

Methodology in the Study of Inclusion of the Deaf and Hard of Hearing in the Slovenian School System

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Introduction: Research topics

The Curriculum Relation Model revised in 2006 (Johnsen, 2007) is used as a framework for classroom studies, analyses and comparisons. The topic frame factors in the project are communication, pupil, care, assessment, intention, content, methods and organisation.

The Slovenian contribution to the international research project *Comparative Classroom Studies towards Inclusion* (WB 04/06) focuses on investigating the following research topics selected in relation to frame factors: communication, pupil, care and knowledge of inclusive practices. Our intention is to 1) give a description of the social care of persons who are deaf or hard of hearing and their communication and social-emotional well-being and 2) try to define main aspects of a positive inclusion process in Slovenia.

The relation between research topics and development towards the inclusive school: Research design - informants - research methods

The paradigm of the education system and schooling for children with special needs has changed due to raised awareness and respect for the rights of every human individual. In this connection education of the deaf and hard of hear-

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ing population has significantly changed. This is a particularly deprived group with special needs that encounters many problems in acquiring knowledge and having access to professional education and employment due to communication problems. At the same time this is a very heterogeneous group when it comes to their hearing remains as well as when during their life time their hearing began to deteriorate. Furthermore, their immediate as well as extended social context may either enhance or inhibit these individuals in their communication development and, consequently, in their realisation as social beings. Our research is based on the following methodological considerations:

Research design. Logically, our contextual problem leads to the use of a combination of quantitative and qualitative research design, also called a mixed methods approach.³ We mostly use non-experimental and experimental methods and in certain parts case study. The study is descriptive, describing characteristics of the deaf and hard of hearing population in detail, because this is important in our Slovenian educational process. Understanding what it means to be deaf or hard of hearing is also an important goal of our qualitative research. Case studies help understanding each instance of deafness on its own terms and in its own context. Understanding the deaf culture and development of deaf and hard of hearing participants is essential to figure out in what ways human development within different communities are similar, and in what ways they differ (Rogoff, 2003). Having acquired this valuable knowledge about opinions, attitudes and practices, we want to inform educational policymakers and start initiatives to improve existing educational conditions for pupils who are deaf or hard of hearing.

Informants. The focus in our studies is on deaf and hard of hearing individuals, who are our main informants. The research is divided into several studies where the sample of informants varies depending on which aspect is being covered (communication, comprehension of speech, socialisation, social emotional well-being, care, inclusion, etc.). In the study of communication and speech comprehension, there are 91 deaf and hard of hearing individuals from 5 to 23 years of age. In the study of socialisation, intercultural communication and self-esteem, there are 102 deaf and hard of hearing individuals from 15 to 23 years old. The sample for comparison of deaf and hard of hearing with hearing peers includes 130 adolescents. They are split into two groups with the method of equal pairs established on the basis of gender, age, form and programme of schooling and nationality. The sample group is also divided into two subgroups; 65 deaf

and hard of hearing adolescents and 65 hearing adolescents. The research study focusing on the inclusion process involves 67 teachers as informants.

Research methods. A cross-sectional study using qualitative and quantitative methods has been decided. We have designed different kinds of studies that cover the main topics of research and planned to take samples from our main groups of informants. We have selected samples that in certain cases represent a defined population of deaf and hard of hearing informants and in addition informants in case studies. We will collect all data and analyse them utilising different procedures and statistical techniques related to educational research. Thus, multivariate methods such as factor analysis, discrimination analysis and regression method are used.

Brief description of the studies' context and completion

Following the doctrine, the school system in Slovenia has changed significantly in recent years, aiming to increase educational quality and ensure the right to education for people with special needs. Persons with different types and levels of impairments have been integrated into the regular school system, including persons who are deaf or hard of hearing. Children who are deaf and hearing children have the option to attend different units in the Slovenian school system; mainstream schools and nursery schools, schools offering adapted programmes, units at mainstream schools with adapted programmes and units at special institutions. A large majority of children who are deaf and hard of hearing attend mainstream schools where they are provided with additional professional assistance as determined by a counselling commission. Some children who are deaf and hard of hearing still attend special institutions; some of them have one or more additional impairments besides their main disability (hearing loss), and some mainly use sign language as their first language. The world of the deaf is a small world living within the hearing world, and they situate their own specific world with their own culture and language. We are obligated to understand and give them the chance to learn and live using their own language, even though for some it is sometimes very difficult to understand that people can use other language codes to communicate with each other than oral language.

As the efficiency of the social care system increases when it comes to individual satisfaction and professional and personal realisation, communication and social network – all life-aspects that are developed during adolescence – it is

considered reasonable to study the school system at the secondary level of education. Our goal is to obtain reliable data from deaf and hard of hearing persons who can inform us about what deafness means and how persons who are deaf and hard of hearing can live within the hearing community. In fact, we all know that human beings learn from their cultural community even before birth, and language learning is also supported by biological and cultural features of human life giving infants opportunities to hear or see their native language and begin communicating with those who use it. Healthy human infants are equipped with ways of achieving proximity to and involvement with other members of society, imitating others and protesting when being left alone (Rogoff, 2003).

