Provision of Education and Rehabilitation Support of Children with Special Needs in Regular Classrooms

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Introduction

This study attempts to explore how to develop individually adapted education for pupils with special needs in a regular school through cooperation between special educators, regular teachers and school administration.

Several studies conducted in Bosnia and Herzegovina (BiH), (Hatibović, 2002; Ibralić, 2002; Muminović, 2000; OSCE, 2001; Salihovic, 2001; Smajić, 2004) show that schools, especially at the primary level, are attended by an increasing number of children who for different reasons cannot cope with the acquisition of what they are taught. The rise in the numbers of these children is calculated to be around 4% from 1997 (UNDP, 2003). Special education needs originate from complex interactions of personal and environmental factors, and in each generation we meet individuals showing developmental traits that differ in pace, level and quality of the developmental path expected by school and more or less followed by the majority of pupils. Children generally differ in interests, learning styles and the amount of time found necessary for learning. These and other differences, such as trauma, fear, sleeplessness or physical, sensory and developmental difficulties, require different approaches and amount

of support. When taking into consideration children living in poverty, children from ethnic and language minorities as well as emotionally, socially and culturally deprived children, we may agree that these children are frequently marginalised within the education system and society in general. Each child with special needs has different learning abilities, needs and interests. Therefore the teaching process must be individualised, respecting and celebrating diversity of individual characteristics, abilities, needs and interests, and the needs of all children attending their local school together with their peers must be addressed (Johnsen, 2001; Smajić, 2004). With the aim of adjusting teaching and learning content to the potential of the pupil, it is necessary to familiarise oneself with the characteristics of the child as well as her or his current level of accomplishment. Moreover, it is important to ensure that the individual pupil's potentials are optimally used. According to national and international principles each child has the right to attend regular primary school (Okvirni zakon, 2003; UNESCO, 1991; 1994).

Contextual and theoretical background of the study

Traditionally, children with disabilities and special needs have attended special institutions and schools. Institutionalisation tended to violate elementary rights, marginalising the institutional inhabitants socially, which may have resulted in less efficient learning. In her PhD. Study Ibralić (2002) has analysed different models for treating persons with disabilities in BiH. Her findings indicate that a medical approach is still dominant. In other words, the focus is on defects, and the person with developmental difficulties is viewed as a problem. All attention is directed to the "difficulty" and "disability", and social activity is directed to alleviate the consequences of a disorder. Children are referred to "special" schools, separated from their families from early childhood, isolated from their surrounding environment and alienated from society. Consequently, they have limited possibilities to establish social contacts and learn to interact with other children.

Ibralić (2002) argues that implementing a social model in education and rehabilitation will improve the social status of children with special needs. Many countries are striving towards the termination of special educational institutions and acceptance of children with special needs as equal members of society. This is in keeping with current international principles regarding human rights. The UN Convention on the Rights of the Child (1991) states that each child has the

right to live in the circle of the family as well as the right to receive education, support and stimulation. Furthermore, the World Declaration regarding Education (UNESCO, 1991) and the Salamanca Framework for Action (UNESCO, 1994) explicitly insist on education for all children in the least restrictive environment possible and in conditions in which their needs will be met. New terminology has also been developed during recent decades. For example, the UK Warnock Report (1978, in Barton & Oliver, 1997) decided to reject the term handicap and instead apply the term 'special educational needs', and at the same time shifting the focus away from the child to the need for providing adequate support for the child. Hand in hand with changing terminology, it seems that society's attitudes towards children with special needs are changing from segregation and labelling towards an understanding of the importance of providing support in order to develop all children without exception optimally towards complete and independent citizens.

