: Zavod za udžbenike i nastavna sredstva.
- Slavnić, S.S. (1996). *Formiranje govora kod male gluve dece [Formation of Speech in Young Deaf Children]*. Beograd: Defektološki fakultet.
- Singleton, D. (2007). *Second language acquisition*. Multilingual matters Ltd, Clevedon, Buffalo, Toronto.
- Spencer, M. Marschark (Ed.). *Advances in the Spoken Language Development of Deaf and Hard-of-Hearing Children*, Oxford University Press.
- Stokoe, W.C. (2001). *Language in hand*. Washington, DC: Gallaudet University Press.
- Timmermans, N. (2003). *Report: A Comparative Analysis of the Status of Sign Language in Europe*. Strasbourg: EU Council.

## **КОМУНИКАЦИЈА ГЛУВИХ И НАГЛУВИХ- МОГУЋНОСТИ И ОГРАНИЧЕЊА У ОБРАЗОВАЊУ**

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### **Резиме**

Потреба за споразумевањем стара је готово колико постоји и човек. Са развојем људске заједнице развијана су и усавршавана различита средства споразумевања.

Стандардни начин комуникације међу људима је говор. Међутим, услед различитих проблема и немогућности успостављања адекватне комуникације, честа је употреба писаног говора али и покрета руку, лица и целог тела.

Услед оштећења слуха јављају се тешкоће у усвајању свих аспеката језика и глуве особе се тешко прилагођавају језичком систему особа које чују. Услед тога настају многи језички дефицити и тешкоће, који доводе до отежане или онемогућене комуникације и отежаног стицања знања. Глува деца развијају друге форме комуникације.

Језик се може реализовати путем говора, писаног или знаковног језика. Они представљају равноправне начине језичке комуникације и у различитим условима могу замењивати један други.

Иако је у прошлости било распрострањено схватање да знаковни језик и није језик и да као такав не заслужује систематско проучавање, знаковни језици су данас равноправни са осталим језицима у свету. Познато је да имају своју граматику, лексику и синтаксу. Они су први језик глувих особа.

Дете које чује учи говор претежно слушањем, а глуво дете мора да користи више сензорних улаза: слух, вид и покрет. Глуво формира и учи свој говор преко појачаног утицаја споља и само на тај начин га може усвојити и савладати.

Постоји велика разлика између писаног језичког израза глуве и наглуве деце и деце која чују. Многа истраживања показала су велико заостајање деце оштећеног слуха у развоју писаног изражавања у односу на децу која чују а која су много млађа. Упркос томе, писани говор је за децу оштећеног слуха значајан аспект комуникације.

Дуго година се, у свету и код нас, расправља који модел образовања ће бити најуспешнији и највише допринети адекватним постигнућима и усвајању знања. Извршено је пуно различитих истраживања која имплицирају и различите закључке. Њихов циљ би био изналажење нових начина укључивања деце са специфичним потребама у све врсте васпитно-образовних процеса.

Када говоримо о могућностима школовања глуве и наглуве деце морамо нагласити да постоје различити ставови, пре свега родитеља деце, затим дефектолога-сурдолога, али и наставника у редовним школама.

Родитељи деце која немају сметње најчешће имају велики број предрасуда и страхова. Родитељи глуве и наглуве деце, такође су веома обазриви, јер је главна препрека комуникација њихове деце и проблем разумевања писане и усмене речи. Велики број глуве деце флуентно комуницира искључиво путем знаковног језика, који наставници у редовним школама, али и ученици не познају. Те препреке у комуникацији онемогућавају, како стицање знања, тако и успостављање адекватних вршњачких односа и стварају велики број фрустрација глувом детету. Његов боравак у редовном одељењу најчешће се своди само на пуко присуство у учионици, што доводи до повлачења у себе и неке врсте изолације.

Пуно је још увек отворених питања. Нека од њих су и колико и како различити начини комуникације утичу на образовање глуве деце, али и које су то предности и ограничења када се деца школују у инклузивним условима, а шта им пружају специјалне школе.

Наша даља истраживања биће усмерена у правцу тражења одговора и изналажења најбољих решења за глуве и наглуве.