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BILINGUALISM IN A CHILD WITH ASPERGER'S SYNDROME IN INCLUSIVE EDUCATIONAL CONDITIONS

Abstract: Bilingual children with Asperger's syndrome and children with other forms of autism are already a recognized fact; however, this still remains an area that is under-researched. Examples of bilingualism in Asperger's syndrome or autism are reported mostly by parents from bilingual backgrounds. There are data and cases recorded that the children from the autistic spectrum are capable of language change or code switching. This research deals with the schooling conditions and family environment of a bilingual boy with Asperger's syndrome, as well as his developmental characteristics. As a research method, a case study was used, representing an eight-year-old bilingual boy from Vojvodina with Asperger's syndrome in a regular elementary school. The boy's specific trait is that besides noticeable difficulties in speech and communication, he speaks two languages – Hungarian as native, and Serbian as a language of surroundings with a large vocabulary. The study covers the time period of three years during which the development of the child was followed, from preparatory pre-school group, and the first and second grade of elementary school. Classes are held according to the individualized approach in the school where elements of the Step by Step program are part of the teaching method. The results show some very interesting data and links between the child's progress, his academic achievement, and bilingualism.

Keywords: *Asperger's syndrome, autism, bilingualism, code-switch, inclusive education.*

Introduction

The inclusive educational condition has only become relevant in Serbia as well as in Vojvodina in the past couple of years. This made it possible for children, who suffer from development difficulties, to have the opportunity to be admitted into regular elementary schools. The new educational paradigm has surfaced a couple of dilemmas among the educators as well as among parents and professionals. There have been frequent discussions about the inclusive educational conditions, about the advantages and disadvantages of the receptive schools, and about the methodology of teaching (Velišek-Braško, 2012).

A new law on fundamental education and educational system was adopted in 2009, which classified quality education as a national priority, which means a successful education for all children. This demands professional, methodological, and approached based reformation of schools as well as the openness of the educational system for every

child. The task of inclusive, receptive education is to educate children with special needs together with other children within the frameworks of the school system. Every child is capable of learning although, in a different way and at a different pace. The conventional education and the old mindset are not flexible enough to accept the principles of the inclusive education. The new school paradigm supports the interactive education, which is a differential education, and it encompasses individualization, diverse forms of engagement, methodologies, and learning techniques. For a school like this it is not difficult to implement the inclusive education and apply its principles, which can satisfy the unique pedagogical and educational needs of psychologically disabled children.

An elementary school in Novi Sad is a model of a receptive school in Serbia, in which the inclusive education is applied. The school's distinctiveness is its bilingual education (in Hungarian and in Serbian), the Step by Step program which contributed to the successful education of a number of autistic children.

This paper deals with the case of an autistic boy with Asperger's syndrome in the above mentioned school. The bilingual and constructive educational environment, the pedagogues' conformation to the personal needs of the pupils greatly stimulated the development of the observed boy.

About the Asperger's syndrome

The Asperger's disorder is a milder form of autism (its abbreviation is AS) that is, a neurobiological pervasive developmental disorder. This anomaly was first described by the Austrian psychiatrist and pediatrician Dr Hans Asperger (1906–1980) in 1944 as autistic psychopathy. The syndrome was named after him by a British psychiatrist and psychologist Dr Lorna Wing who first used this term in 1981 in one of her essays. It is characterized by a normal rate of language development. It can occur at any level of intelligence, even among the mentally disabled. In 30-50% of the cases it is not diagnosed because it's difficult identification (Attwood, 2008).

Lora Wing (Burgoine & Wing, 1983) describes the Asperger's syndrome the following way:

- Lack of empathy,
- Childish, not adequate relationship to the situation or one-sided relationship,
- Neat, the speech is characterized by repetitions
- Poor nonverbal communication
- Intense interests towards certain subjects,
- Clumsy, poorly coordinated movements, abnormal postures.

