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The paradigm of inclusive education in theory and practice

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Contemporary global world gives new tasks to lifelong education. The concept of traditional school does not meet expectations of heterogeneous society, it is also less effective in the society of cultural differences and deepen differences among people. The main idea included in UNESCO program "Education for everyone" constitutes a message for education in most of well-developed countries of the world. Moving away from homogeneous education, the same for everyone, determined by the same standards and aims, is justified and necessary.

Accepting the paradigm of inclusive execution and its practical implementation contributes to respect for different needs, abilities and psychophysical skills of every subject of education process. Non-segregationist approach and high quality education for everyone, regardless of social origin, sex, race, language, level of development, disability, age and many other factors, should be understood in dimension of combating with social exclusion and should be seen as an important issue of European social policy.

In scientific publication one can see two streams of references to education of differences. The first stream is focused mainly on integration of disabled people with the rest of society, the second stream is concentrated on combating with marginalisation and social exclusion of "different" people. Education of differences consists of removing mental barriers, reducing limitations and full acceptance of everyone without any prejudices.

Complexity and multifaceted nature of the issues concerning inclusion i education makes us aware that scientists should deal with this issue in more earnest way, therefore academic stuff from two academies of Belgrade Institute and State Higher Vocational School in Nowy Sącz make an attempt to look into this field of scientific knowledge. Discourse on education in the context of inclusive education presented in this publication refers to selected examples of theme of inclusion. It is not vast spectrum but it is important to remember that it concerns theoretical assumptions and practical implementation of message of inclusive education. Effectiveness of action and good quality of education for everyone stems from scientific theory and is justified by it. Wise and reasonable solutions in practice of educational interactions constitute confirmation of reflexive attitude towards inclusive education.

In the monographic study three main parts were abstracted. In the first part the authors discuss different ways to individual success of a pupil – from segregation to inclusion (Anna Struzik) and make reference to inclusion as an important element of quality of education at level of primary education (Ivica Radovanović, Dragana Bogavac).

The second part is a recognition of inclusion in terms of special educational needs of children, youths and seniors. Jasmina Kovačević writes about children with special educational needs, whereas Bogusława Gaweł i Karol Wiśniewski develop theme of inclusion education in an integrative kindergarten as an example of good practise. Issue of differences in terms of psycho-motor studies is presented by Danica R. Džinović. Joanna. Jachimowicz took up an interesting studies on emotional attitude of pupils towards top-class classmates. Zdzisława Zacłona writes about actual issue of

ageing society and demonstrates that educational activity of seniors is an opportunity to combat marginalisation and social exclusion of elder people.

In the last, third part, one can find considerations on teachers preparation to inclusive education. Jolanta Rybska and Julia Klapa analyses outcomes of empirical studies on teachers competencies in terms of inclusive education at different levels of school education. Jasmina Milinković presents an interesting issue of challenges concerning inclusion in practical education of mathematics. The need to develop skills and the abilities to use information technology in the education process of future teachers is justified by Miroslava Ristić, and Ivica Radovanović shows that in a world of knowledge and IT skills are essential and necessary.

The paradigm of inclusive education is a key idea which organises theoretical knowledge, shows direction and method for scientific studies as well as systematizes intellectual experimental studies used in educational practise. It is important to remember that issue of inclusive education is located in many scientific disciplines thus both a broad look on the issue and narrow, specialized look can bring many relevant and valuable theories to cognition of the theme.

Zdzisława Zacłona and Ivica Radovanović

Chapter I

Assumptions of inclusive education

Anna Struzik
State Higher Vocational School in Nowy Sącz

DIFFERENT WAYS TO INDIVIDUAL SUCCESS OF A PUPIL – FROM SEGREGATION TO INCLUSION

Summary: *The author attempted to explain the differences between segregated education, integrated education and assumptions of inclusive education mainly in the light of development of special education. She showed the benefits of inclusive education and risks resulting from its unreflective implementation in the Polish education system.*

Key words*: segregated education, integrated education, inclusive education, inclusion, special education.*

Introduction

Equal treatment of children regardless of race, ethnic origin or religion was rightly noted and specified in Geneva Declaration of 1924. Right to education and higher education, which shall be equally accessible to all on the basis of merit, was defined for the first time in The Universal Declaration of Human Rights of UN of 1948 (art. 26) and later repeatedly confirmed in international documents such as Convention on the Rights of the Child of 1989, ratified in Poland in 1991. Art. 28 specifies rights to equal opportunities, free access to education and compulsory elementary education. On the other hand, art. 29 specifies aims and values set in educational process. These are: the fullest development of child's personality, his or her adequate preparation for living in society, development of child's respect for nature, spirit of friendship between all nations and finally respect for human rights and his or her fundamental freedoms (Szczepska-Pustkowska, 2009, p.145).

Such implemented educational policy aims to serve citizens, their development and complex functioning on the micro- and macro-social level, with a view to reducing inequality among people resulting, for example, from followed beliefs, nationality or disability. Justifiable call for ensuring the educational equality of all children seems to be difficult to pursue in practice due to not only multiplicity and variety of psychical, social and cognitive needs of different pupils but also necessity for conciliation of interests of different social groups, that is multidisciplinary and multithreading of this issue. It seems relatively easy to do it on primary education stage when children's susceptibility to adults' impact and their openness to others is great. Heteronomous phase in moral development requires compliance with adults' influence and adaption of models opposing to discrimination on several dimensions.

Openness to various needs of children with physical or intellectual disability took place in 1990s in our education system and it showed values of at least partial reducing of inequalities between health children with so-called development norm and ill ones, euphemistically called 'children with special educational needs'. However, civilization transformations are still generating new, highly complex social

phenomena, f. ex. constant poverty, unemployment, pathology, voluntary migration (labour) or obligatory migration (political – refugees) clearly visible in West, multicultural countries, but slowly influencing school situation of children in Polish education system. Occurring problems are the subject of social care, debates and reflection on searching for appropriate solutions. On the second hand, these problems face numerous legal, financial and even mental barriers. The postulate of school reform, concerning addressing pupils and their physical, emotional and social needs, is the essence of the idea of inclusive education and specific challenge to local governments, schools which are educational organisations as well as contemporary teachers who are creators and direct executers of propaganda concept.

Misunderstandings about the term inclusive education – from segregation to inclusion

The evolution that has occurred and concerned social exclusion may be introduced with the example of education of pupils with especially 'downward' deviation from standards, that is, children with 'special educational needs'.

Fear of diversity, distrust towards what is unknown have been an integral part of human existence since ancient times and displayed cruel treatment towards people who were 'different' from them. For many centuries, reluctance towards those who were mentally impaired has been displayed by negative attitude concerning complete natural selection, superstitions, mystical fanaticism leading people to deprivation of their life, isolation in anti-humanitarian conditions and the lack of any care for them. The lack of knowledge about a child and its development contributed to the fact that hard upbringing methods were applied towards awkward teenagers in the Middle Ages. Rod or physical punishment such as flagellation became the symbol of teachers' power which aimed to eradicate child's evil (Lipkowski, 1981, p.101, 112). When elementary school became popular, it turned out that education in publicly available institutions is not equally effective for all children. Slow educational progress were reported in impaired pupils and organisational difficulties in education process influenced also results of the rest pupils. It became a natural pretext for excluding them from the community of healthy people. Possibility of education of disabled pupils has gained popularity in the period of Enlightenment when first institutions were created in France, for deaf pupils (1770) as well as mentally impaired ones (1784) and later in other countries, including Poland. Centres for deaf (1817), morally neglected (1829) and blind people (1842) appeared consecutively. Organisation of education for mentally disabled children (1917) and schools for sick children (1926) in Poland took place only after the country regained its independence. (Baranowicz, 2006, p.43) The scope of care for children requiring special education was vastly disproportionate to existing needs. Little social sensitivity towards problems of special education was the main reason for this (Baranowicz, 2006, p.43).

The introduction of the name therapeutic education in 1861 with an attempt in determining its objectives and place in theory of educational sciences as well as one of the first Academies for Special Education founded by M.Grzegorzewska in 1922 which aimed to train teachers for special schools as well as conduct research on educational process of disabled pupils were believed to be a turning point in developing the theory of special education and changing attitude among the society

towards people with different types of disability (Lipkowski, 1981, p.55). Grzegorzewska's statement 'there are no handicaps, there are people' stimulated reflection on the necessity to emphasise boosted needs of disabled people and to create for them more convenient education conditions and also reorientation of views the perception of them and their place in society.

Compulsory education for disabled pupils was imposed partially in 1932 by virtue of the act in which possibility of exemption of this obligation was foreseen if there were no special school in the place of living (Gajdzica, 2007, p.278) what aroused justifiable criticism of teachers of this schools. Intensive development of special education took place in the interwar period but this education was provided only at the level of primary school and attempts in institutional preparation for professional work were incidental (ibid., 2007, p.278).

After World War II, special education was subject to the same changes as general education provided that compulsory education was imposed on all children, including deeply disabled and with multi-dimensional disabilities. Schools of life, educational and therapeutic centres and other forms of education were created in which such children had opportunities to fulfil educational obligations (ibid., 2007, p.278).

Under the act of 1962, children with visual, hearing, movement impairments and chronic diseases as well as those who are mentally disabled and morally neglected were considered to have been incapable of learning in normal primary schools because of the degree of their disability which prevent them from learning in public school. Simultaneously, children incapable of learning in primary school might have stayed in normal school under the permission until the place in special school was found. However, if such a child created 'unusual behaviour problems', the permission might have been withdrawn at the request of the teaching staff. In 'normal' class, disabled child was often relegated to the margin of teacher's interest and tolerated only because it had to attend school (Baranowicz, 2006, p.44). There were, however, cases of not legally authorised presence of disabled child in publicly available school purely dictated by its good development what gave rise to so-called 'inclusive' conception in education. Until the 1990s, special education was the only form of special teaching in which 'comprehensive development and social revalidation of pupils as well as their education to be conscious and creative citizens at the possible level concerning their type and degree of disability' (Lipkowski, 1981, p.71). Special schools through their objectives discharged normal school from children who were often disorganising and restraining didactic work of normal units and for whom public school could not provide proper measures and methods of teaching.