Having ratified the above mentioned UN and UNESCO documents, BiH has still not managed to realize completely all the basic conditions that they prescribe. The school system is making slow progress toward becoming a school for all, welcoming all children with and without special needs, and inclusion. Today, inclusion in BiH is partially organized by statute, meaning that primary schools are not adequately prepared to serve children with special needs. Although the Frame Statute regarding primary and secondary education in BiH (PSBH no. 59/03, 2003) has ascertained the possibility for equal participation of all children, cantonal statutes are not regulated, especially when it comes to schools' obligations to support children with special needs. Until now, these children have not received appropriate attention in all courses and activities in school, and there is insufficient cooperation between school and parents. There is very limited or no early detection of children with special needs in BiH, and there are no teams for follow-up providing support in form of early stimulation. Further, there is a lack of advanced individualised support and development of inclusive practices. Although inclusion as a principle is regulated by the above mentioned statute, questions regarding how to provide special needs education and appropriate collaboration between special needs educators or defectologists, teachers and school administration in regular classes have remained unanswered. Unfortunately, very few signs may be found regarding implementation of the principle of inclusion in teacher education, which is still carried out in a traditional fashion, through lecturing and with relatively few practical exercises and new, flexible and creative teaching methods adapted to different individual needs.

The process of identification and support for children with special needs still is not officially regulated. Although certain changes are being implemented in the education of teachers and special needs educators as well as in some schools in Tuzla, Sarajevo and other cantons of BiH, they are still partial and unsystematic (Ibralić, in press; Johnsen, 2007; Pepeljak, Hasić, Buljubašić & Smajić, in press; Salihović & Hatibović, in press; Smajić, 2004).

So, in spite of the slight improvements mentioned above, the regular school is currently not easily accessible for children with special needs. The reasons for this are many, such as lack of proper legislation, unpreparedness of the schools and teaching staff to offer adequate support, absence of expert staff, and no or little adaptation of school curricula and school buildings. Another reason may be the lack of connections between school, parents and local community. Regarded in their entirety, these conditions prevent schools from making effective efforts in addressing the individual needs of all children. However, individual curricula are in focus as regards special education, and they are one of the important factors that have contributed to the successful inclusion and increased success for children with special needs in regular school (Johnsen, 2001; 2013; Smajić, 2004). Positive interaction between teacher and pupil is another core issue. Rye (2001; 2005) discusses eight basic principles of resource-based communication and mediation promoting adequate contact with all pupils, and specifically with vulnerable pupils. No one teacher, no matter how experienced or talented, can possess all the knowledge, skills and attitude necessary for planning and practicing individually adapted education for the multitude of pupils with different educational needs.

Having pupils with special educational needs in the classroom means that special educational knowledge and skills are required. Professional special needs educators, or defectologists are necessary partners in the regular school for all, and team work and cooperation between them is a crucial requirement for success (Ferguson et al, 1998). In BiH and Tuzla canton the term "special needs" has not yet been clearly described in public documents, and it is applied mostly with a focus on children with different disabilities: mental or physical disability, sensory impairments, multiple impairments, psychosocial or language and speech difficulties (Official paper of Tuzla Canton no.7/04).

Stančić (1985) offers a description of special needs, arguing that children and youth with special educational or (re) habilitation needs are those who, for the purpose of optimal development of their intellectual and psycho-social abilities, essentially need specially adapted and individualized conditions and treatments.

The advantage of this description or definition is that the term "developmental difficulty" is avoided, and that focus is turned towards possibilities of alleviating the primary difficulty. Thus, the purpose of the concept special needs is to direct attention to the needs of pupils, asking questions such as: What are the needs of this individual child, and what kind of support has the school to offer in order to meet these needs?

Learning means operating within the framework of what Vygotsky (1978) terms the *zone of proximal development*. He describes this zone as the distance between actual developmental level determined by the ability to independent problem-solving and level of potential development determined by the ability to solve problems under the supervision of an adult or in collaboration with more capable peers. The zone of proximal development relates to functions that are still not mature but are in the process of maturation; functions that may be mastered tomorrow, but are developing within social interaction today (Vygotsky, 1978). This line of argument supports the view that teacher, classmates and educational adaptation are crucial for learning. Accordingly traditional assessment of what the pupil masters independently only presents one aspect of educational assessment. The entire spectre of influential factors related to the teaching-learning process in the classroom needs to be considered as a basis for development and revision of individual as well as class plans and programmes or curricula. Tharp and Galimore (1991) argue that teaching happens when help or assistance is given on the level or point in the zone of proximal development, on which performing a certain activity or learning task depends upon assistance.

This study is a systematic follow-up of a former international project focusing on developing individual and class curricula as a key practice of inclusion (SØE 06/02). This is an independent Bosnian study, and at the same time a contribution to a second international project entitled *Comparative Classroom Studies towards Inclusion* (Johnsen, 2013; WB 06/04).