Asperger's syndrome causes clinically significant social impairments or impairments in the field of other important functions. This syndrome makes children inapt to empathize with their peers. The delay of motor development may occur, e.g. they learn to ride a bicycle much later than their peers. They may have issues with movement coordination, with the synchronization of vision and movement. They may face problems with proprioception (awareness of the position of one's body), with balance, and the inability of opposable thumbs. These children do not sleep a lot, and they also wake up several times during the

night. It is unclear whether these abnormalities are relevant concerning Asperger's syndrome in respect to other well-functioning autisms, however, they must be differentiated.

“In the spirit of the Nazi eugenics in the past every deviation and hereditary disability would have been exterminated. Asperger defended children who were diagnosed with autistic psychopathy, claiming that they also have their place in society; they occupy their roles, moreover even better than others. He also came up with the label “little professors”. He believed that these children subsequently would achieve a great step forward and they will develop into grownups who will have unique thinking (Wikipedia, 2011).” This anecdote reflects Asperger's attitude which is equivalent to today's inclusive education principles. Every child has a place and role in society, even if it lives with developmental difficulties.

Tony Attwood (2008) referred to children with Asperger's syndrome as special children and pointed out six development areas in which they have particular difficulties:

- The social behavior, which refers to mutual games played together with other children, behavior principles, friendship, eye contact and emotions.
- Speech and language characteristics in the field of pragmatics, literal interpretation, speech melody, pedantic speech, specific use of idiolect, out loud thinking, auditory discrimination, distortion, and speaking skills.
- Interests and routines concerning special interests and rituals.
- Movement disorders can be detected in the field of locomotion, sensory spheres, balance, dexterity, handwriting, rapid movements, loose joints, rhythm, and imitation.
- Cognitive behavior difficulties, concerning the theory of mind, memory, flexible thinking, reading, spelling, numbers, imagination and visual thinking.
- Stimulus processing disorder can include hypersensitivity to sounds, touch, food and flavors, odor and visual stimuli, and a high tolerance for pain and temperature.

Children with Asperger's syndrome are characterized by antisocial personality disorder, for instance, avoid eye contact, improper use of gestures to regulate social interactions; does not participate in social or emotional relationships. All of these cause significant problems in social relationships, at school or work. Language acquisition and language use is often unconventional. They are characterized by verbosity, by misunderstanding subtle nuances and the use of metaphors, unintelligible to others. Speech is formal and pedantic; the tone of the voice is not in accordance with the situation. The pitch, intonation, and rhythm of the sound can be equally affected. In addition, they may have problems with the quality of sound as well. A child with Asperger's syndrome disregards the listener's indications concerning whether the listener is interested in what the child wants to say or not. It may occur that the child is unable to retain his/her thoughts. The logic of their thoughts is often unfollowable, unable to draw conclusions from them, and to understand what they meant or to turn the conversation to another topic. Children with Asperger's syndrome already in preschool may have a large vocabulary (“little professors”) however; they tend to interpret the language literally (Wikipedia, 2011). The interests of individuals with Asperger's syndrome are often restricted and repetitive.

Stereotyped and repetitive movements also form the essential part of the diagnosis. These include hand flapping, shaking, twisting as well as complex whole-body movements. Main symptoms include narrow and restricted interests. They gather together a great amount of information in a relatively limited number of subjects, such as dinosaurs or freezers without knowing anything about the broader topic, into which the subject of interest is included. The child's interactions are often so dominated by their circle of interests that the whole family immerses in it. Empathy is the most damaged area of individuals with Asperger's syndrome. They are also not aware of the basics of building relationships. Further on these include a lack of social and emotional reciprocity, the difficulties in forming friendships or impairment of meta-communication (eye contact, facial expressions, and gestures).