It is clearly seen that trends in teaching students with 'derivations' from standards became segregated and adapted to different types of disabilities. Segregation tendency in education is characterised by the belief that a child with specified disfunction shall be taught in school created especially for her/him where there are the best conditions as well as curriculum adapted for child's special needs and which is taught by specially prepared teachers. A stay in such institution causes that a child resides constantly with the same people as it is and where contacts with other people are restricted. Similar thing is in publicly available schools where the

best educational conditions for normal and healthy children are created (Zacharuk, 2011). Thus, special teaching is considered to be a segregated one whereas teaching in publicly available schools is considered as a non-segregated one.

Creation of special or therapeutic classes, in publicly available schools, in which teaching of disabled people is provided and contacts with other non-disabled pupils take place during extra-curricular activities is considered to be an interim and partially segregating solution (Maciarz, 2007, p.33).

Exemplifying the current issue from a different perspective, instances of discrimination and segregation, historical or more recent may be given, for example, persecution of early Christians, racial and ethnic cleansing in Africa and Near East, places (restaurant, trams) or Jewish ghettos, only for Germans – racial segregation in the United States during World War II, etc. The most recent example of segregation tendencies may be observed at the first stage of school education in Poland. It concerns lowering the age of start of education of six-year-old children and creating separate classes for 6- and 7-year-old children.

Next trend of education of disabled and non-disabled children was the idea of integration which originated in the 1960s and the pace of its introduction was different both in European countries and in the world. In Poland, it has undergone transformation from perceiving it as an innovation to obligatory standard which is still controversial and cannot find support even among experts. Antoni Hulek has prepared and popularised basics of teaching and education in inclusive system in our country since the 1970s. According to Hulek (1997, p.493) "*integrated system of teaching and education consists maximum inclusion of children and teenagers with derivations from standards in publicly available schools and other institutions as well as allowing them, as far as possible, to develop and learn among healthy peers. According to Hulek, integration is indicated by such mutual relationship between disabled and non-disabled people in which the same rights are respected as well as identical conditions for maximum and comprehensive development are created for both groups"*. Promotion of idea of integration in Poland took place not earlier than in the 1990s, after the political transformation and increasing role of parents' co-decision concerning education of their children. When they stood up to segregated education, they contributed to the creation of the first integrated schools where pupils with different types of disabilities could get assistance of several organisational structures (special, compensatory and therapeutic classes).

Integrated classes in publicly available schools turned out to be dominant in Poland. They created proper conditions for children with special educational needs concerning development and leading a normal life in society. Regulations relating to their creation were presented in 1993[1] and they arbitrarily set model of integrated education concerning classes with maximum number of 20 pupils, including 3-5 disabled people. Initially, assistant teacher was recommended to be present during lessons but the employment of special education teacher, apart from general teacher, was obligatory in these classes after the reform of 1999. Thus, it can be seen that in the trend of integrated education, there is a chance for disabled children to learn and maintain contacts with other non-disabled people. Integrated education is understood

[1] Official Journal No. 9 of September 1993.

as *„organisational and pedagogical actions aiming at the inclusion of children and teenagers with derivations from standards concerning health and development conditions to classes, schools and other publicly available educational institutions taking into account specific educational needs of disabled peers and providing them with conditions for optimum development among healthy peers(...). It enables bringing children and teenagers up in the spirit of understanding and tolerance towards disabled people. On the other hands, it enables disabled people to live in the community of non-disabled people on the basis of equal rights and obligations"* (Kupisiewicz, Kupisiewicz, 2009, p. 40-41).

Controversies over the idea of integrated education centre on multiplication and interpretation of the term (social, individual, partial, formal, group integration, etc.) as well as its ways of perceiving: either as a goal and method to achieve this goal; as a form of organisation of education or revalidation; or as a social process, which allow to differentiate its 2 concepts: therapeutic and medical as well as social. Generally speaking, it concerns the scope and quality of support concerning either the change of a child adapting his or her to existing system or openness to a child and its needs.

Concepts of the scope of special support for pupils are based on separate assumptions The first one provides necessity to organise special learning conditions and wide range of help for disabled children, including the presence of two teachers in a class. As A. Twardowski states (2007, p.19) it has been affirmed that the presence of special education teacher in a class encourages the rest of teachers to leave awkward teenagers to them because they will better diagnose them, prepare corrective actions and provide proper educational services. As a consequence, a pupil spends more time under the supervision of special education teacher as well as under their educational methods and equipment used by them what paradoxically causes that mutual learning is less and less mutual and it moves education closer to segregated teaching.

In conclusion, after T. Zacharuk (2011), it may be assumed that integrated education allows children to maintain contacts with others but educational process shall consist adapting a child to existing system on the basis of rehabilitation, equalization and therapy. In multinational or multicultural countries, integrated education shall lead to assimilation of culture of the guest country and adaptation of this culture as its own on the basis of reorganisation of cognitive and social structures what raises concerns of certain groups and becomes a source of ethnic, racial or religious conflicts.

The second concept of inclusive education is based on the social model and assumes that each school should be prepared to admit disabled pupils. All teachers are responsible for the education of these pupils in mainstream classes. A. Twardowski (2007, p.20) claims that in order to ensure a high quality of inclusive education it is necessary to reform the schools in order to create such conditions in which all or the vast majority of pupils could learn in a normal class. The class should be led by one teacher, and special education teachers' help should not be too frequent and related to tasks which cannot be performed in a normal classroom. According to him, specialist assistance should be directed also to teachers of mainstream classes, in the form of training, advice or consultation. These are assumptions concerning the concept of

inclusion in the integration, which involves the creation of educational models for children with special educational needs in the least restrictive environment. According to Żółkowska (2007, p.46), it means that individual pupils with evaluation for special educational purposes are learning in classes. However, inclusion concerns not only placement of a child in a publicly available institution but also making such changes in school in which their offers will fulfil needs of all pupils and create supporting system allowing pupils to function in natural environment.

This perception is consistent with the philosophy of inclusive education. This philosophy is all about opening up the system to social equality in broader sense, to human rights, to multitude and diversity of pupils' needs, as well as creating community free from all forms of segregation, remodelling social attitudes towards different people, not just those with disabilities.

The assumptions of inclusive education and the chances of its implementation in Poland

A. Firkowska-Mankiewicz (www.abcd.edu.pl) claims that inclusive education *"acting on the assumption that* ***all children can have and have the right*** (underlined by A.S) *to study in generally accessible schools which are near place of their residence - it focuses on how to effectively teach and how to ensure them a sense of belonging to a school community. Therefore, inclusion does not mean assimilation, i.e. it does not try to fit all children to one pattern. Flexibility is its basic principle – i.e. recognition that children can learn at a different pace, and teachers should be able to support their learning in a way which is adapted to their diverse needs, abilities and pace of development"*. The philosophy of inclusive education itself is not new and is deeply rooted in the paradigm of teaching and humanistic psychology (subjective treatment, differentiation of requirements, customization of development), and its specific nature lies in opposition to any exclusion in education, manifested in segregation or adaptive teaching system. It is well illustrated by the UNESCO – inclusion is seen as a process of meeting the diverse needs of all children, youth and adults by increasing their participation in learning, culture and social life, as well as eliminating all forms of exclusion in education (Firkowska-Mankiewicz, 2014). These are undoubtedly progressive and modern views, but at the same time utopian assumptions in times when people's rights are violated even in highly developed countries.

Inclusive education refers to the restructuring of education, politics, and culture in order to match the diversity of pupils in places of their residence (Zacharuk, 2011).

UN and UNESCO are leaders of changes, the World reports on the state of education as well as proponents of inclusive education, which are derived from multicultural countries, mainly Anglo-American. Their solutions trigger heated debates in Poland and despite they continue to reform education, they encounter barriers to understanding and implementing resistance. Let us consider why? Do all children and young people – even those with very different behaviours and ways of learning, for example children with deep degree of mental retardation, mental illness, self-injurious or soaked with deep social pathology – must participate in mainstream education? Do different ways of including children who are different in one range are

appropriate for children with differences in many ranges? Are examples of good solutions in educational practice publicised? etc.

Basic assumptions and practical solutions for inclusive education can be found in books written by P. Mittler and D. Mitchell[2]. Mittler (2000) underlines that this term is not synonymous with integration. Starting from the assumption that society and its institutions are oppressive, discriminatory and debilitating, he puts an emphasis on eliminating obstacles preventing people – "others" (in various ways) from participation in social life. Removing obstacles can be expressed by changing institutions, law and social attitudes that contribute to the production and maintenance of mechanisms of exclusion.

Here are the assumptions:

- all children go to school in the neighbourhood and attend regular classes with appropriate support,
- all teachers accept responsibility for all pupils and get appropriate support and opportunities for professional development,
- schools re-evaluate their values: remodel their organization, the curriculum and assessment methods in order to overcome barriers for learning and participation of pupils and to take care for full range of pupils in their own school and in local community (Marszałek, 2008, p. 98-99).

The reading of the proposed solutions concerning organisation and teaching leads to the conclusion that these are not "revolutionary" and the unknown to us proposals. Their fairly general statements have a universal character, and rare examples refer to the conditions of other educational systems. However, we can discern parallels in the organization of the teaching process, differentiation of requirements, the use of different, including cooperative, methods and forms of learning, student assessment and feedback, collaboration with parents and the presence of a teaching assistant teacher in the classroom. Polish education has extensive experience and literature on these topics, while changing this theory into practise depends on many factors, e.g. school management and determining its mission, community of teaching staff, need to change the working conditions, motivation and professional advancement of teachers, their passion and commitment to work, and perhaps above all, from mental readiness to accept more and more tasks. Solutions at the central level has been regulated successively by the ordinances of MEN for several years, and ways of applying the recommendations to the reality remain the responsibility of the school community and individual teachers.