Research topic

As argued, educational issues related to children with special needs in BiH are serious and different from one another. This study is therefore based on the following two presumptions:

- In regular classrooms one encounters children who do not cope with acquisition of traditional teaching content due to various special needs

- Children with special needs learn and develop effectively in regular settings when provided with adequate special educational support focused on their potentials.

Consequently, we suggest that planning and providing adequate support through identification of level of mastery and learning possibilities, individual education programmes, appropriate instruction and individualised assessment, represent significant steps in addressing relevant education of children with special needs in the inclusive classroom. Thus, the main goal of this research project is to explore how a school develops individually adapted education for pupils with special needs in cooperation between special needs educators, regular teachers and school administration.

Sub goals or focus areas for exploration:

1. Contextual assessment of characteristics of pupil and learning environment, playing and living inside and outside school in order to develop a profile of the pupil in the learning process
2. Development of systematic suggestions for the adaptation of an individual curriculum or plan in order to meet the pupil's needs on the basis of information collected through contextual assessment
3. Development of individual educational and/or rehabilitation program
4. Implementation of individual educational and/or rehabilitation program
5. Evaluation of the program

Thus, learning-teaching interactions related to a small number of pupils with different special needs within regular classes are investigated in this study.

Methodology; design-methods-instruments
Research design

This is an action research project with qualitative elements. The linking of the terms "action" and "research" highlights the essential features of this approach; we are trying out ideas in practice as a means of increasing knowledge about the research topic and/or improving practice.

Action research involves action (or change) and research (or understanding). Rapoport (1970) argues that the aim of action research is to contribute to understanding and solving practical dilemmas of the participants involved in the research as well as clarifying dilemmas that may appear in the research field. One

may say that action research takes place in a process that improves and shapes itself, while the understanding of a phenomenon grows. The process is cyclical, intending to increase understanding. Action research is usually participatory. The methodology is based on the assumption that changes most easily occur for those whose changes are directly involved in the process of changing, which in our case are selected teachers, special needs educators and school administration. Actual real-life situations in school are in focus of action research. Control of variables is not an issue here, but rather the issue is to explore the different aspects of the complex and continuous flow of changes in the real-life process (Dick, 1995; Armstrong & Moore, 2004). In this study, action research will provide an opportunity to 1) systematically analyse and reflect on teaching-learning processes 2) explore and test new ideas, methods, and materials 3) assess how effective the approaches have proved to be 4) share feedback with fellow team members and 5) make decisions about new approaches related to pupils, learning process, curriculum adjustment, instruction, and assessment plans.

A qualitative research approach is explorative or descriptive, assumes the value of context and searches for a deeper understanding of the phenomenon in focus of the study. According to Gall, Gall and Borg (2003), a main characteristic of qualitative research is its focus on the intensive study of specific instances that are cases of a phenomenon. The phenomenon in focus of this study is the process of providing support to children with special needs attending regular primary school.

Purposeful selection of a regular school

Preliminary studies have already been implemented in order to select one school as arena for the research. At first, we gained access to one school which seemed to fulfil our purposes for selection. However, when the school decided to withdraw from the research cooperation, we set out finding another, which is now ready to participate in our project. The selected school is a regular primary school with 841 pupils at the beginning of the study. The school meets the following criteria for selection:

- It has a large number of pupils
- It does not have a developed system of support for children with special needs at the beginning of the project
- The school director and administration are ready for cooperation
- It is an urban school

- None of the staff have been educated for working with children with special needs
- It has welcomed children with different special needs in several classes

Within the school the classes have been purposely selected in order to work with six different categories of special needs. The selection criteria are:

- Pupils of both genders
- Pupils who the teacher and project researcher assess and find to have difficulties in overcoming applied curriculum
- Classes with pupils with different special educational needs due to the categories intellectual difficulties – language and speech disorders – psychosocial / behavioural difficulties – visual or hearing impairment – mobility disabilities – chronic disease/s

The study includes pupils from first to eight grade of both genders. The selection of pupils and classes has been conducted in cooperation with class teachers, director and pedagogue. All 841 pupils participated in assessment with the following outcome regarding special needs:

- 32 pupils with intellectual difficulties
- 94 pupils with language and speech disorders
- 3 pupils with hearing impairment
- 1 pupil with behavioural disorder
- 3 pupils with mobility disorders and chronic diseases
- 36 pupils with visual impairment

The plan is to select one or two pupils from each category of special needs depending on parents' consent to their children's participation in the project on the following aspects:

- agreement to further assessment of the child
- agreement regarding development of individual educational and rehabilitation programmes
- interest concerning their child's progress

In addition to the selected pupils, parents, teachers and other relevant educators will be informants in this study.