They do not retreat from human contact they rather commence lengthy conversations about topics, which are to their liking ignoring the indications of their listeners whether they are interested or they would rather leave. This kind of behavior is active but unusual. It seems as if he/she has no regards for others and may appear insensitive. The tests showed that children with Asperger's syndrome in theory, understand others emotional responses, and social norms, but in real life situations have difficulties in applying them. They observe, analyze and enclose these norms into rigorous rules and apply them immediately, thus they appear to be rigid or socially naive. Due to unsuccessful attempts to establish relationships they may suppress that childhood desire for company (Attwood, 2008).

The 8-year-old boy, who is introduced in this paper, is abreast of the described symptoms of Asperger's syndrome. He was born in 2003 in Novi Sad and lives with his parents and with his 4-year-old brother. His parents have not noticed any kind of particular abnormality until he was two, two-and-a-half years old when the educational difficulties began. The integration period into pre-school was prolonged in his third year, due to frequent health problems. When he was 5 years old his behavioral problems intensified among his friends in kindergarten. In the preparatory group with the help of the kindergarten psychologist they created a personalized plan according to which the education and tutoring was conducted with him. Already at the age of 6, according to the evaluation of the psychologist, he had a rich vocabulary; he could interpret and use complex concepts for his age. He loves his friends, upon meeting them he gets in a euphoric state. However, he does not participate in games. He often plays beside children but not together with them. He does not obey the rules of board games and he is not fond of them either. He has a plump physique and has difficulties regarding his mobility, he is unable to ride a bicycle, he is clumsy concerning ball games and he is not willing to work out. He likes to dance and snorkel. His intelligence level is on the lower limit of the average and has difficulties in literacy acquisition. However, concerning empathy he has less deficiency compared to the description above. Besides the mentioned he's most outstanding trait is his great knowledge about topics that he is in favor of (dinosaurs, animals, archaeologists, and investigations), as well as the fluent usage and wide vocabulary knowledge of the Hungarian mother tongue, the language of the environment, Serbian, and the interest in the English language and in the learning of the same. According to the Australian Scale for Asperger's syndrome the boy has 94 points out of 144. On this scale the 0 denotes the expected average behavior of a child attending

elementary school. Out of the ten posed extra questions seven statements are related to the boy (Appendix 1 the scale and the questions). It stands as an interesting data that one can classify the difficulties in socialization and communication among the key symptoms of the syndrome however despite that fact he holds a rich vocabulary in both languages. One may pose the question, does learning languages belong to the interests of the boy or children with Asperger's syndrome have the ability of bilingualism or bilingualism is a characteristic of the Asperger's syndrome?

Bilingualism

In search of the resolution of complex psychological issues as the relation of thinking and speech or the affect of the diverse social environment on the development, often, along the way, they researched bilingualism as well (Göncz, 2004). Bilingualism was examined from different aspects of psychological disciplines, among them mostly developmental psychology, children's language psycholinguistics, sociopsycholinguistics, social psychology and educational psychology.

Bilingualism has many definitions and specifications which are influenced by the various interpretations and approaches of experts and scholars, as well as their aspects of their researches.

Bilingualism is a specific pedagogical problem for gentilital schools. The pupils of national schools must learn both their mother tongue and the language of the state. This is not the same as foreign language acquisition (Pedagógiai lexikon, 1977).

According to Grosjean's definition (1992) "Bilingualism is the regular use of two (or more) languages, bilinguals are those individuals who need to use two or more languages in their everyday lives." Bilingual people are equally aware of language A and language B (Csallóközi, 2011).

From the two definitions follows the explanation of two aspects of bilingualism, one as a social phenomenon, the other as the characteristics of the personality. There are more definitions on the characteristics of the personality than on bilingual individuals and from the aspect of this paper these definitions are more important.

The following definitions are distinguished concerning bilingualism (Skutnab-Kangas, 1991):

- The definition of bilingualism on the basis of competence,
- The definition of bilingualism on the basis of the function,
- The definition of bilingualism on the basis of identification.