[2] Peter Mittler, an advisor on special education of many global organizations such as the UN, UNESCO, the author of the book "Working Towards Inclusive Education. Social Context." published in 2000 by Taylor & Francis, in which study was prepared by Anna Wyka from PAN (Polish Academy of Sciences). The study is posted on the website of Centrum Metodyczne Pomocy Psychologiczno-Pedagogicznej (Methodological Centre for Psychological-Educational Support). Second book - written by David Mitchell, "What really works in special and inclusive education. Using evidence-based teaching strategies**"** The book was translated into Polish by A. Firkowska-Mankiewicz.

To illustrate the thesis I will use several thoughts from above mentioned studies, and I leave reflection and assessing to what extend are the thoughts, which have been implemented in the educational reality, known to the reader

Example of a directives for inclusive schools when it comes to organising teaching:

- lessons are constructed so as to take into account the diversity of pupils,
- lessons must be accessible to all pupils,
- lessons develops the ability to understand the difference,
- pupils are actively involved in their own learning,
- pupils learn through mutual cooperation,
- method of evaluation should serve as an encouragement for all students,
- discipline in the classroom is based on mutual respect,
- teachers plan, review the material and teach in the plane of the partnership,
- assistants who support teaching process (learning support assistants – LSA) should really support it and encourage each pupil to participate in classes,
- homework should contribute to the learning process of all pupils,
- all pupils take part in additional activities (Mittler 2000, p.116).

By contrast, 24 strategies developed by D. Mitchell are quoted for A. Firkowska-Mankiewcz (2014), who groups them into blocks concerning such issues as, inter alia, the teaching context (option of inclusive education, teaching in cooperating groups, the climate in the classroom), cognitive and behavioural strategies, assessment of learning outcomes and feedback, finally enabling technologies and creating the right conditions for learning). These guidelines and proposed solutions are the foundation for modern teacher training and for new challenges of civilization. They should also be for them a guideline to improvement and self-education.

Conclusion

The attempt to organize the etymology of the concept of inclusion in school education allows the conclusion that the inclusive education concerns all students for whom school education is not a benefaction, not only those pupils who are perceived as pupils with special educational needs (Mittler, 2005).

Inclusive education is a field of both, special education and general education. Inclusive education is not a permanent state but the process of wide-ranging changes in the restructuring of schools at global and local levels.

The experiences gained from segregated and inclusive education, and education which include six-year-pupils into mainstream schools, on the one hand can be a warning, on the other hand it can be a chance for implementation of the “novelty” in schools. They entitle to scepticism towards the implementation of idea of inclusive education in the long run. As the data shows, the number of children covered by the mandatory education at the primary level has significantly increased in the 21 century. Still, about 130 million children in the world (including 800,000 girls) do not have access to education even at the primary level, and signs of segregation in access to education are also present in systems of highly developed countries (Szczepska-Pustkowska, 2009, p. 145). It seems that the right assumptions can bring benefits in the form of deepened knowledge of cultural and ethnic differences, anti-discrimination, promoting tolerance and consequently, can create motivating

environments, which stimulate and are open to the needs of all people. By contrast, inclusive education which is implemented mindlessly when diversity among pupils is large, can make it difficult to determine school requirements for them, contribute to neglecting the needs of children or engaging in sham operations, which will paradoxically adversely affect their interests. As a consequence, it leads to a decrease rather than improvement in the quality of education.

Research and reality shows that achievements of students, regardless of the type of school in which they are taught, depend on good teachers who are responsible for the quality of their work. The effects are achieved in the educational, personal and social dimension. A wise and involved teacher, in cooperation with parents and the school community in all possible aspects, facilitates education in a mainstream school to a child. If there is a need for a decision on a different concept of education, a teacher will choose it for the good of a child and other children, because as mentioned by A. Twardowski (2007, p. 20), even with respect to disabled children ,,no country has succeed to cover all pupils with non-segregationist education, and at least 1% of children and young people of school age must be educated in segregated schools because of significant differences in their method of learning and behaviour".

Bibliography

Baranowicz, K. (2006). *Pozadydaktyczne efekty edukacji integracyjnej dzieci niepełnosprawnych*, Łódź: Wydawnictwo Uniwersytetu Łódzkiego.

Firkowska-Mankiewicz, A. (2013). *Edukacja włączająca – droga ku przyszłośc*i. Pobrane z www.abcd.edu.pl

Gajdzika, Z. (2007). Szkoła specjalna, W: T. Pilch (Red.), *Encyklopedia pedagogiczna XXI wieku*, p. 277-279. T.VI. Warszawa: Wydawnictwo Akademickie „Żak".

Hulek, A. (Red.). (1997). *Pedagogika rewalidacyjna*, Warszawa: PWN.

Kupisiewicz, Cz., Kupisiewicz, M. (2009). *Słownik pedagogiczny*. Warszawa: Wydawnictwo Naukowe PWN.

Lipkowski, O. (1981). *Pedagogika specjalna. Zarys*. Warszawa: PWN.

Maciarz, A. (2007). Dylematy edukacji specjalnej w klasach integracyjnych. W: Z. Janiszewska-Nieścioruk (Red.), *Problemy edukacji integracyjnej dzieci i młodzieży z niepełnosprawnością intelektualna* (p. 33-41). Kraków: Oficyna Wydawnicza „Impuls".

Marszałek, L. (2008). Kompetencje nauczyciela w kontekście edukacji włączającej, W: T. Żegnałek (Red.), *Kompetencje nauczyciela edukacji początkowej* (p. 93-106), Warszawa: Wydawnictwo Wyższej Szkoły Pedagogicznej TWP.

Mittler, P. (2005). Praca ku edukacji włączającej. Konteksty społeczne, W: A. Wyka (Red.). *Nauczanie włączające*. Warszawa. PAN.

Mittler, P. (2000). *Working Towards Inclusive Education. Social Context.* Pobrane z: www. stowarzyszenie-razem.org/edukacja.

Szczepska-Pustkowska, M. (2009). Prawa dziecka, W: D. Klus-Stańska, M. Szczepska-Pustkowska (Red.), *Pedagogika wczesnoszkolna – dyskursy, problemy, rozwiązania.* Warszawa: Wydawnictwo Akademickie i Profesjonalne.

Twardowski, A. (2007). Dylematy integracyjnego kształcenia dzieci i młodzieży z niepełnosprawnością, W: Z. Janiszewska-Nieścioruk (Red.), *Problemy edukacji integracyjnej dzieci i młodzieży z niepełnosprawnością intelektualną,* s.13-31. Kraków: Oficyna Wydawnicza „Impuls".

Zacharuk, T. (2011). Edukacja włączająca szansą dla wszystkich uczniów, Mazowiecki Kwartalnik Edukacyjny *Meritum*, nr 1(20). p. 1-7.

Żółkowska, T. (2007). Wybrane koncepcje edukacji integracyjnej, W: Z. Janiszewska-Nieścioruk, (Red.). *Problemy edukacji integracyjnej dzieci i młodzieży z niepełnosprawnością intelektualna,* p. 43-54. Kraków: Oficyna Wydawnicza „Impuls".

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INCLUSION AS A COMPONENT OF THE CONCEPT OF QUALITY PRESCHOOL EDUCATION

Summary: *The second half of the twentieth century has been marked by a systemic approach to the educational process intended for people/children with disabilities. Until then, the education of children with disabilities was exclusively related to special education schools, which were functionally independent of the general education system. The attitude and relationship of society towards children with disabilities and their isolation in special institutions caused a range of negative reactions. This leads to a new approach of a „social model", which promotes the inner strength of an individual, rather than the type and degree of disability.*

With the emergence of the concept of quality education for all, the more commonly used term is inclusive education. This term refers to the possibility to provide good education to all children regardless of their differences. Inclusive education in preschool institutions includes the following: changing the system to fit children; the educational process should include all children regardless of the type of their special needs; the preschool teacher and the institution are responsible for the development of children; flexibility of curricula; education of preschool teachers, teaching associates and the staff should be permanent; potential failure should be regarded as a problem of the society and system; enabling all children to develop and learn according to their potentials. Successful inclusion also helps the commonly developed children to form positive attitudes towards people with disabilities, which increases the potential for establishing social principles based on equality and ensures the promotion of a harmonious society.

Key words: *inclusion, child, preschool institution, preschool teacher, quality.*

Introduction

The second half of the twentieth century has been marked by a systemic approach to the educational process intended for persons with disabilities. Until then, the education of children with disabilities was exclusively related to special education schools, which were functionally independent of the general education system. This approach is the so-called "Medical model", which is unfortunately still present in many countries today. These are, in the first place, countries in transition and economically underdeveloped countries.

Within this model, people with disabilities are seen as a problem. The essential focus is on the impairment/difficulty that a person has. The aim of diagnostics and treatment was isolating the person/child from the natural social environment. Thus, this model has meant fitting children with disabilities in the world as it is. If the child is unable to accommodate to the demands of the environment, it remains isolated,

usually at home. This further implies that the child stays outside of the educational system and out of the possibility of involvement in community events.

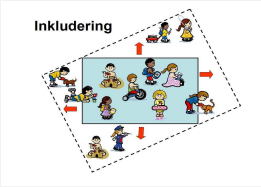
If the family is unwilling or unable to provide adequate care, the child is placed in a specialised institution.[3] In this way, a child with disabilities is completely dependent on other people and services whose involvement is necessary and crucial for their reintegration. The level of achievement of such a child is very low.

The attitude and relationship of society towards children with disabilities[4] and their isolation in special institutions caused a range of negative reactions. This leads to a new approach of a „social model", which promotes the inner strength of an individual, rather than the type and degree of disability. In the last few years the inclusion has become part of the concept of quality education. Preschools and other educational institutions should be open to diversity.