One school, six cases and eight researchers

Through the preparatory assessment shown above, pupils with special educational needs are divided into six categories in accordance with suggested reasons for their difficulties in meeting traditional educational requirements. Each category constitutes a case. The further study will be implemented by colleagues with professional and research experience within each category or case. Each case is planned to follow a similar process through action research. Differences between the case studies relate to differences in assessment, planning and implementing within each special needs educational category.

Cases and researches

Case 1. Pupils with intellectual difficulties. Researchers PhD Fata Ibralić, Docent and M.A. Alma Dizdarević, Teaching Assistant

Case 2. Pupil with language and speech difficulties. Researches: PhD. Nevzeta Salihović, Professor and PhD. Mirela Duranović, Docent

Case 3. Pupil with hearing difficulties. Researcher PhD Husnija Hasanbegović, Docent

Case 4. Pupil with socio-emotional difficulties. Researcher PhD. Behija Čišić, Associate Professor

Case 5. Pupil with mobility disorders and chronic disease. Researcher PhD. Ajša Mahmutagić, Docent.

Case 6. Pupil with visual impairment. Researcher PhD. Dževdet Sarajlić, Professor.

Main activities

Each case is represented by one pupil in the research school who has been purposefully selected or appropriately sampled on grounds of a series of criteria. For Case 1, however, two pupils have been selected.

The next step is to implement further in-depth assessment related to level of mastery and educational resources in accordance with the different categories of special needs[33]. Data will be collected by contextual assessment through observation of the pupil in a regular class setting and by document analysis, including the pupil's works, drawings, teacher's assessment and tests of the

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33.   See list of planned assessment approaches and tests under References

pupils with scales, tests and check-lists as well as interviews with informants. The information will be gathered in a so-called pupil's profile of individual and environmental characteristics as well as with educational proposals regarding adjustment of curriculum, teaching methods and assessment, as well as rehabilitation proposals depending on particular needs. This will be carried out in cooperation between researcher, teachers and parents.

An individually adapted education plan will be developed based on gathered information. Educational objectives will be decided based on the analysis of the gathered data relevant to the pupils' needs and interests. The total range of needs; educational, social, occupational, physical, psychological and recreational; will be considered

The individual education plan will be implemented. Continuous observations of the needs and interests of the pupil in focus will be administered through team work involving teacher, pedagogue, parent, educator-rehabilitator, and other experts if needed. The voice of the pupil will be in the centre of attention. Continuous revision will take place focusing on potential objectives necessary for curriculum adaptation and for development of a support program in accordance with particular special needs.

Evaluation of the effectiveness of the individual program will be carried out. A final assessment will be performed at the end of the school year, applying the same scales, tests, checklists and other procedures that were used at the beginning of the research project, as well as by analysing the pupils' achievements in academic and other developmental domains. This information will serve as basis for a descriptive analysis of the results of this research project, and. In addition it may also serve to suggest future goals concerning:

- how to improve research work in this field
- how to improve the provision of support for children with special educational needs in regular classrooms
- how to create efficient inclusive schools

Preliminary time schedule					
January 2007	February – Jun 2007	September – October 2007	November 2007	December 2007 – Jun 2008	September 2008 –…
Assessment	Research – Treatment, support	Evaluation	Assessment	Research – Treatment, support	Evaluation

Ethical considerations

A number of ethical issues may occur at various points in an educational research process, such as in data collection, in the field related to analysis and especially regarding dissemination of qualitative reports (Gall, Gall & Borg, 2003). In this research two ethical issues have been addressed already in the preparatory phase:

- Obtaining informed consent: A formal letter with information about the research project has been formulated and addressed to the school authorities of the primary school requesting their written consent to participation
- Maintenance of privacy and confidentiality: All information about the selected pupils in the cases and their family, as well as about the school has been guaranteed strict confidentiality. Any information related to any individual may only be released with parental and school permission.