As mentioned, the deaf population is very heterogeneous, and we have to clarify when talking about deafness as a general phenomenon and when dealing with individuals with their different kinds of hearing loss; those who use hearing aids to communicate efficiently with hearing persons, and those who do not as well as those who use sign language as their main language. This is why our research is based on the three main aspects mentioned above; 1) speech comprehension and communication, verbal and non-verbal intercultural communication, 2) socialisation emphasising self-esteem and 3) the inclusion process from teachers' perspectives. These topics are also parts of broader investigations within two doctoral studies (Kogovšek, 2007; Ozbič, 2007), and due to this, the sample is not always the same. The objective is to answer the research questions through combining the different aspects. We have chosen as large population in Slovenia as possible (the adolescent group covers all deaf and hard of hearing students except at-risk groups, persons who do not attend schools and/or have additional and complex needs) in order to analyse and clarify the scope of the inclusion process. In addition we have several single case studies with individuals in inclusive settings.

Analysis

The main categories of analysis are: organised social concern for deaf individuals as a system and the practical implementation of this system, including the status of the deaf individual in an inclusive school, communication and knowledge, readiness of the hearing environment to offer support, as well as the school's didactic and technical equipment, as indicated above. The analysis is based on findings related to the following research questions:

- What kind of communication mode is used in the classes?
- How does the communication take place (verbal and non-verbal) between teacher and deaf pupils, between hearing and deaf peers, etc.?
- What knowledge does the teacher possess of deafness and hard of hearing?
- Which teaching methods are used in teaching pupils who are deaf or hard of hearing in special- and mainstream schools?
- Are persons who are deaf or hard of hearing invited to communicate verbally and/or non-verbally?
- What are the concrete barriers to effective communication and why?
- Can we predict speech comprehension of pupils who are deaf or hard of hearing?
- To what extent are pupils' immediate environment -family and peers – and teachers ready to respond to the communication challenges with which deaf pupils are confronted?
- What does the socialisation of and the self-concept and self-esteem of pupils who are deaf and hard of hearing look like?
- What kind of support do pupils who are deaf and their teachers need?
- What are the resources, barriers and dilemmas in schools where pupils who are deaf and hard of hearing are mainstreamed?
- What are the resources, barriers and dilemmas concerning inclusion?

We have analysed the existing records and legislation applying questionnaires, checklists, tests and video-clips. For this purpose, the existing scales and questionnaires which were used in similar studies within the WB 04/06 project were applied or they were compiled for the purpose of this research. The following tools have been used in relation to the different areas of study:

The school system:

- Document analysis of current legislation (*Zakon o usmerjanju otrok s posebnimi potrebami*, 2004), determining the education of deaf children from the point of view of fundamental children's rights principles (UNESCO, 1994; 2004; UNICEF, 2000)
- Assessment of the inclusion for pupils who are deaf or hard of hearing in different types of programmes through analysis of social records

The support system for pupils who are deaf and hard of hearing:

- The descriptions are acquired through analysis of regulations and current state of affairs

Knowledge status of deaf student in view of prescribed curriculum in mathematics and Slovene language:

- The description has been obtained through testing objective type tasks (official and unofficial tests) (Košir, 1998)

Didactic and technical school equipment:

- Assessment through questionnaires (Kogovšek, 2002; Ozbič & Žolgar, 2007)

Communication:

- Verbal and non-verbal communication of the deaf student assessed with video observations and checklists (Ozbič, 2007; Kogovšek, 2007; Kogovšek, Ozbič & Košir, 2009), through interview and questionnaires (Ozbič, 2005; 2007)

Social-emotional well-being:

- Self-concept of the deaf assessed with questionnaire (Kogovšek, 2003; 2004; 2007)
- Basic risk factors for health and socialisation assessed through questionnaire (Kogovšek, 2003; 2004; 2007; MKF, 2006)

Other items regarding methodology. Parts of the information are obtained by examining laws and analysing existing records. Other findings are revealed through concrete questions posed to a selected group of 15–25 deaf students included in the secondary school along with hearing peers, and to a group of 15–25 deaf students in classes for pupils only, who are deaf and hard of hearing. Thus, the respondents are mostly pupils, their teachers and peers of different age groups at the secondary level who, as mentioned, constitute the sample. Focus is mainly on adolescents for reasons already described. There is, however, an additional research-pragmatic reason related to communication possibilities in the sample, because some of the informants use sign language as their first language, some use speech and others both communication modes. This communication aspect is a challenge for all of us, and from the point of view of the study, we find this to be a very important aspect for academic success of the target pupils. In this particular study, we have also observed several informants who are deaf and hard of hearing and in this way increased the possibility for generalising the data. However, still we have to be careful making generalisations because the deaf population is very heterogeneous. The research project is the first of its kind in Slovenia and provides an excellent basis for further studies.

Research ethical considerations

Our study mostly involves data collection from human participants, and it is therefore important to be very careful when we plan, design and implement the field studies in order to protect all participants from possible harm (Gall, Gall & Borg, 2003). In this study it is of specific importance to protect the well-being and self-esteem of the informants who are deaf or hard of hearing and their comparison with hearing peers. All questionnaires have been sent to institutional review boards at schools and university, and we have received approval of our research from medical and ethical commissions. The question of confidence is the first ethical question we have considered in this research process, as it may be difficult to gain confidence of individuals with hearing loss. All participants are requested to give their permission to be involved in the study, their names are kept anonymous, and they are informed about the purpose of the investigation and their role in it (especially in comparison with hearing peers).

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