Inclusion: context and processes

Most often, inclusive education is defined as a process that combines a number of different strategies, methods and techniques of quality, open and equitable education. Daniels and Garner (Daniels and Garner (Eds.), 1999) defined inclusion as a process in which a child with disabilities is educated together with children who do not have these difficulties. At the same time the child is provided an equal opportunity to be recognised on the basis of their merits, regardless of how big cognitive, physical, social or emotional challenges those may be.

The characteristics that define inclusion are: access, participation and support. As one of the characteristics, access means: provision of a whole range of activities, the environment for each child where physical barriers are removed, as well as the ability to take on different ways to promote learning and development. Participation, as another characteristic, means that different strategies are used for engaging children in play and learning. In addition, each child has a sense of belonging. Support is the characteristics related to the broader aspects of the system, both to the professional development of teachers, and the possibility of communication and cooperation between the families and the professionals who provide quality inclusion.



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[3] These institutions are of a closed type, in which conditions often do not meet the standards of the child's overall development, or the specific needs of the individual.

[4] General category "A" - Disabilities: students/children with disabilities in medical sense, i.e. cognitive, physical, or sensory disabilities, as well as students/children with multiple problems. These students have so far usually been issued a medical report with categorisation. General category "B" - Difficulties: students/children who exhibit emotional problems or behavioural problems. This group includes students who have continuing problems in learning. General category "C" - Disadvantages: students/children whose problems stem primarily from socio-economic reasons, or the fact that they are being educated in a non-native language.

Therefore, this concept:

- ⇨ respects diversity;
- ⇨ identifies and removes barriers;
- ⇨ represents a gain for all children;
- ⇨ allows equal access to education (presence, participation and achievement of all children);
- ⇨ includes individualisation and children's mutual support;
- ⇨is related to the improvement of the learning environment

In our country, a large number of children with special needs are not included in the preschool educational process. The category of children with special needs includes: children with disabilities, bilingual children, children without parental care, abused children and gifted children. Disabled children (mental, sensory or physical disability) are only one category of children with special needs.

A special group consists of children with behavioural problems, which can only conditionally be marked as disabled children, but certainly belong to the group of children with special needs. The basics of the preschool education curriculum for children aged three to seven (2006) define and include as its functions the following:

- compensatory function of preschool education by mitigating differences among children resulting from children's different social, cultural and economic backgrounds;
- for children with special needs, through appropriate corrective action, preschool education provides education, care and increased social assistance;
- for gifted children, through special educational processes, preschool education creates opportunities for the expression and development of creativity.

Our country is currently implementing the following:

- compensatory programmes and social assistance when it comes to marginalised groups of children, and the inclusion of these children into regular kindergartens;
- organisation of seminars, lectures, professional training, etc. dedicated to inclusion. The inclusion of children with disabilities in regular kindergartens. Creating individual teaching syllabuses;
- creation of special syllabuses to stimulate gifted children in order to develop their creative abilities.

Preschool institutions which implement inclusions are characterised by the following:

a) they are available to every child, regardless of whether or not the child has developmental difficulties;

b) a maximum of two children with developmental disabilities are included in one inclusive group;

c) the basic criteria for the selection of a syllabus are the child's needs and the development of his abilities;

d) the syllabus is the same as in other educational groups in preschool institutions;

e) there are special stimulative programmes which are designed for children who have developmental disorders (made according to the Portage method, which

involves relying on the preserved abilities of the child. This method is based on the use of cards (in the process of interaction) that offer ideas and strategies to support development through reflective planning and the process of individuation. They have the capacity to adapt to the child's potentials and the preferred teaching style);

f) governed by the principle of graduality (each activity is divided into several elements that are learned independently, and then linked into a whole);

g) teachers are additionally trained to work with children who have developmental disorders;

h) programme is implemented through teamwork – for each child with developmental disabilities there is a team consisting of the parent, the child's teacher and an associate expert.

In practice, the common case is that the burden of inclusive educational practices is borne by the preschool teacher, and that the success of this process depends on his own abilities, whether the process occurs spontaneously or in an organised manner.

Inclusive education in preschool institutions includes: changing the system so as to fit children; the educational process should include all children regardless of the type of special needs; preschool teacher and the institution are responsible for the development of children; flexibility of the curricula; the training of preschool teachers, professional associates and staff should be permanent; potential failure should be considered as a problem of the society and system; all children should be allowed to grow and to learn in accordance with their own potentials.

Inclusive kindergartens should, therefore, be organised to fit the child. This means respecting the differences in the bio-psycho-social status of each child. A child with special needs should be accepted as it is and given the opportunity for self-realisation to the highest levels of their own capacities.

Curricular adaptations

In an institutional context, the humanistic approach to preschool education, as a contemporary pedagogical trend, starts from the child, the nature of his development and learning, as well as the needs for creativity and lifelong learning. Humanists emphasise that man carries a positive, developmental feature, moving toward value-based goals, towards some sense – i.e. self-actualisation. According to Maslov, self-actualisation is the ultimate goal of human needs and is manifested in the full development of human potential, moving towards greater autonomy and social responsibility. Namely, it is based on the natural tendency of man to gain knowledge, to develop potentials, realise himself and manifest the need for the autonomy, freedom and integration of his personality.

That is the basis for developing curricula and educational strategies which also include children’s families in the pedagogical processes. Educational contents in the modern preschool education are not required in advance, but are discovered and developed in line with children's developmental needs. Emphasis is placed on procedures and methods of work with children. The aim is to develop the independence and autonomy of children, to timely discover and develop their interests and meet the genetic needs for exploration, creation and cognition (learning). Children are not only monitored, but also encouraged in their daily creative activities. It is

important that children's learning and development opportunities are still constantly studied in numerous scientific disciplines. Some research suggests that expectations of parents and teachers largely encourage children to greater achievement (Stevanović, 2001).

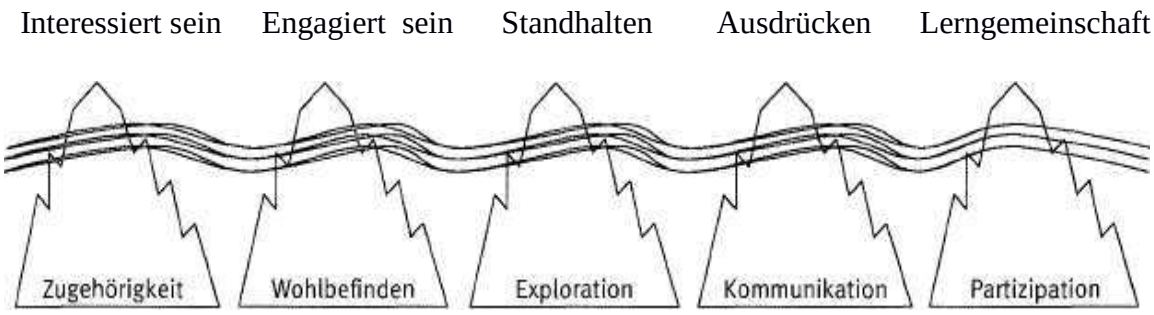
Today's educational and pedagogical work is fully focused on the child, and not on the contents or „areas", as has been the common practice so far. Focus on the child is an essential characteristic of the humanistic approach to preschool pedagogy. Therefore, the goal is to educate a free, independent and creative child with a full respect of their needs and interests. Competent teachers recognise them and use their methodological procedures to affirm them, expand them and continuously enrich them. Children are monitored so that their current level of development can be observed, including the zone of their potential (proximal) development. It has been found that during its growth every child goes through different stages of unchanged development, thanks to specific interaction with the physical and social environment, where the quality of the interaction is more important than its content. One of the most important goals is to discover the dissimilarity of each child in relation to other children.

Given the humanistic concept of access to preschool education, an approach is determined in terms of choice of contents and ways of their interpretive - creative redefinition (Stevanović, 2001). The humanist pedagogy recognises an individual as a unique, all-encompassing and complex personality who largely strives to realise their potential. Therefore, it is necessary to provide a climate of maximum support and minimal routing (Djordjević, 2000). The basic principle of humanistic education is the belief that the child should be free and in the position to choose what they want to learn, and that the way in which they will learn the contents (i.e. 'how') is more important than acquiring factual knowledge (i.e. 'what') and that feelings are as important as the facts themselves.

Dealing with the relationship between learning and the basic dimensions of dispositions, Margaret Carr presents them through the metaphor of the "Iceberg model" (Eisberg-Modell) (according to Leu, Flämig, Frankenstein, Koch, Pack, Schneider, Schweiger, 2011). She calls the curricula icebergs, whereby the tops of these icebergs represent learning, while the „underwater" parts show the dispositions of learning (belonging (Zugehörigkeit), welfare (Wohlbefinden), exploration (Exploration), communication (Kommunikation) and participation (Partizipation), which are difficult to detect and are present in children's activities. The relationship between the dispositions is interdependent. In order for children to develope an interest in learning, what is necessary is the experience of belonging. Welfare is a prerequisite for children to be involved in a certain activity. Therefore, it is important for preschool children, including children with special needs who attend preschool, to have a sense of belonging to the group and to feel comfortable in this environment. In a stimulating and developmentally oriented environment, children are motivated to develop strategies to successfully adopt certain contents. In such conditions, they are ready to face potential difficulties in the study process. Such an environment involves different resources and different ways of communication. Children participate in learning in their community through various activities, discussions, and planning process, if they are included in them. Learning dispositions are to be found in the "strands" of the curriculum.

Picture 1.

The “Iceberg model”



Characteristics of learning are visible through different situations and children’s activities. Carr believes that there is an interaction between what the child carries in itself and the environment. How much children will be able to pursue their interests and develop their learning skills depends on how much they are faced with certain situations and how reasonably accessible they are to the child. Developing dispositions may be limited if they are not appreciated enough, or are even considered completely irrelevant, says Carr.