Instead of giving a definition, Skutnab-Kangas describes bilingualism (1991:111): "A speaker is bilingual who is able to function in two (or more) languages, either in monolingual or multilingual communities, in accordance with the sociocultural demands made on an individual's communicative and cognitive competence by these communities and by the individual herself, at the same level as native speakers, and who is able to

identify positively with both (or all) groups (and cultures) or part of them (Göncz, 2004:30).”

A bilingual person can be classified into four groups, depending under what circumstances the individual became bilingual (Skutnab-Kangas, 1991):

- Elite bilinguals – children from middle and upper class families who travel, live a few years abroad or children who study abroad on scholarships. Children belonging to this group voluntarily learn another language; they also receive encouragement learning their mother tongue. Positive, friendly and patient attitude is practiced towards them when they are speaking the other language.
- Children from linguistic majorities – children who are learning a foreign language and children who are admitted to professional programs or classes are conducted in another language most commonly in the language of the minorities.
- In this category choosing to be bilingual is voluntary and it can be kept as an asset which already is given to them as well as benefiting from the advantages of bilingualism.
- Children in bilingual families – parents of children who belong to this category speak different languages. In this case a successful bilingual education can be risky – if the child does not become bilingual it can have negative effects both on the child and on the family. In this way, the child may become discontent therefore the relationship with a parent or with both of them may get worse.
- Children from linguistic minorities – are under strong internal and external pressure to become well educated and to be successful on economic terms as well. Failure involves huge risks because the consequences could become disastrous. If the child remains monolingual, the possibilities for education will narrow down to which employment opportunities are closely linked. Another negative effect is the possibility that the child becomes monolingual in the language of the environment, which draws negative consequences such as breaking away from the family, even isolation can occur. The third negative consequence occurs when the child is unable to acquire any of the two languages on the level of an original speaker and the combination of the already mentioned two negative aspects can occur.

On the other hand, besides the risks for children from minority language groups, the influence of the dominant language of the environment and the encouragement and study of the minority language (mother tongue) in the family, further on, the existence of educational and cultural institutions, may provide the best opportunity for the realization of the benefits of bilingualism.

At the beginning of the last century aspects of bilingualism which were highlighted as being negative and voicing the disadvantages of the same was a commonplace, today are claimed to be the advantages:

- Contact with two languages does exist
- The state of remaining a bilingual for a longer time period is more persistent
- A bilingual individual is conscious of language A and B
- The speaker uses the languages interchangeably

- The rules do not mix
- Predominantly common vocabulary (with semantic differences)
- Knowledge of everyday and folk expressions (Csallóközi, 2011).

The 8-year-old boy, mentioned in this thesis, is bilingual. He belongs to the minority language group and most of the key aspects of bilingualism apply to him. He is consciously using both languages. He has difficulties in language usage, word order, pronunciation and following the rules of grammar in his mother tongue as well. In pre-school, to the surprise of the family and his speech therapist, he adopted the language of the community on his own at a very fast pace. His vocabulary in both languages is very rich, predominantly in topics favored by him. Interestingly, he gladly uses language-specific expressions, idioms, and phrases in both languages.

The relation between bilingualism and autism

In recent years, there were such case presentations, predominantly on the internet, in which children with autism and Asperger's syndrome were associated with bilingualism. This could be referred to as a phenomenon due to the fact that no research or literature can be found on this topic.

A nanny, in 2003 in Norway, worked with a 7-year-old autistic child who was diagnosed with Down syndrome and with other autoimmune diseases, and who loved Dora cartoons. Through the Dora cartoons the child learned a little Spanish. The child knew the words for colors, numbers, letters, names of basic objects, in Spanish, English and in Norwegian. Interestingly, children with the mentioned difficulties are capable of doing the same as any other child.

