OBSERVING CLASSROOM PARTICIPATION OF A STUDENT WITH A COCHLEAR IMPLANT IN MAINSTREAM SETTINGS

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A cochlear implant is a small, complex electronic device that can help to provide a sense of sound to a person who is profoundly deaf or severely hard-of-hearing. Cochlear implantation may open the door to educational choices that parents may not have previously considered making. Children with CI can be educated in mainstream settings. We conducted a single case study investigating the qualitative aspects of the inclusion process of a child with a cochlear implant in a mainstream school in Republic of Macedonia. Our intention was to give a description of the life and events in the inclusive classroom and to determine the social implications of the disability. This was an original study, the first one of its kind in our country. We believe that this study gave precious and valuable findings about the manner of administration of the process of inclusion of the children with a cochlear implant in the regular schools. Because this was an action research it resulted with the development of an action plan or as we called them - strategies for working with children with cochlear implants in the inclusive schools. These work strategies were recommended to the teachers that work with our examinee but they are also available to the general population.

Keywords: inclusion, cochlear implant, participation, action research, case study

This longitudinal study was conducted in the frames of a West Balkan project study called “Comparative classroom studies towards the inclusive schools” in cooperation between the Universities in Oslo, Belgrade, Ljubljana, Tuzla, Saraevo, Skopje and Zagreb. The title of the Macedonian project was “A child with a cochlear implant within the inclusive classroom”.

How do we define inclusive education?

Inclusive education is not integration and is not concerned with the assimilation or accommodation of discriminated groups or individuals within existing socio-economic condition and relations. It is not about making people as ‘normal’ as possible. This is radical conception, not satisfied with piecemeal, short-term reforms.

It is ultimately about transformation of a society and its formal institutional arrangements, such as education. This means changes in the values, priorities and policies.

Inclusion is technically simple, but socially complex. The complexity of inclusion is fundamentally related to the reality of schools and other educational environments-to the dimension of inclusion called 'culture'. So, we define inclusion as transformation of:

- Us;
- Schools;
- System;
- Societies (Jachova, 2004).

We mean that inclusion is:

- More than "being there";
- Taking part;
- Valued for what you are;
- A process, not a state;
- Involving everybody;
- Efficient and effective;
- More than integration;
- Participation and learning;
- Identifying barriers in and out of school;
- Mobility and human resources;
- Network;
- Partnerships.

Inclusion is beyond doubt an ambiguous and multidimensional concept. On one side inclusion is taken in a very broad sense-as a new principle, which is the base for the cohesion of postmodern society. On the other hand, inclusion is understood as an intervention model towards socially excluded groups.

The importance of cochlear implantation in relation to inclusive education

Cochlear implant can enable partial hearing of individuals with a significant hearing loss. Because of the improvement of the early identification and intervention, a large number of children will be included in the mainstream schools. The different backgrounds in society terms enable the children to develop abilities for respecting different communication schemes that will enable them to make different interactions with one another (Rogoff, 2003:355-356) This point's to the fact that regular teachers should be prepared for the educational process of children with cochlear implants. The educational system in Republic of Macedonia orients towards the contemporary European standards and models of inclusive education. This is constructed thru initiation and application of innovations in the education (Jachova, 2008). The inclusive education involves identification, challenge and overcoming the barriers of participation, conditioned by the social, cultural, ideological and physical factors. Inclusion is not only connected to placement of the children with impaired hearing. In a school that moves towards inclusion, the quality education can be assured only in a educational surrounding that is friendly towards the children and the learning process, where diversity is recognized as a process for enrichment of all the individuals involved. Also the social aspects of the learning process should

be accented (Johnsen & Skjorten, 2001:23-24). According to Bartolo, Blake and Jachova (2007) there should be a good cooperation between the teachers and the parents.

Previous studies have shown that social adaptation of deaf children can be problematic; this aspect of accommodation of children with cochlear implants seeks great attention (Nevins & Chute, 1996). The inclusion of hearing impaired children in the regular educational system is an admirable goal, but it demands significantly more studies on this subject (Marschark & Lang & Albertini, 2002:58-60).

Research methodology

During the *selection of the problem* we decided on a *contextual one* with the purpose to gain information that describe the situation, the difficulties that the pupils with Cochlear implant interface in a certain context, in Republic of Macedonia.

The objective of our research project was development of new knowledge and improvement of competence about a child with a Cochlear implant through inclusive classroom studies.