The child’s Interest (Interessiert sein) for everything that surrounds it is a prerequisite for learning. Interests need not only be in the area of cognitive understanding. Children are also interested in learning when faced with certain situations resulting from a stimulating environment.

The child’s Involvement (Engagiert sein) is a very important component of learning. Therefore, it is important for a child to demonstrates a willingness to participate. The ‘involvement’ means that the child is dedicated to a certain topic for a period of time, analysing it and identifying it to a certain extent.

The child’s Perseverance (Standhalten) in an activity, or when it faces certain challenges and difficulties, is another important component of successful learning. This component also includes learning from one’s own mistakes. Mistakes and potential difficulties are part of the learning process. A particular challenge for the child is when they are offered contents that are almost above the best of their abilities.

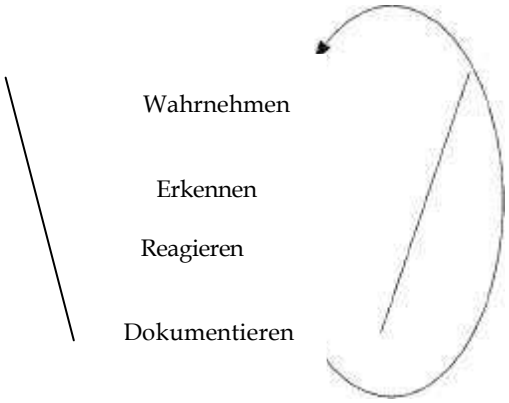
To Express oneself (Ausdrucken) is the fourth link in this model. During the learning process, children get into different forms of interaction with other children and adults, they express their ideas, needs, interests, and feelings.

The Learning community (Lerngemeinschaft) is the last link in the model. Learning prompts the child's responsibility. Learning in the community means that at least two children or a child and an adult participate in this process. So the child is in a position to provide information, develop strategies, make decisions, and explain things in communication and interaction with others in their own community.

Carr believes that the teacher is constantly exposed to various impressions and explains this by means of the “Progressive Filter” (according to Leu, Flämig, Frankenstein, Koch, Pack, Schneider, Schweiger, 2011).

Picture 2.

The “Progressive Filter“



When it comes to preschool children, including children with special needs, observation (Wahrnehmen) occupies most of the space. A professional preschool teacher must not restrict himself to mere observation, but should recognise (Erkennen) what essentially a child is doing in certain activities and in a particular context. The next step for this teacher is to react (Reagieren) in terms of planning further steps. This is followed by documenting (Dokumentieren) as part of systematic evaluation. The preschool teacher should document everything that is the result of their detailed perception. After documenting, the preschool teacher comes to the stage of exchange (Austauschen) with other teachers and parents in the “action area” – the teacher compares and complements their impressions of the child with what is important from the perspective of others. All these stages are in the function of monitoring the learning process in children, with the aim of supporting good practices.

Inclusive program in preschool institutions implies an open approach which includes:

1) dialogue with parents who have a child with disabilities on the characteristics of the inclusive programme and parental involvement in the team for the developmental support to their child,
2) organisation of parents’ meetings for all parents, both those who do not have and those who have children with disabilities, on the subject of the specifics of inclusive preschool programmes,
3) ensuring continuity in informing and involving parents in the life and work of the preschool in order to provide parents with insight into how their child is progressing,
4) creation of a developmentally stimulating atmosphere in the group and fostering collaborative rather than competitive relationships among children
5) application of the same strategy for all children in the group,
6) writing up an individual education plan for the child with disabilities on the basis of developmental and behavioural scales (filled in at the beginning and end of the school year), check lists of developmental milestones, as well as the sociograms, in order to determine the current level of the child’s performance in the group.

In an inclusive kindergarten there are benefits for: children without developmental disabilities, children with developmental disabilities, parents of children with developmental disabilities, parents of children without developmental disabilities and preschool teachers.

For children without developmental disabilities:

- ⇨ understanding and acceptance of diversity;
- ⇨ development of tolerance;
- ⇨ development of social skills.

For children with developmental disabilities:

- ⇨ social integration;
- ⇨ feeling of security and self-esteem;
- ⇨ fostering the development of children's preserved abilities in their natural environment;
- ⇨ acquiring knowledge and skills with peers;
- ⇨ development of communication skills according to possibilities;
- ⇨ better quality of life, also out of kindergarten.

For parents of children with developmental disabilities:

- ⇨ support, cooperation and partnership with the teachers in their children's upbringing;
- ⇨ feeling of acceptance - of them as parents of children with developmental disabilities;
- ⇨ acceptance of the child as special and with its own qualities;
- ⇨ strengthening of the parental role.

For parents of children without developmental disabilities:

- ⇨ developing empathic relationships;
- ⇨ acceptance of diversity;
- ⇨ positive experience, pleasure of socialising with other children, parents and teachers.

For preschool teachers:

- ⇨ raising the level of tolerance and respect for diversity;
- ⇨ improving the quality of educational work;
- ⇨ strengthening teamwork.

The introduction of inclusion is a process that requires competence, time and emphasised voluntary component of all stakeholders.

Conclusion

Humanistic approach to preschool education ensures the development of children's autonomy, their ability to make decisions within the limits of their capabilities and competencies. In modern preschool institutions the child is being asked, and his suggestions and opinions re respected. It is most often an active participant not only in kindergarten, but also in his family. It is important to monitor the child's development of the child and his daily needs, and to have full confidence in the psychophysical capabilities of the child. This is why the preschool teacher must always bear in mind the developmental level that the child is currently on, the level which it is about to move to, and the strategies to be used for its further development, taking into consideration all these developmental stages. Children's needs and interests

as a starting point for a planned, systematic, continuous and harmonious development of every individual.

With the emergence of the concept of quality education for all, the term inclusive education has become more common. This term refers to the possibility of providing good education for all children, regardless of their differences. Successful inclusion also helps children of normal development to acquire positive attitudes towards people with disabilities, enhancing the possibility of establishing social principles based on equality and ensuring the promotion of a harmonious society.

Bibliography

Bogavac, D. (2009). New epoch education through pedagogical discourse prism. У: *Образование и наука в третьем тысячелетии*. Сборник научных трудов. Барнаул (Русија).

Copple, C., Bredekamp, S. (2006). *Basics of developmentally appropriate practice*. Washington, DC: National Association for the Education of Young Children.

Daniels, H., Garner, P. (Eds.) (1999). Inclusive Education: Supporting Inclusion in Education Systems. World Yearbook ofEducation. London: Kogan Page.

Đorđević, J. (2000). *Reformni pedagoški pokreti u XX veku*. Beograd: Učiteljski fakultet.

Leu, H.R., Flämig, K., Frankenstein, Y., Koch, S., Pack, I., Schneider, K., Schweiger, M. (2011). Bildungs- und Lerngeschichten. Berlin: Förster & Borries GmbH & Co. KG.

Opšte osnove predškolskog programa (Pravilnik) (2006). Beograd: SL- Prosvetni glasnik.

Radovanović I., Kovačević J. (2006). *Pripremljenost nastavnika redovnih škola za inkluzivno obrazovanje*. Beogradska defektološka škola, br. 2, p. 195-212.

Stevanović, M. (2001). *Predškolska pedagogija 1 i 2*. Tuzla: R & S.

Tietze,W., Gűnther Rossbach, H., Grenner, K., (2005). *Kinder von 4 bis 8 Jahren*, Műnchen.

Chapter II

Special educational needs of different education subjects

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SPECIAL NEEDS CHILDREN IN INCLUSIVE EDUCATION

Summary: *The aim of this study was to examine what problems are most commonly encountered by students with special needs throughout their education in mainstream schools, the attitude of students with special needs towards the school and school work, relationships with peers and teachers and teacher attitudes towards inclusive education. The sample included 136 teachers in 6 regular primary schools and 197 students with special needs from 3rd to 8th grade of primary school. The study was based on a specially designed questionnaire covering seven areas, each area consisting of 15 questions. The results showed that the most frequent category in the sample of special needs students was that of speech-language pathology and behavioural disorders; that pupils with special needs generally come to school regularly and are willing to go to school; that they have the best communication with peers in the class; there is a positive attitude towards providing peer support and help to the children with special needs; and that the relationship with teachers is based on mutual acceptance. Concerning teachers' attitudes related to the support to the implementation of inclusive education, a vast majority of the respondents are of the view that inclusive education should be supported, but with a special needs professional as a permanent member of the expert team.*

Key words: *special needs students, inclusive education, impairments, disability, suport.*

Introduction

Inclusive education is a topic that has been a subject of many studies and that encounters many challenges in the policy development and implementation processes. Inclusive education promotes the idea of quality education for all, providing equal opportunities to all children, especially those with developmental disabilities, to an education based on their individual possibilities and abilities. Education should recognise that all pupils are different and should even celebrate these differences because they are the stuff of life (Wedell, 1995). Inclusive education concepts range from narrow views, according to which inclusive education is an attempt to educate persons with intellectual disabilities through a greater integration into regular structures of educational system (Michailakis, Reich, 2009), to wider definitions that see inclusive education as a guiding principle which helps to provide Education for All (EFA) – educational systems that would benefit from differences, in order to build a more just, democratic society (Acedo, 2008). This current view on education may be considered in light of the democratic-oriented principle, which is part of a larger issue concerning social justice (Howe, 1997; Meijer, Pijl & Hegarty, 1997). The democratic-oriented principle means that every individual has an equal right to

participate in society and to be accepted for what she or he is. Within this view heterogeneity and pluralism are positive, and everybody is entitled to ask for special services without the risk of being segregated or excluded. The consequence of this ideology for education is therefore a single, inclusive school system where different groups or individuals should be together without shedding their distinctive identities or suffering any disadvantage because of them (Haug, 2000). Inclusion is seen as a process of seeking and finding answers to the diversity of needs of all learners through greater participation in learning, cultures and communities and less exclusion within and from education (Booth, 1995). It involves changes and modifications in content, approaches, structures and strategies, with a common vision which involves all children of the appropriate age range and with the belief that education for all children is the responsibility of the regular system (UNESCO, 1994). The goal of 'responsible inclusion' is to place all pupils in general education classrooms, unless their academic and/or social needs cannot be adequately met there (Vaughn, Schumm, 1995).