Connection between the Tuzla study and the joint comparative classroom studies towards inclusion (WB 04/06)

This study contributes to our joint international comparative study through exploring, describing and discussing six cases related to pupils with special needs in regular classes in a regular school. This research project focuses on all eight didactic-curricular main aspects for comparative analysis presented in the joint project plan (Johnsen, 2012; WB 04/06).

References

Armstrong, F. & Moore, M. (2004). *Action Research for Inclusive Education. Changing Places, Changing Practices, Changing Minds*. London: Routledge Falmer.

Barton, L. & Oliver, M. (1997). *Disability Studies: Past, Present and Future*. Leeds: The Disability Press.

Dick, B. (1995). *Session 5 – The change process and action research*. St Lucia: Bob Dick. http://www Action Research and Evaluation On-Line

Ferguson, D. L., Gudjonsdottir, H., Droege, C., Meyer, G., Lester, J. & Ralph, G. (1998). *Designing Classroom Curriculum for Personalized Learning*. Oregon: University of Oregon.

Gall, M. D., Gall, J. P & Borg, W. R. (2003). *Educational Research. An Introduction*. Boston MA: Allyn and Bacon.

Hatibović, Ć. (2002). *Kongruencija latentne structure stavova prema odgojno-obrazovnoj integraciji djece s teškoćama u razvoju*. Tuzla: Univerzitet u Tuzli. Defektološki fakultet. Doktorska disertacija. (Concord latent structure of attitudes towards the education integration of children with disabilities. Tuzla: University of Tuzla. Faculty of education and rehabilitation. Doctoral dissertation).

Ibralić, F. (2002). Adaptivno ponašanje osoba s mentalnom retardacijom. Tuzla: Univerzitet u Tuzli, Defektološki fakultet. Doktorska disertacija. (Adaptive behavior of persons with mental retardation. Tuzla: University of Tuzla. Faculty of education and rehabilitation. Doctoral dissertation).

Ibralić, F. (in press). Socio-Emotional Growth and Development of Learning Strategies. In In B. H. Johnsen, S. Zečič & M. Babić (Eds.). *Special Needs Education towards the School for All and Inclusion – Specijalno obrazovanje prema škoiza za sve i inkluzija*.

Johnsen, B. H. (2001). Curricula for the Plurality of Individual Learning Needs. In B. H. Johnsen & M. D. Skjørten (Eds.). *Education – Special Needs Education. An Introduction* (pp.255–304). Oslo: Unipub.

Johnsen, B. H. (2007). Razred u pravcu inkluzije -The Classroom towards Inclusion – Dialogue about Good Examples and difficult Dilemmas in Development of Inclusive Practices.Sarajevo: Connectum.

Johnsen, B. H. (2013). Comparative Classroom Studies towards Inclusion. Joint Research Plan for Cooperation between the Universities of Belgrade, Ljubljana, Sarajevo, Skopje, Tuzla, Zagreb and Oslo. In B. H. Johnsen (Ed.). Project Preparation. Introduction to Theory of Science, Project Planning and Plans. Oslo: Cappelen Damm Akademisk.

Muminović, H. (2000). Mogućnosti efikasnijeg učenja u nastavi. DES. Sarajevo. (Possibilities of more effective learning in the classroom. DES. Sarajevo).

Okvirni Zakon o osnovnom i srednjem obrazovanju u Bosni i Hercegovini. (2003). PSBiH. 59/03. Sarajevo. (The Framework Law on Primary and Secondary Education in Bosnia and Herzegovina. (2003). PA. 59/03. Sarajevo).

OSCE. (2001). Izvještaj o provedenom istraživanju o broju djece i učenika sa posebnim potrebama u predškolskom i osnovnom odgoju i obrazovanju, te stavovima nastavnog osoblja, pedagoga i roditelja o uvođenju inkluzije u obrazovni sistem u Bosni i Hercegovini. Mission to Bosnia and Herezegovina. (A report on conducted research on the number of children and pupils with special needs in preschool and primary education, and attitudes of teachers, educators and parents about the introduction of inclusion in the educational system in Bosnia and Herzegovina. Mission to Bosnia and Herezegovina).