We wanted *to present:*

- *Interaction between learner and environment /school;*
- *Cooperation with more competent peers.*

Definition of the research problem

"Qualitative aspects of the inclusion process of a child with a cochlear implant". Definition of the research goals

- *Aim*

"To give a description of the life and events in the inclusive classroom".

- *Objectives*

"Determination of the social implications of the disability".

"To obtain an insight of the individual differences in the teachers' approaches regarding the estimation of the respondent's abilities".

Research methods, techniques and instruments

We used a parallel model of combination of the qualitative and quantitative approach. We decided to conduct a *participative action research* which has the goal to motivate the individuals and groups to improve their lives and to contribute for a social change on some level-school, community or society. The research that we conducted was actually an action research. *The action research* is conducted by one or more individuals or groups with the purpose of solving a problem or collecting information to improve the existing practice (Creswell, 1998:36-37). To achieve maximum success, the action research should result in an *action plan* or *development of work strategies*, which in an ideal situation could be implemented and further evaluated.

Action researches are conducted by one or more individuals or groups with the purpose of solving some problem or gathering information with the purpose to improve the current practice. We decided to conduct a participatory action research. Although the participatory action research shares the focus for a specific local question and uses the data for the action implementation, it differs in some main points from the practical action research. The first difference is that it has two additional goals: to motivate the individuals and groups to improve their lives and to contribute for a

social change on some level-school, community or society. According to that, the research involves a bigger group of people that have different experience and points of view that are focused on the same problem. This involves common work on the data gathering and the data analyses, interpretation of the data and the actions that follow. Because of this moment this research is most commonly called *collaborative research.*

The participatory action research is a collaborative approach towards the research that enables the persons, means for taking systematic actions with the purpose of solving specific problems. This encourages consensual, democratic and participatory strategies with the purpose to encourage the people to explore the problems that influence them. The action researches include four main phases:

1. Identifying the research problem or question
2. Collecting the needed information to answer the questions
3. Analyses and interpretation the collected information
4. Development a plan for action or strategies of work.

This longitudinal study was actually a *case study*. A case study involves an exploration of "a restrained system" or a case over a deep, detailed data collection that involves multiple sources of information (observations, interviews, audio-visual material, documents and reports). The context of the case involves the placement of the case in the surroundings, which can be physical, social, historical and/or economical surrounding. The type of the data analysis can be a holistic analysis of the entire case or analysis of certain aspects of the case.

Some individuals believe that the "case" represents the object in the study, while others believe that it regards the methodology. The case study is actually an exploration of a closed system or a case (or more cases) in the period of a certain time, through a detailed, intensive collection of information that includes multiple sources of information. This limited system is connected in time or space and it represents the case that is studied - it can be a program, event, activity and individuals.

The focus can be directed towards the case, and it looks for an *internal case study*. The researcher that conducts the case study has a large number of texts and approaches from which the case study can be developed. Yin (1989) used the qualitative and quantitative approach towards the case study using extensive, systematic procedures for the studying.

We used the *technique* of participative observation and three research *instruments*: a check list for observation of the participation of the child with a cochlear implant within the inclusive classroom; semi structured interviews and video indicators (Angelovska-Galevska, 1998).

Informants

We decided to explore all the events connected with the school everyday life of a child with a cochlear implant within the inclusive classroom. During the research we observed a subject on the age of 12 during the first year (13 during the second year of research). The child with a cochlear implant was from the mail sex, in the fifth grade (sixth grade). The research was conducted in the elementary school "Dimo Hadzi Dimov". The phenomenon was followed during a period of three years, from 2006 till 2009.

We monitored the phenomena and the child during the school year, and we continuously analyzed that observation data in the classrooms where the teaching was held. That means that we continuously followed the progress of

the child, and we did the data summarization twice per year for each of the teaching subjects.

After every data gathering and their analyses we had instructive work with the teachers. This was conducted by specialized persons-special educators and rehabilitators. The instructive work was held after the analyses were made and the video data watched and it was consisted of suggesting work strategies with a child with a cochlear implant in inclusive environment.

In this paper we will present the results from our longitudinal study which was conducted in the period from 2006 to 2009. We gained this data with the use of the check list during the 5 realized *video shots*.

Analysis

With the purpose to make a holistic analysis of the phenomenon we were exploring we decided to make the so called *on going analysis* using the *parallel model* of combination of the qualitative and quantitative approach. Regarding the standards we made extensive verification with the use of triangulation. The *protocol for triangulation* was based on: data resources, researchers, theory and methodological issues.