This concept has been accepted by the Republic of Serbia as well, which means that inclusion will take place in accordance with society's ability to provide adequate support services in the child's neighbourhood school (UNESCO, 1995).

Hence, the inclusion, as a two-way adaptation, is a process open and linked to the recognition and acceptance of the child`s identity (Canevaro, 1983). The definition of inclusion, as provided by us, means that inclusion in Serbia is "education for all". This means education of impaired with unimpaired peers in same classes with different educational needs (Kovacevic, Maćešić-Petrović, 2012). According to Soder (1986) distinction should be made between physical, functional and social integration. Physical integration means the placement of pupils into regular schools but without necessary communication and without common activities; functional integration means the least possible distance between groups, while social integration means carrying out some activities jointly, using common equipment, space, etc. at the same time. Inclusive education requires the implementation of flexible curricula, maximum individualisation in creating teaching contents and applying different methods of work, elimination of architectural and other barriers, more adequate preparation of teachers and equipment in schools with various teaching materials and teaching aids, but also changing the views about the needs, abilities and capacity of pupils with developmental disabilities. However, the debate about inclusion has evolved, and it is now acknowledged that issues of physical placement must be distinguished from issues related to the social and emotional environment (Powers, 1996, 2002).

Effective educational system should respond to the needs of children and students with disabilities and special needs (children with developmental impairments), who need an organised support from the community, educational institutions and society as a whole, in order to achieve the guaranteed right to accessible and quality education under equal conditions. However, the setting, in which the new strategies and legislation related to education need to be implemented, is burdened with serious obstacles, including systematic institutional, social and psychological barriers (discrimination, prejudices and stereotypes in the society in general and in schools), lack of preparation and motivation of teachers to work in mixed classes, legislative obstacles from the previous laws and ultimately, poverty. All

these factors represent potential problem areas for the implementation of inclusive practices (National Report for Serbia, European Training Foundation, 2009).

Material and methods

Study objectives

The objective of the descriptive study was to find out the problems most often encountered by the pupils with special needs in the course of education in regular schools, the attitude of the pupils with special needs towards school and school obligations, relations with their peers and teachers, and the attitude of teachers towards inclusive education.

Methods, tools and techniques

A specially designed questionnaire was used for the purposes of this descriptive study. We included the techniques and instruments with representative questions (questionnaire and check lists).We also included an interdisciplinary team of educators in the preliminary research. The instrument was developed in a simple form of interview or a request for an opinion.

Before applying the final version of the questionnaire, we conducted a preliminary study on the basis of which a revision of the implemented questionnaire was done, so that the final questionnaire contained seven areas:

- the results relating to the attitude of the students with special needs towards school obligations, unimpaired peers and teachers;
- school achievement
- educational problems encountered in their work; and
- teachers' attitude towards inclusive education.

Each studied area contained fifteen questions. The questionnaire consisted of multiple choice questions, with the respondent being obliged to choose one of the possible answers. The statistical analysis of the data included descriptive statistics (frequencies and percentages).

Sample

The sample consisted of 136 class and subject teachers from primary schools (three regular schools from the administrative centre and 3 regular countryside schools) and 197 students with special needs. The structure of the sample which consisted of teachers was: regarding gender - 76.1% of female respondents and 23.8% of male respondents; regarding the length of service - 12.4% with up to 5 years of service, 29.7% of respondents with length of service of 6 to 15 years, 38.1% of the length of service from 16 to 24 years and 19.7% with over 25 years length of service; in respect of the location of schools, the sample included 46.0% respondents from regular primary schools located in the Belgrade (urban) area and 54.0% from regular primary schools located in the countryside (rural area). The structure of the sample of special needs students consisted of students from 3rd to 8th grades of primary schools, 36% of them being male respondents and 64% female respondents.

Results of the study and discussion

The results are presented according to the area of study and are classified into four groups:

1. Pupils with special needs in regular school.
2. Attitude of the special needs students towards school obligations (school performance and respecting school rules).
3. Relations of the special needs students with unimpaired students and teachers.
4. Support to inclusive education.

1. Pupils with special needs in regular school

In the last twenty years the terms invalidity, handicap and backwardness have been replaced with the term special needs. In fact, even in the Declaration on the Rights of the Child, adopted in 1959, Article 5 stipulates that a child who is physically, mentally and socially backward, should enjoy special procedures, education and care dependent on his special conditions. It was then for the first time, more than fifty years ago, that the term „child who requires special conditions" was used, but the official term of the child with special needs, which in time became an integral part of many legislative and school acts, came into use after the Salamanca Conference, held in 1994. This was when the „Report on the principles, policies and practices of education of children with special needs" and the „Draft Action Plan" were adopted.

Children with special needs are children who need special social support in order to achieve or maintain an appropriate level of physical, intellectual, emotional and social development.

Special needs arise from complex interactions of personal and environmental factors, and can be seen as a discrepancy between the emotional, social and other requirements essential for learning, which are placed before a child and the resources that the child possess to be able to respond to these demands. Special needs arise as a result of factors or conditions that prevent „normal" learning and development of children / persons (Kovačević, 2011).

Children with disabilities are only one category of children with special needs. Terminological equalisation of a child with special needs and a child with disabilities is an attempt to avoid stigmatisation and any form of discrimination of this category of children. In this way, attention is drawn to the need for functional assessment of physical and mental status of the child, in order to define both damaged, and preserved functional capabilities of a child, including the family situation, as well as the relationship to the wider environment. The existence of certain limitations in the functioning of the disabled child points to the need to seek different, special ways, which would compensate for the shortfall and encourage the development of his personality. This is so because the specificity of development of the disabled child is not reflected in the fact that it does not possess many features that are present in a child with normal development, but in the fact that the disturbed balance of adaptive functions, the entire system of adaptation that seeks new balance, is reorganised according to the new principles (Vygotsky, 1983). The boundaries of the new and different organisation of psychophysical development are determined by the social environment under whose strong influence the disabled personality develops and strives to achieve the common normal status. This is why disability turns into

a handicap when the present impairment becomes a sum of personal and social consequences of the impairment or when it receives a social character. What occurs then is a discrepancy between the achievement or condition of an individual and the expectations of a certain group to which he belongs. The handicap thus becomes a social phenomenon that indicates the social and environmental consequences for the individual arising from the impairment.

In their professional work teachers usually meet with students who have difficulties at the emotional level (sudden changes in mood, readiness for frequent and groundless arguments, aggressiveness, feeling of anxiety, motor restlessness, sadness, indifference, and the more severe forms of depression), at the behavioural level (poor labour activity, bullying, truancy, avoiding common activities, developing various addictions), in the field of cognitive impairment (unclear presentation of thoughts, confused thinking, difficulty in focusing attention or memory), at the physical level (various psychosomatic reactions, frequent headaches, loss of appetite, sleep disturbances, chronic diseases and compromised function of the organ system), in the field of speech and language development (inadequate sound pronunciation, problems with the vocabulary and its development and restricted use, difficulties in understanding words, as well as in finding appropriate words, limited understanding of words, sentences, texts, difficulties in following speech, limited ability of expressing oneself, decreased ability to speak, grammatical problems-agrammatism).

The results of the study (Table 1) show that the tested regular classes most commonly included students with speech disorders, especially with the pronunciation of sounds and disorders of rhythm and speech tempo (18.75%), students with behavioural disorders 18.18% (running away from school, a large number of absences, aggressive behaviour), as well as students with disabilities in reading and writing - 14.77% of them, students with intellectual limitations – 13.92%, while the least represented students were those with visual impairments (5.39%) and students with hearing impairments (2.55%).

Table 1.

Students with special needs in regular schools

Students with special needs	**f**	**%**
Visual impairment	19	5,39%
Hearing impairment	9	2,55%
Physical disability	26	7,38%
Intellectual disability	49	13,92%
Emotional disability	34	9,65%
Behavioural disorder	64	18,18%
Speech impairment	66	18,75%
Reading and writing disorder	52	14,77%
Chronic disease	33	9,37%

2. Attitude of special needs students towards school obligations

Education means acquiring a broad range of skills, not only academic, but also life skills that allow a person to be as efficient as possible in adapting to changes in the environment. One of the goals of education for all children in most of Western Europe reads „the achievement of independence and individuality in functioning" (Brooks-Gunn, Denner, Klebanov, 1994, according to Čolin, 2005). Students' school performance depends on many objective, as well as subjective factors. However, for students with special needs who are integrated into regular classes, one of the significant factors is their attitude towards school and school work seen through their emotional attitude and behaviour during a lesson or in extracurricular activities.

The results show that 55, 32% of students with special needs come to school regularly (Table 2) and 49.74% of the students come willingly to school (Table 3); that 24.87% are occasionally absent, while 19.79% of students with special needs are often absent from school; that 25,88% are indifferent to school, while 24.36% of students with special needs refuse to come to school. Students with special needs generally feel fine at school (44.16%), 24.36% manifest anxiety and fear, while 17.76% express concern (Table 4). Regarding discipline in class and respecting the rules, they are generally quiet with occasional outbursts of 30.96%, while 19.79% are always restless and unruly (Table 5). In relation to school performance (Chart 1) the largest number of students show excellent and very good academic achievement (32.8%; 21.2%), while 12.5% of students show unacceptable school performance. Regarding the subjects provided within the curriculum, they experience most problems in acquiring the contents in Mathematics and the Serbian language (15.5% achieved excellent grades in the Serbian language and 12.6% achieved excellent grades in Mathematics), while their best performance is related to the subjects which include manual activities such as physical education and art (85% of them have an excellent mark).