On the 8th International Congress for Autism in Europe there were two presentations on the relation of autism and bilingualism. Both presentations pointed out that there were no previous studies done in this area, however, there exists data from the past about families of autistic children who were advised by professionals to choose one language for their child. Two presentations showed positive results in those families who refused the advice and the autistic children learned another language as well. On the basis of different educational experiences of families it was concluded that autistic children are bilingual (*Autism and PDD Support Network*).

Are children with Asperger's syndrome capable of learning one foreign language and becoming bilinguals? This issue has been addressed by Christine Besnard and Glendon College, from the University of Toronto (York University, Toronto, Canada), and they have shown positive results. This is particularly interesting if we know that among the main symptoms of Asperger's syndrome is the disability of social communication that is, they already have difficulties in their first language (L1). In professional circles, only the mentioned study verifies that children with Asperger's syndrome are able to learn a foreign or second language (L2). There are thousands of families in the world living in bilingual/multilingual countries and are faced with the question which language should they teach their autistic child: the official language of the country or the language of their family? In their research they observed autistic children, who function on a high level,

during the acquisition of the second language (L2). They studied the benefits of this and the effect it has on their overall development. Longitudinal study was used on a number of well-functioning autistic children who were learning L2 and during that process they were monitoring the children's progress of communication and language disorder in the regular Canadian French-language school program. The results suggest that autistic individuals who function well are capable of learning L2. Moreover, despite the fact that in the field of communication and social interaction they have deficiencies, the learning of L2 would serve as a tool for the development of the same. This study showed positive results not only in language acquisition, but the positive effect it has on the transfer of L1-L2 and on cognitive, emotional, cultural and social development as well. (Besnard, 2007) Elizabeth Grindheim from the Rikshospitalet-Radiumhospitalet Medical Center in Oslo, Norway worked on the development of autism and bilingualism. There has been a small amount of literature written on autistic children learning two languages. Questions are raised about the ability of children with autism, learning conditions and progression. There is no literature about the development of the communication skills and language acquisition of autistic children who are mastering two cultures. According to a case study a boy, with bilingual background, who at the beginning was speechless, was observed for two years while attending pre-school. Based on the results after two years he was able to communicate in both languages. He mixed the order of the words but used them in accordance with the non-verbal signals. The case study concludes that autistic children are able to do code-switching during the use of language. In order to achieve a positive outcome it is inevitable to employ the intervention and inclusion philosophy that is, the interaction between the day-care nursery and the family contributes to the child's cognitive development (Grindheim, 2007).

A father from Quebec posed a question, if a child who suffers from Asperger's syndrome and has problems with pronunciation of words in his mother tongue, how is it possible for this child to learn another language? In Canada, children acquire two languages, English and French. The son (with Asperger's syndrome), of the mentioned father, is bilingual but he is unable to speak in a grammatically correct way. He learned the Spanish language through a DVD on a computer.

From family circles a friend mentioned a family to him in which a 13-year-old autistic boy speaks 3 or actually 4 languages. He learned French, Spanish, and Japanese on his own with the help of a computer software.

The same Canadian father met a Chinese autistic child in a camp for autistic children who liked to count in Spanish and loved mathematics (*Autism and PDD Support Network*).

The boy with Asperger's syndrome from Novi Sad who is shown in this paper, in addition to the mentioned bilingualism at the beginning of first grade he had major difficulties with numbers that is, he did not understand the concept of numbers. He could only count to ten in a mechanic manner, he could not connect the written number with the quantity of that number and he even had problems differentiating between numbers 2 and 3. On the child development educator's proposal he began learning numbers in English with the help of the parents, teacher and English teacher. By the end of the first grade and during the summer holidays as a result a tremendous development happened concerning

mathematics. At the beginning of second grade he is able to grasp the concept of numbers until twenty. Operations such as adding and subtracting are performed independently almost flawlessly and he is able to count to one hundred by tens. The results can be attributed to the inclusive education that is, the child is individually, through a personalized program acquiring school material. The teacher creates separate tasks on a daily basis for the pupil with individualized expectations, instructions, and uses a lot of interactive methods in the classroom (Step by Step program). During class pupils are frequently involved in group activities and the teacher is creating a cooperative environment in the classroom.