Pepeljak, S, Hasić, O, Buljubašić, F & Meliha & Smajić, M. (in press) The Inclusive School – A Model of Modern Work in School. In B. H. Johnsen, S. Zečić & M. Babić (Eds.). *Special Needs Education towards the School for All and Inclusion – Specijalno obrazovanje prema škoiza za sve i inkluzija*.

Pravilnik o procjeni sposobnosti i određivanju podrške djeci i mladim s posebnim potrebama. (2004). Službene novine Tuzlanskog kantona br.7/04. (Regulations on assessment of ability and determination of support for children and youth with special needs. (2004). Official Gazette of Canton br.7/04).

Rapoport, R. N. (1970). Three Dilemmas in Action Research. In *Human Relations*, 23:4; pp. 499–513.

Rye, H. (2001). Helping Children and Families with Special Needs: A Resource Oriented Approach. In Johnsen, B. H. & Skjørten, M. D. (Eds.). *Education-Special Needs Education. An Introduction* (pp. 65–130). Oslo: Unipub.

Rye, H. (2005). The Foundation of an Optimal Psychosocial Development. In B. H. Johnsen (Ed.). *Socio-Emotional Growth and Development of Learning Strategies* (pp. 215–228). Oslo: Unipub–Oslo Academic Press.

Salihović, N. (2001). Prevalence of Stuttering of Preschool-Age Children and Adolescents. In *Defectologica Slovenica*, 9 (2) 7–14.

Salihović, N. & Hatibović, Ć. (in press). Estimation of Language Abilities, Reading and Writing. In B. H. Johnsen, S. Zečić & M. Babić (Eds.). *Special Needs Education towards the School for All and Inclusion – Specijalno obrazovanje prema školiza za sve i inkluzija*.

Smajić, M. (2004). *Adjusting the Curriculum to Individual Needs. A Single Case Study and Innovation Project*. Oslo: Department of Special Needs Education. University of Oslo. Master thesis.

Stančić, V. (1985). Problemi integracije slijepih u radnu i životnu sredinu. In *Defektologija* 21.1. 85–93. (Problems of integration of the blinds in the labor and the environment. In Defektologija 21.1. 85–93).

SØE 06/02. *Institutional Competence Building and Cooperation with Two Bosnian Universities: "Special Needs Education towards Inclusion"*. Cooperation Programme with South-East Europe (CPSEE).

Tharp, R. & Gallimore, R. (1991). *The Instructional Conversation: Teaching and Learning as Social Activity*. Washington, DC: Center for Applied Linguistics.

UN. (1991). *Convention on the Rights of the Child*. New York.

UNDP. (2003). *Izvještaj o humanom razvoju BiH*. (Human Development Report Bosnia and Herzegovina).

UNESCO. (1991). *Education for all I, II and III*. Jomitien: Thailand World Conference on Education for All.

UNESCO. (1994). *The Salamanca Statement and Framework for Action on Special Needs Education*. Paris.

Vygotsky, L. S. (1978). *Mind in Society. The Development of Higher Psychological Processes*. London: Haward University Press.

WB 04/06. *Development towards the Inclusive School: Practices – Research – Capacity Building. Universities of Belgrade, Ljubljana, Sarajevo, Skopje, Tuzla, Zagreb & Oslo*. Norwegian Cooperation Program on Research and Higher Education with the Countries on the Western Balkans (CPWB).

References to assessment instruments and literature related to specific research plans for the six cases

Assessment instruments

Barrage, N. (1980). *Diagnostic Assessment Procedure (DAP) for Efficiency in Visual Functioning and Observation. Checklist for Visual-Motor Coordination Observation and Graphic Plastic Development*. New York: American Foundation for the Blind.

Bjelica, J. & Posokhova, I. (2001). *Dijagnostički komplet za ispitivanje sposobnosti govora, jezika, čitanja i pisanja u djece*. Lekenik: Ostvarenje. (The diagnostic kit for testing the ability of speech, language, reading and writing in children. Lekenik: Ostvarenje).