Table 2.

Regular attendance

School attendance	f	%
Often absent	39	19,79
Occasionally absent	49	24,87
Regularly present	109	55,32
Total	197	100.0

Table 3.

Special needs children's reactions to school attendance

Children's reactions	f	%
Come willingly	98	49,74
Indifferent	51	25,88
Refuse to come	48	24,36

Table 4.

Emotions while at school

Emotions	f	%
Feeling fine	87	44,16
Anger	27	13,70
Concern	35	17,76
Anxiety and fear	48	24,36

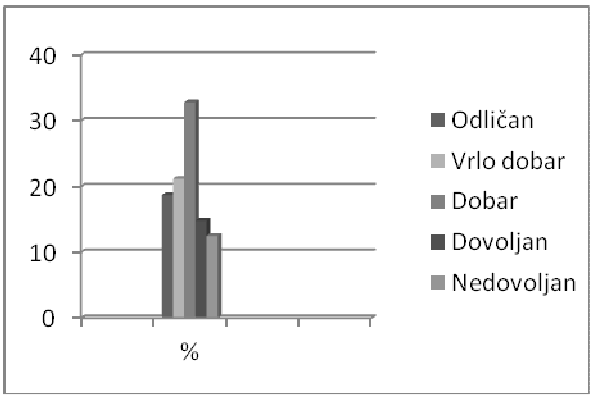
Table 5.

Discipline in class and respecting the rules

Behaviour and rules	f	%
Always unruly and restless	39	19,79
Generally restless and unruly	54	27,41
Generally quiet, with occasional outbursts	61	30,96
More quiet and obedient than other children	43	21,82

Chart 1.

Academic performance of students with special needs



3. Relations of special needs students with unimpaired students and teachers

In many countries, inclusion of pupils with disabilities is a core element of educational policy. Stinson and Antia (1999) define social integration as the ability to interact with, make friends with, and be accepted by peers. From the studies available, it appears that pupils with disabilities in mainstream education often have few friends, have less interaction with peers from typical population, and are more often rejected or neglected than their peers from typical population. In addition, they may feel isolated and lonely (Kluwin, Stinson, Colarossi, 2002; Musselman, Mootilal, MacKay, 1996; Stinson Antia, 1999; Stinson Kluwin, 2003). Therefore, for children to accept a child with special needs, they need to be prepared for the differences that they will be faced with. Teachers in the educational institutions should provide children with adequate and clear information about certain developmental disabilities, in a language that is understandable to them, and demonstrate through their own behaviour that they accept

the child. The preparation should give children the opportunity to learn what it means to be different and have a developmental disability. It is important to present a student with special needs in a positive light, as a child who can do many things well, while at some activities he will need help, which will thus encourage other children to think about how they can help their peers with special needs (Kovačević, Maćešić-Petrović, 2012). Attitudes of students towards their peers with special needs have been in the focus of many authors' studies (Guralnick, 1990; Gross, 1993; Acton and Yarbatany, 1993; Rynders et al., 1994; Grenon, 1996; Helmunt, 1997; Haug, 1999). Their studies indicate that a one-year period of learning spent in an established, integrated preschool environment has a positive effect on the process of inclusion and raises social integration to a level that can be compared with the children of proper mental and physical development. At the same time, the results of these and similar studies have influenced the creation of different models of educational work with children with special needs in various countries.

The primary condition for establishing a positive attitude of teachers towards students with special needs is getting to know the students with special needs, i.e. their limitations, and possibilities in relation to the secondary effects of their primary impairment. Teachers are expected to be able to recognise how they could encourage the emotional and social development of students, to provide adequate support, to know about the different types of motivation and ways to motivate students and to be able to identify, mobilise and encourage the development of the capacities of all students while showing respect for individuality. However, in practice it happens that most of these conditions are not met. Due to the lack of knowledge on the educational capacities of children with special needs, teachers often form a negative attitude, which also tends to develop negative attitudes in peers towards their classmates with special needs (Kovačević, Maćešić-Petrović, 2012).

The results show a relatively equal acceptance of students with special needs by their peers in the classroom and outside the classroom (29.44%), as well as acceptance only in class, but with no socialising outside of the classroom (24.87%). However, it is encouraging that 23.35% of peers help their peers with special needs to establish communication with other children (Table 6). In communication with the teacher (Table 7) mutual acceptance is exhibited (64.97%). The presented results indicate that there is a positive atmosphere within the class, but there more effort should be invested in the acceptance of peers with special needs outside the classroom, i.e. in the wider social environment, especially in other school activities that are not exclusively related to the teaching process. A positive attitude of more than a half of the teachers towards students with special needs in a class shows that teachers are relatively adequately informed about the real potentials and possibilities of integrated students with special needs.

Table 6.

Attitude of peers towards special needs students

Attitude of peers	f	%
Accept them both inside and out of the classroom	58	29,44
Help them and establish communication with other children	46	23,35
Accept them in the classroom, but avoid socialising out of it	49	24,87
Often tease them and mock them because of their disorientation with school work	32	16,24
Do not accept them	12	6,09

Table 7.

Attitude of special needs students towards the teacher

Attitude towards the teacher	f	%
Mutual acceptance	128	64,97
Accepted by the teacher but does not respond equally	57	28,93
Mutual non-acceptance	5	2,53
Indetermination	7	3,55

4. Support to inclusive education

Still inadequate preparation of regular schools for the implementation of inclusive education in terms of existing architectural and other barriers, lack of competence of teachers to work with children with special needs, insufficient preparedness of families and unimpaired children, still a large number of students in classes and grades, inadequate technical support in assistive technology, inadequate assistance in professional services, as well as many present prejudices about the abilities and skills of children with special needs are just some of the factors that contribute to the existence of still negative attitudes of teachers towards inclusive education. The results have shown that 8.88% of the class and subject teachers support inclusive education, 43.38% do not support the implementation of inclusive education, while 47.79% would support its application with a special needs expert as a permanent member of the professional team (Table 8).

Table 8.

Support to inclusive education

Support to inclusive education	f	%
Yes	12	8,88
With a special needs expert as a permanent team member	65	47,79
No	59	43,38
Total	136	99,98

Conclusion

The inclusion movement is responsible for the development of the social model whose essence is the view that disability, which objectively exists, should not be denied and that the persons with developmental disability are excluded from the society not only due to their impairment, but also due to insufficient knowledge about their abilities and capacities, present prejudices and fears. Inclusion itself does not mean equalising all people, but rather, respecting differences in each individual. Inclusive education allows different forms of schooling, which provides for such conditions where each child feels safe, accepted and valued. Inclusion develops a new attitude towards differences, i.e. towards different abilities. The approach conceived in such a manner raises many questions, the answers to which should be thoroughly analysed and tested in concrete practical circumstances before any further steps are decided on. Advancing the educational inclusion of disabled children requires consideration of issues of definitions, data, policies, service delivery, finance, and capacity development. Policy commitment to inclusion, with related actions, is the critical issue, rather than one particular model of inclusion (Bines, Lei, 2011).

We made similar conclusions in our research. Inclusion is indeed a process consisting of many small and big steps that take time, phased introduction and, above all, careful consideration. The results of the presented study reveal that pupils with special needs are integrated in regular classes but, due to as yet inadequate preparation of regular schools, they are faced with numerous educational problems. However, the data obtained show that the attitudes towards the capacities of children with special needs are changing and that with adequate expert support and support of the community teachers will be ready to support inclusive education.

Bibliography

Acedo, C. (2008). Inclusive education: pushing the boundaries. *Prospects*, *38*, p. 5-13.

Acton, H.M., Yarbatany, L. (1993). Interaction and Performance Within Cooperative Group: Effects on Nonhandicapped Students Attitudes Toward Mildly Mentally Retarded Peers. *American Journal on Mental Retardation*, 93, (1), p. 16-23.

Bines, H., Lei, P. (2011). Disability and education: The longest road to inclusion. *International Journal of Educational Development*, *31*, (5), p. 419-424.

Booth, T. (1995). Mapping inclusion and exclusion: concepts for all? In C. Clark, A. Dyson & A. Millward (Eds.), *Towards Inclusive Schools?* (p. 96-108). London, David Fulton.

Caine, R. N., Caine, G. (1991). Making connection: *Teaching and the human brain*. Alexandria,VA, Association for Supervision and Curriculum Development.

Canevaro, A. (1983). *Handicap e scuela manual per I. Integrrazione scolastica*. Roma: La nuova Italia scienifica.

Čolin, T. (2005). Education of Atypical Children in Typical Environment: US experience. *Korak ka,* Belgrade: Bulleting for people without bias, Serbia, p. 3, 20.

Grenon, L. (1996). *Education Characteristics and Barriers in Canada. Entourage Inclusive Education* Vol. 9, (4), p. 18-20.

Gross, J. (1993). *Special Education Needs in the Primary School*, Open University Press Celtic Buckingham.

Guralnick, M.J. (1990). Social Competence and Early Intervention, *Journal of Early Intervention*, United States: 14, (1), p. 3-4.