The ongoing analysis was conducted in five steps: Introduction to the data; 2) Determining a theme framework; 3) Indexing; 4) Grouping and tabulation and 5) Categorization.

The research data gained from the video indicators for interaction and the check list for observation of the participation of the child with a cochlear implant was analyzed with elementary statistical procedures which were expatiated with the protocol of triangulation.

Phases of the research conducted in Republic of Macedonia

The research that was conducted on behalf of the Macedonian research team went thru the following stages of activities:

- Gaining access to the field through an official document from the relevant institutions;
- Gaining a written consent from the parents of the child with a cochlear implant;
- Gaining a written consent from the parents of the peers;
- Meeting with the Inclusive team of the school;
- Meeting with the parents;
- Pilot phase;
- Data collection with video camera and semi-structured interview;
- Data analyses and interpretation;
- Individual analyses with the teachers and instruction work;
- Joint meeting of the Project team with the teachers and parents.
- Gathering information from the five data collections by video camera;
- Five analysis and interpretations of the data material;
- Individual instruction work with the teachers after the analyses;
- Cooperation with the parents;
- Preparation of the video material for the joint meeting of the project team, the teachers and the parents.
- Analysis of the video indicators for the five shots with the purpose to observe the social interaction between the teachers and the child with a cochlear implant.

- Final workshop with the teachers and the professional team and suggesting work strategies for the child with a cochlear implant.

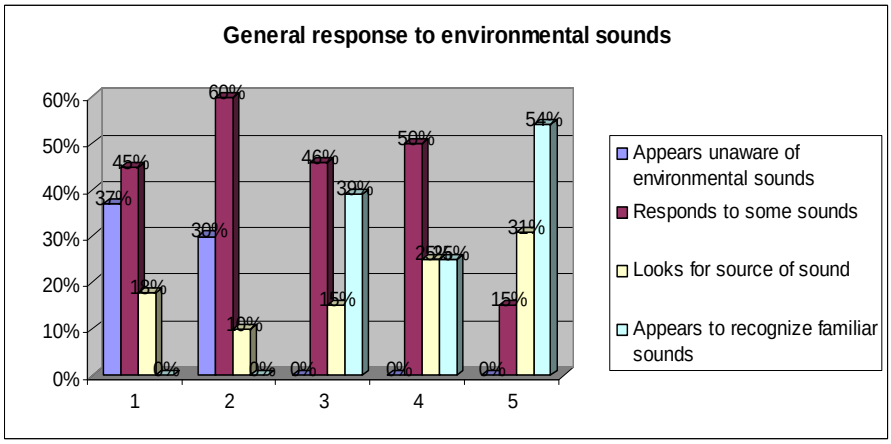
Definition of research questions:

1. What is the student's general response to environmental sounds and to speech?
2. Can the student follow directions from the teacher?
3. What is the student's typical behavior when the content is not understood?
4. What are the student's typical receptive and expressive interactions with peers?

Results

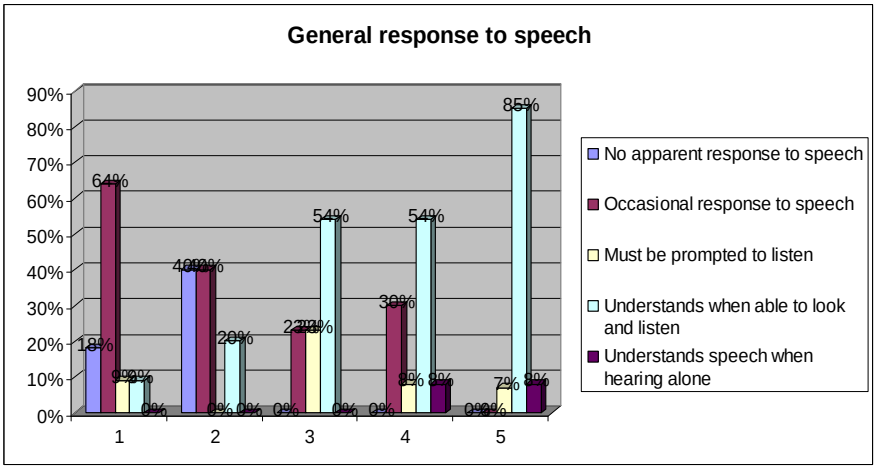
During the analyses we decided to make an extensive verification with the use of triangulation.