More similar cases and examples do exist but there is no recorded data about children with autism and with Asperger's syndrome bilingual or multilingual in a bilingual or a non bilingual environment. Already these valuable case reports could prove that children with autistic spectrum are able to acquire one or more languages and learning languages can have a positive impact on their social and cognitive development.

Language switching and Asperger's syndrome

Linguists refer to language switching as code switching concerning bilinguals. Different theories give explanations for code switching and its rules.

A number of researches have studied the code switching among bilinguals that is, the language systems' reciprocal effects. Penfield and Roberts in their "one switch model of bilingual functioning" assume the existence of a neurophysiological mechanism that automatically switches off one language system while the other one is in operation. Linguistic stimuli coming from the environment automatically activates the decoding system of the language that they originate in (Göncz, 2004). The one switch model of bilingual functioning highlights language independence but opposite to this is the two switch model of bilingual functioning that emphasizes the linguistic interference during the encoding and decoding of language switching.

Howard Giles, a professor of communication at the University of California, developed the Communication Accommodation Theory CAT (2011), in which he explains cognitive changes of code-switching and other changes in speech. During a conversation the speakers are trying to minimize the existing social differences among them. According to the claims of professor Giles, when a speaker's desire is to build other people's approval in a social situation they are more likely to moderate their speech to their co-speaker. This can relate but is not limited to the choice of speech, accent, dialect, paralinguistic properties. The opposite occurs when the speaker uses a different phrasing through which the speaker emphasizes the social distance between him/her and other speakers. In these instances the speaker uses the speaking characteristics of their own language group and emphasizes its features. Thus in terms of the situation the intersubjective background of the code-switching can be observed or the part of the broader intersubjective process. Due to the interpersonal context we think, feel, and behave differently. This does not mean that we lose our individuality while communicating with others; instead we try to conform to others not just on the surface but on a deeper, subconscious level in order to secure the relationship with them. During social

interactions there are constant adjustments, maladjustments, and readjustments happening. With bilingual individuals code-switching may occur as part of the interpersonal settings, when they speak to another bilingual person. According to the phenomenological theory intersubjectivity allows multiple functions, such as empathy. Based on the above, the following questions arise: Since with Asperger's syndrome social interactions and the capacity of the intersubjective adjustment are damaged, what happens to bilingual people with Asperger's syndrome when it comes to code-switching? If the code modifies the intersubjective settings what kind of effect can it have on the Asperger's syndrome?

Methodology

The research shows a positive example of inclusive education in a bilingual environment through the case study of a boy (8 years old) with Asperger's syndrome. The model elementary school which the boy is attending has been using inclusive education for the past seven years with a highly trained staff and has been developing the school with several "inclusive" projects. In this school one can observe inclusive politics, culture, and practice. Bilingual education is one of the characteristics of the school, i.e. the education is conducted in Serbian and Hungarian languages and the application of the Step by Step program, which is a world-renowned child-centered educational program.

The subject of the research: the effect of bilingualism and the effectiveness of inclusive education on the development of a child with Asperger's syndrome.

The research is longitudinal since, it lasted for three years from the preparatory group in pre-school until the end of second grade elementary school that is, from the time the child started receiving a personalized individual plan.

The location of the research: Novi Sad, Dunavirág Pre-School and Sonja Marinković Elementary School.

Research results

The results gathered during the course of the research show difficulties or mannerisms of the boy's development and behavior process in the family, pre-school, or elementary schools which are grouped within the development areas:

Emotional development

- He was not a typical baby; he could not be calmed down by hugging or stroking only by putting him in a baby carriage and taking him on bumpy carriage rides.
- Estrangement from family members if they have not seen him for a couple days.
- He was not a crying baby
- "His love often hurts."