Brown, L.L. & Hammill, D.D. (1990). *Behavior Rating Profile: An Ecological Approach to Behavioral Assessmen*t. Austin: Pro-ed, Inc.

Frostig, M. (1973). *Test de development de la perception visuelle*. Paris edition.

Igrić, Lj. & Fulgosi-Masnjak, R. (1991). *AAMD Skala adaptivnog ponašanja*. Priručnik: Zagreb: Sveučilište u Zagrebu, Fakultet za defektologiju. (AAMD adaptive behavior scale. Manual: Zagreb: University of Zagreb, Faculty of Special Education and rehabilitation).

Jewett, E. (2005). *Ekspresivna skala bosanskog jezika*. (Expressive scale of the Bosnian language).

Matanović-Mamužić, M. (1982). *Teškoće u čitanju i pisanju*. Zagreb: Školska knjiga. (Difficulties in reading and writing. Zagreb: Školska knjiga).

Novosel, M. & Mavrin-Cavor, L. J. (1985). *Acadia test razvojnih sposobnosti*. Primjenjena psihologija, 1–2. (Acadia test of developmental abilities. Applied Psychology, 1–2).

Ozaretski, N. I. (1971). *Les teste moteurs d Ozaretski*. Manual d instructions. Issy-les-Moulineaux, est ablisse ments d'aplications psychotehniques E. A. P.

Roongpraiwan, R., Ruangdaraganon, N., Visudhiphan, P. & Santikul, K. (2002). Prevalence and clinical characteristics of dyslexia in primary school students. In *Journal of the Medical Association of Thailand = Chotmaihet Thangphaet* 85, Suppl 4 (5): 1097–103.

Salihović, N. & Junuzović-Žunić, L. (2006). *Test artikulacije*. Tuzla: Tuzla Edukacijsko-rehabilitacijski fakultet, Univerziteta u Tuzli. (Test of articulation. Tuzla. Tuzla Faculty of education and rehabilitation).

Stančić, V. (1991). *Ispitivanje stavova i vrijednosti u djece niže osnovnoškolske dobi. Skala za ispitivanje stavova i vrijednosti*. Priručnik. Zagreb: Fakultet za defektologiju Sveučilišta u Zagrebu. (Examination of attitudes and values in children below primary school age. Manual. Zagreb: Faculty of Special Education, University of Zagreb).

Stančić, V. (1994). *Ispitivanje socijalnog razvoja djece niže osnovnoškolske dobi*. Priručnik za upotrebu DR-2 testa. Zagreb: Fakultet za defektologiju Sveučilišta u Zagrebu. (Testing of social development of children below primary school age. User's Manual DR-2 test. Zagreb: Faculty of Special Education, University of Zagreb).

Žunić-Pavlović, V.(2005). Instrument *za rano otkrivanje djece s faktorima rizika i poremećaje u ponašanju*. Beograd: Fakultet za specijalnu edukaciju i rehabilitaciju. (Instrument for early detection of children with risk factors and behavioral problems. Belgrade: Faculty of Special Education and Rehabilitation).

Literature related to specific research plans for the six cases

Augar, J. (1993). *Early Help: Better Future*. Reading: British Dyslexia Association.

Baumer, B. H. (1996). *How to Teach Your Dyslexic Child to Read, A Proven Method for Parents and Teachers*. New York: Citadel Press, Kensington Publishing Corp.

Block, F. K.(1993). Services in the Schools. In *ASHA*, 35, 36–54.

Brestovci, B., & Selci, M. (1978). *Disleksija i disortografija s logopedskog aspekta*. Beograd: Savez društava defektologa Jugoslavije. (Dyslexia and disortografija with aspects of speech pathology. Belgrade: Association of Yugoslav Societies of special education teachers).

Brinton B. (1990). A Model for Collaborative Service Delivery for Students with Language-Learning Disorders in the Public Schools. In *ASHA*, 33 (suppl. 5) 44–50.

Cronin, E. M. (1997). *Helping Your Dyslexic Child. A Step-by-Step Program for Helping Your Child Improve Reading, Writing, Spelling, Comprehension, and Self-Esteem*. USA: Prima Publishing.