Table 1. *General response to environmental sounds*



In the first shot the respondent responded to some sounds in 45% of the cases. During the last shot he appeared to recognize familiar sounds in 54% of the cases and he looked for the source of the sounds in 31% of the cases.

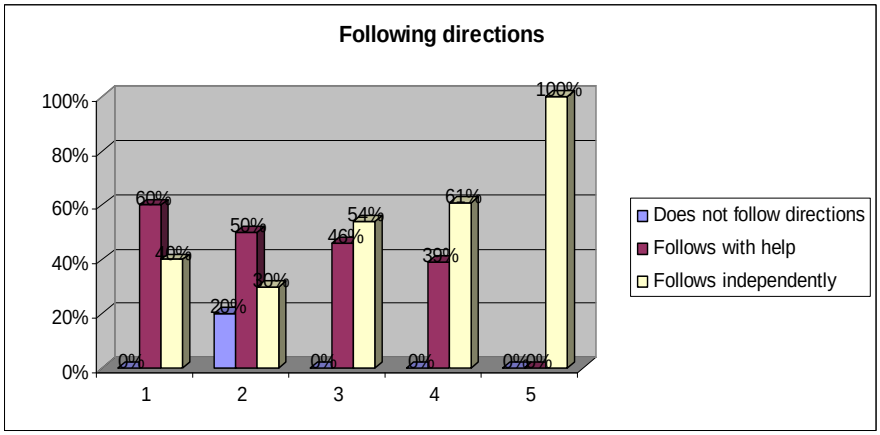
Table 2. *General response to speech*



During the first shot it is clear that there was an occasional response to speech in 64% of the cases. During the last shot we can clearly see that this

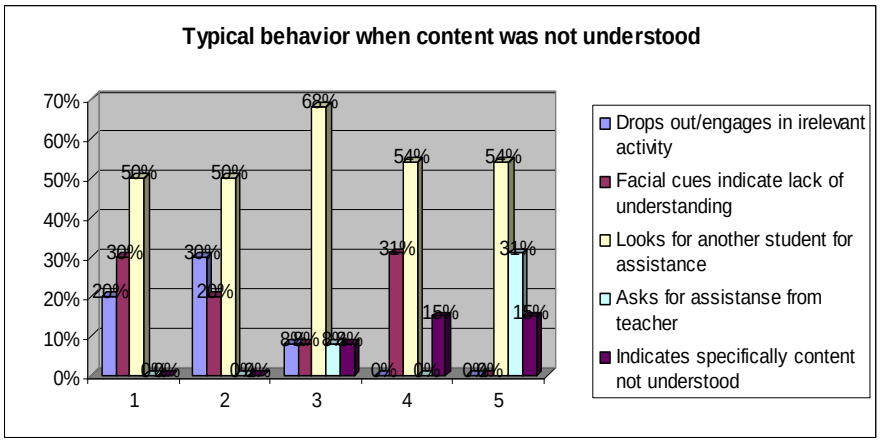
percentage is lowered to only 7%, and the child with a CI understands when able to look and listen in 85% of the cases. He understands speech when hearing alone only in 8% of the cases.

Table 3. *Following directions*



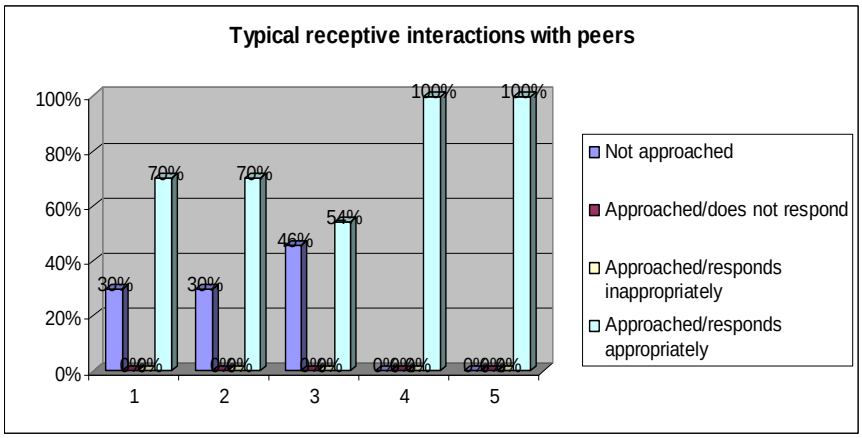
In the first shot the respondent followed directions with help in 60% of the cases but in the last shot he independently followed directions in 100% of the cases.