By the age of seven major developments were observed concerning empathy, for example, he protects his younger brother when someone yells at him or hurts him.

Social development

- Between the ages of 5 and 6 some problems appeared in pre-school. He played beside the other children and often he would get into conflicts with them, he did not want to participate in activities.
- Between the ages 6 and 7 he is anticipating his friends' arrival in a euphoric state but he plays with them for very short period of time. He does not like group activities.
- At the age of 8 he loves his friends very much, he likes to make friends outside of school but he is the one who is in control of the games.

Speech and language development

- In his first year he learns to speak.
- During his pre-school years people became aware of his difficulties in pronunciation of sounds and of the incorrect use of grammar in his mother tongue. (he has been going to a speech therapist since the age of four)
- By the age of five he independently mastered the language of the environment; he used full sentences and he became bilingual.
- At the age of six he aroused admiration from his psychologist and speech therapist because of his rich vocabulary and understanding of complex concepts.
- In first grade English was his favorite subject and it was the English alphabet that he learned first.
- Between the ages of 7 and 8 he often uses specific phrases in everyday speech.
- The speech rate, rhythm and loudness are specific. He often imitates sounds or situations with prominent mannerisms and body language.

Cognitive development

- Between the ages of four and seven his IQ level reached the lower limit of the average intelligence level.
- He has been tutored for three years according to an individual personalized plan (he receives individual tasks and the expectations are personalized).
- He has an incredible memory (he remembers a lot of things from his early childhood) his visual memory is specifically strong (he remembers tropes).
- He has difficulties with reading and writing.
- He is full of ideas, solutions. He is very creative and has a rich fantasy.
- At the age of seven he could only count in a mechanic manner and he only knew the concept of number 3. On the child development educator's proposal he began learning numbers in English. By the beginning of second grade he mastered operations such as adding and subtracting up to number twenty, and he could count until one hundred. He performed these tasks almost flawlessly. In second grade he learned to add and subtract two digit numbers and he began to learn the multiplication table (in the appendix 2 the child's products can be seen).

Conclusion

The boy presented in this case study stands as a positive example of inclusive education. He proved to be a great success and showed progress during the observation. The family is a huge support in this case and they are exemplary and accepting. Child therapists and therapies, psychologists, speech therapists, and development educators had a huge

impact on the child's development as well as dancing, kinesitherapy, horseback riding and a variety of other workshops. The host school, the class, the teachers and their attitudes and work stimulated the child's progress in all development areas. Owing to the high quality and effective teaching and to the Step by Step program and the well applied individualization the inclusive education shows positive results. Concerning the 8-year-old boy with Asperger's syndrome it has been noted that he has no serious injuries in the field of empathy and he has highly expressed compassion towards close people (towards his younger brother, parents, and grandmother). It is possible that the development of this area was also stimulated by bilingualism and by switch between languages.

The most specific and interesting information of this research is the stimulating effect of bilingualism and multilingualism on the social, emotional, and cognitive development of the observed child.

This is a new area which is not sufficiently researched on the part of psychologists, development educators and educators. Perhaps it is most important for the parents to have a new treatment for their child's development.

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Biographical note

Otilia Velišek-Braško was born in 1975 in Novi Sad. She graduated from the Philosophical Faculty at Novi Sad University, Teaching Methodology Department and became a pedagogue in 2003. She defended her doctoral dissertation in 2014 and its title was *Development of competencies for inclusive education in the system of professional development of teachers*, mentored by Dr Olivera Gajic at the same faculty. Her working experience refers to 8 years of engagement as a medical nurse-kindergarten teacher in nursery working with children aging between 1 and 3, and 8 years of engagement as a school pedagogue in a primary school. Since 2012 she has worked at the Preschool Teacher Training College in Novi Sad, as an assistant for pedagogic sciences, teaching courses at basic and specialist studies.