Crowe, K. (2002). Cued Phonology: A Proposed Bridge for Deaf Students' Development of Proficient Word Reading. Proceedings of the 2002 Speech Pathology Australia National Conference, *Journal from the Centre*, 145–52.

Davis, R. D. & Braun, E. M. (2001). *Dar disleksije, Zašto neki od najpametnijih ljudi ne znaju čitati i kako mogu naučiti*. Zagreb: Alinea. The gift of dyslexia, Why do some of the smartest people do not know how I can read and learn. Zagreb: Alinea.

Dennison, P. E. & Dennison, G. E. (1989). *Brain Gym Teacher's Edition Revised*. Ventura, California: Edu-Kinesthetics, Inc.

Dickman, E., Sherman, G. & Lyon, G. R. (1994). *Definition of Dyslexia Adopted by ODS Research Committee and National Institutes of Health*. Perspectives. The Orton Dyslexia Society.

Duranović, M. (2003). Prevalenca poremećaja govora, čitanja i pisanja u gradskim i prigradskim školama. In *Naša škola* (24): 49–55. (The prevalence of speech, reading and writing skills in urban and suburban schools).

Galić-Jušić, I. (2006). Terapija disleksije. http://www.hud.hr/w-tekstovi/w-terapija.html (Therapy of dyslexia).

Heilman, A. W., Blair, T. R. & Rupley, W. H. (1986). *Principles and Practices of Teaching Reading*. 6 ed. Columbus, Toronto: Charles E. Merrill Publishing Company – A Bell & Howell Company.

Lyster, S. (2005). Language, Reading and Self-Esteem. In B. H. Johnsen (ed.). *Socio-Emotional Growth and Development of Learning Strategies* (pp. 399 – 412). Oslo: Unipub – Oslo Academic Press.

Miles, T.R. & Miles, E. (2004). *Disleksija*. Jastrebarsko: Naklada Slap.

Nielsen, G. S. & Irvall, B. (2004). *Smjernice za knjižnične službe i usluge za osobe s disleksijom*. Zagreb: Hrvatsko knjižničarsko društvo. Guidelines for library services and services for people with dyslexia. Zagreb: Croatian Library Association.

Salihović, N., Hatibović, Ć., Junuzović, L. & Čišić, F. (2005). Influence of Bilingualism and Socio- Emotional Stress on Speech, Language, Reading and Writing Acquisition. A Case Study. . In B. H. Johnsen (ed.). *Socio-Emotional Growth and Development of Learning Strategie*s (pp. 365 – 398). Oslo: Unipub – Oslo Academic Press.

Posokhova, I. (2000). *Kako pomoći djetetu s teškoćama u čitanju i pisanju*. Lekenik: Ostvarenje. (How to help children with difficulties in reading and writing. Lekenik: Ostvarenje).

Tronbacke, B. I. (2005). *Smjernice za građu laganu za čitanje*. Zagreb: Hrvtasko knjižničko društvo. (Guidelines for easy material to read. Zagreb: Hrvtasko knjižničko društvo).

Vladisavljević, S. (1991). *Disleksija i disgrafija*, Logopedija IV. Beograd: Zavod za udžbenike i nastavna sredstva. (Dyslexia and dysgraphia, speech pathology IV).

Young, P. & Tyre, C. (1983). *Dyslexia or Illiteracy? Realizing the Right to Read*. Philadelphia: Open University Press.

Changes in the research plan during implementation
Alma Dizdarević and Nevzeta Salihović in May 2011

As mentioned in the main text, the research team gained access to a school as research arena. However, soon after the identification of children with special needs for each category of disability took place, the cooperation was suspended. It turned out that the school administration and teaching staff did not accept one of the objectives of the study, which was to give selected teachers in-service training in how to develop individually adapted education plans for pupils with special needs through initiating collaboration with the special needs educators working on the research team. We then turned to a second regular school in an urban setting. While this school was slightly smaller, the teaching staff, including its director, educator and classroom teachers, was willing to cooperate with us in the realization of the research. Parents of the children assessed and selected for the study were also willing to cooperate with the special needs educators during the research period. However, when it came to signing the individual education plans, parents of one of the selected pupils withdrew from the project. Another child with special needs within the same category was then selected with the written consent of his parents.