Table 4. *Typical behavior when content was not understood*



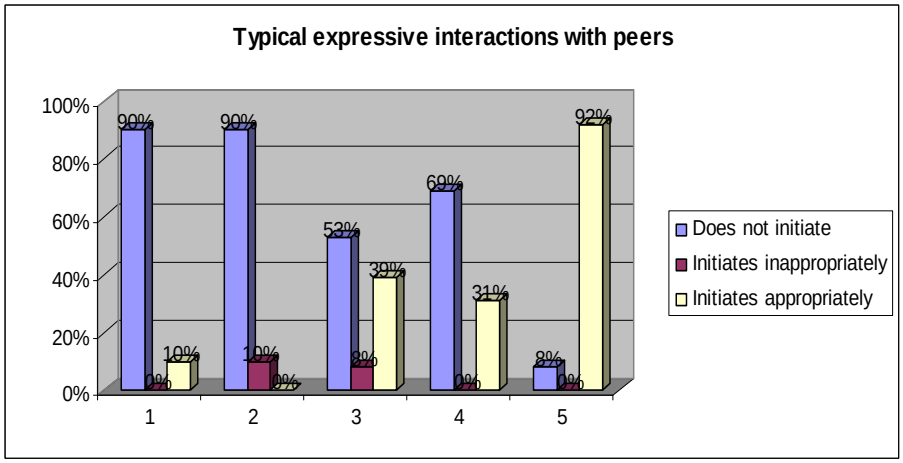
In the first shot the student looked to another student for help in 50% of the cases. In the fifth shot he asked assistance from the teacher in 31% of the cases and indicated specifically which content is not understood in 15% of the cases.

Table 5. *Typical receptive interactions with peers*



Regarding the next item on the check list – typical receptive interactions with peers we can see that in the first shot he was approached and he responded appropriately in 70% of the cases. During the last shot this percent climbed to 100%. So, during the last shot the child with CI was appropriately approached and he appropriately responded during all the classes.

Table 6. *Typical expressive interactions with peers*



Regarding this indicator – typical expressive interactions with peers, we got some lower results during the first several shots. During the first shot the respondent did not initiate interaction with his peers in 90% of the cases. During the last shot the student initiated appropriate expressive interactions in 92% of the cases.

Conclusion

During this research and the gained results we defined some strategies for working with a child with a cochlear implant as some recommendations for the teachers.

There are few things that the teachers can do with the purpose to help the children with cochlear implants to achieve success in the inclusive classroom.

- The teachers should make and implement Individual Educational Plans. Usually the IEP's are created by teams of professionals and the parent that meet twice during one year with the purpose to establish some goals for the child.
- The background noise should be reduces;
- The teachers should use the LING 6 test to establish whether the cochlear implant is on and is functional.
- The teachers should gain the auditory attention of the pupil. They shouldn't knock on the table or make hand movements to gain his attention;
- The teachers should gain the child's attention and talk face to face. The child with a cochlear implant will have difficulties to understand and hear the teacher if he/she talks with his/her back turned on the other side;
- On the blackboard, the key words, dates and home tasks should always be written.
- They should use visual demonstrations or written notes as a support of the verbal presentations;
- The teachers should expect the contribution of the child to be oral;
- The teachers should ask from the pupil to repeat or write some word or phrase that he/she didn't understand;
- The teachers should ask from the pupil to change the old words with new ones - widening of the vocabulary in different contexts;
- The teachers should repeat of paraphrase the information in a more basic form;
- The teachers should stand relatively still when they talk;
- The child should be allowed to change the sitting position if he believes that the change will contribute a better understanding of the lesson;
- If it is necessary the teachers should implement the buddy system. The buddy could help the child if he had problems during direction following, to give him information about the discussion etc;
- When the teachers talk with a child with cochlear implant they should sit on the same side where the cochlear implant is placed;
- The teachers should talk slowly when they present a new content;
- The child should be explained what follow in the discussions or the lessons;
- The teachers shouldn't rise their voice tones and they shouldn't yell;
- The teachers should give additional time to the child for a auditory processing;
- The newly learned words should be often repeated and they should give alternative words when they teach new vocabulary;
- The teachers should use notes with the purpose to help the child to follow directions;

- They should organize a meeting with the parents to explain the parts of the implant and what to do in case if some problems occur.

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