European Training Foundation. (2010). Country Report for Serbia. *Mapping Policies and Practices for the Preparation of Teachers for Inclusive Education in Contexts of Social and Cultural Diversity*. Belgrade. Retrieved from ETF database: http://etf.europa.eu/webatt.nsf/0/C12578310056925BC125772E002CAB00/$file/NOTE85SBJV.pdf

Hamby, J. V. (1989). How to get an „A" on your dropout prevention report card. *Educational Leadership*, *46* (5), p. 21-28.
Haug, P. (2000). *Regimes of Special Education Research. Trends in special education research in Norway*. Paper presented at the European Research Association Conference. Edinburgh, September, p. 20-23.
Haug, P. (1999). Formulation and Realization of Social Justice the Compulsory School for all in Sweden and Norway. *Special Needs Education*, 14, (3), p. 231-239.
Helmut, C.B. (1997). *Introduction to a Structure of Nord Rhine Westfallen Education System.* Defektologija, University in Tuzla, Faculty of Education and Rehabilitation, Bosnia and Herzegovina, 1, (1), p. 35-39.
Howe, K. R. (1997). *Understanding Equal Educational Opportunity. Social Justice, Democracy and Schooling.* New York, Teachers College Press.
Kluwin, TN., Stinson, MS., Colarossi, GM. (2002). Social Processes and Outcomes of Inschool Contact Between Deaf and Hearing Peers. *Journal of Deaf Studies and Deaf Education* 7:200–213.
Kovačević, J. (2011). *Dete sa posebnim potrebama u redovnoj školi*. Beograd, Univerzitet u Beogradu-Učiteljski fakultet.
Kovacevic, J., Macesic-Petrovic, D.(2012). Inclusive education – Empirical experience from Serbia, *International Journal of Educational development*, Vol. 32 br. 3, p. 463-470.
Meijer, C.J.W., Pijl, S.J., Hegarty, S. (1997). Introduction. In S.J. Pijl, C.J.W. Meijer & S.Hegarty (Eds.), *Inclusive Education. A Global Agenda, (1-7).* London, Routledge.
Meyer, H.(2001). *Turklinkendidaktik: Aufsatze zur Didaktik, Methodik und Schulentwicklung*. Berlin, Cornelsen Verlag Scriptor.
Michailakis, D., Reich, W. (2009). Dilemmas of inclusive education. ALTER, *European Journal of Disability Reaserch, 3,* p. 24-44.
Musselman, C., Mootilal, A., MacKay, S., (1996). The Social Adjustment of Deaf Adolescents In Segregated, Partially Integrated, and Mainstreamed Settings. *Journal of Deaf Studies and Deaf Education* 1:52-63.
Powers, S., (1996). Inclusion Is an Attitude Not a Place: Part 1. *Journal of the British Association of the Teachers of the deaf* 20 (2):35-41.
Powers, S., (2002). From Concepts to Practice in Deaf Education: A United Kingdom Perspective on Inclusion. *Journal of Deaf Studies and Deaf Education* 7:230-243.
Pugach, M., Warger, C. (Eds.). (1996). *Curriculum trends, special education, and reform.* New York, Teacher College Press.
Reynolds, M., C., Ainscow, M. (1994). Education of Children and Youth With Special Needs: anIinternational Perspective. In: Husein, T. and Postiethwaite, T.N: *The International Encyclopedia of Education* Oxford: PergarnonSoder, M.,1986. Social Integration of Mentally Retarded Children. European Seminar on the Social Integration of Mentally Handicapped Children and Adolescents. Hyvinkaa, Finland.
Stinson, MS, Antia, SD. (1999). Considerations in Educating Deaf and Hard-of-Hearing Students in Inclusive Settings. *Journal of Deaf Studies and Deaf Education.*
Stinson, MS., Kluwin, TN. (2003). *In Deaf Studies, Language, and Education, Educational Consequences of Alternative School Placements*, (Eds.) Marschark M, Spencer ME (Oxford University Press, New York), p. 52-64.
UNESCO (1994). *The Salamanca statement and framework for action on social needs education.* Publication ED-94/WS/18.
UNESCO (1995). *Review of the present situation on special needs education.* Publication ED-95/WS - 7.- UNESCO, (2005). Guidelines for Inclusion: Ensuring. Access to Education for All. Publication ED-2004/WS/39.
Vaughn, S., Schumm, J. S. (1995). Responsible inclusion for students with learning disabilities. *Journal of learning disabilities*, *28,* p. 264-270.
Voltz, D. (2003). Personalized contextual instruction. *Preventing School Failure, 47* (3), p.138-43.
Wedell, K. (1995). Making inclusive education ordinary. *British Journal of Special Education*, *22* (3), p. 100-104.
Выготский, Л. С. (1983). *Основы дефектологии.* Москва, Педагогика.

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INCLUSIVE EDUCATION IN A PRIVATE KINDERGARTEN

"[…] A man is doomed in every moment to discover,
to find a man".
Jean-Paul Sartre

Summary: *Content of the article concerns essential, current problem of society, that is inclusive education which assumes to prepare children having special educational needs to living and working in conditions of publicly available education, on the basis of integrated kindergarten.*

Historical overview of integration and its legal conditions are presented in the article. The authors describe functioning of integrated kindergarten and present Revalidation and Therapeutic Work Programme as well as parents' assessment concerning specific work of kindergarten.

Key words: *inclusive education, integrated kindergarten, Revalidation and Therapeutic Work Programme.*

According to the source literature, the term 'inclusive education' is treated as a synonym of integrated teaching (Wącek, 2008). The concept of integrated teaching has its roots in the trend promoting social integration of disabled people. This trend originated in 1960s in Denmark and in the countries of Scandinavia, in Poland it originated in the next decade. From the beginning, that is since 1970s, one of the first and the keenest supporter of this approach has been Aleksander Hulek who is a precursor of integration concept in Poland (Hulek, 1997).

The first attempts of integrated activities in Poland were made on the turn of 1980s and 1990s. Gradual development of integrated teaching and education ideas and the emergence of integrated classes took place at the beginning of the nineties (Popławska and Sierpińska, 2001). Despite functioning of integrated teaching and education as well as gained wide experience, the best practices in this field are being still looked for.

The beginning of the nineties contributed to the key changes in the development of integrated concept in Polish education system concerning political, economic and social changes. Since that time, we can speak of the second stage of the process concerning preparing and implementation of the integration of disabled people (Bąbka, 2001). The implemented Law on education system of 7 September, 1991[5] includes provisions concerning 'possibility for disabled as well as socially maladjusted

[5] The Act of 7 September, 1991 on education system, art. 1, no 4,5 and art. 2 no 1.

children and teenagers to learn in all types of school according to individual development and educational needs as well as predispositions' and 'adaptation of content, methods and organisation of teaching to psycho-physical possibilities of pupils as well as possibility for having psychological assistance and special forms of didactic work.' According to the art.2 of the law mentioned above, education system includes kindergarten with integrated departments as well.

When situation of integrated teaching in practice is being analysed, Wiącek (2008) believes that it is worth referring to K.J. Zabłocki's idea who suggests two models of integrated classes but in Poland the second one is in force. According to K.J. Zabłocki (2002, p.108): "The second model assumes that normal intellectual development is not a condition for educational integration – all children may be integrated with each other. Integrated class includes children with all types of disabilities. This model emphasises satisfying individual (social, emotional, didactic and others) needs of every child. The curriculum is adapted to individual possibilities of every child. Such situation in class requires new rules of functioning of class, new forms of didactic-educational process as well as the presence of two teachers – general and special ones. It ensures individualisation of teaching process of every pupil".

This model of integrated teaching is implemented, among others, in described Private Integrated Kindergarten in Stróże.

Private Integrated Kindergarten in Stróże has been operating since 2002. Foundation for Assistance to Disabled People in Stróże is the founding body. Substantive supervision is provided by Education Office in Nowy Sącz. Disabled children are directed to this kindergarten on the basis of opinion concerning the necessity of special education, issued by Psychological and Pedagogical Counselling Centre. Children come from different places of nowosądecki and gorlicki region, they are transported by bus, free of charge. Kindergarten is open from Monday to Friday, between 7.00 and 17.00 60 children including 10 disabled ones with different illnesses: mild or moderate retardation, infantile autism, movement disorders, are currently in the kindergarten. Several children suffer from multiple disability for example, movement and speech disorders. The staff is consisted of: headmaster, 8 teachers (including 4 of oligophrenopedagogy speciality, 4 of preschool education speciality), psychologist (working twice a week), speech therapist (working once a week) and physiotherapist (working once a week).

Activities of this institution aim to prepare children for learning in publicly available school (integrated classes) or in special school. Every year, staff of the kindergarten prepares Revalidation and Therapeutic Work Programme and individual plans for every disabled child.

Revalidation and Therapeutic Work Programme, presented in table 1 below, aims to provide a picture of work of the kindergarten. Detailed aims, methods, techniques adjusted to the degree of children development are determined in the programme. People responsible for programme implementation are determined as well.

Table 1.

Revalidation and Therapeutic Work Programme

Detailed aims	Objectives	Methods and techniques of work	People responsible for
1. Creation of favourable conditions for individual development of a child	1.Stimulating of children's activity	1.Verbal methods: conversation, chat 2.Practical methods: M. Bogdanowicz 'Metoda dobrego startu', P.Dennison 'Method of educational kinesiology', E. Gruszczyk-Kolczyńska 'Dziecięca matematyka', M.Ch. Knill 'Activity Programme', W. Sherborne 'Method of developing movement', I. Majkrzak 'Odmienna metoda nauki czytania'	Psychologist, speech therapist, special education teacher, teacher, tutor, physiotherapist
	2. Learning and acquiring skills in expressing feelings	1. Arts techniques: painting of music, painting during music works, painting with the use of fingers and feet, painting on the easels 2. Production of arts works with the use of different techniques	Teacher, special education teacher, tutor
	3. Development of musical sensitivity	1.Music therapy 2.Playing on the percussion instruments, learning to play the keyboard, listening to music, recognizing musical instruments in musical work, 3. Making simple musical instruments	Teacher, special education teacher, tutor, psychologist, physiotherapist
	4. Polysensory therapy	1.Stimulating of tactile, visual and auditory perception in 'world experience room'	Teacher, psychologist
	5.Rehabilitation	Hippotherapy	Hippotherapy instructor, special education teacher,
	6. Water therapy	Swimming classes	Instructor, special education teacher,
	7.Relaxation activities	1.Fairy tale therapy 2.Music therapy	Psychologist, special education teacher
	8. Preparation of individual programmes for working with children having special educational needs	1.Diagnosis of children on the basis of: analysis of the opinion of Psychological and Pedagogical Counselling Centre, analysis of 'diagnostic worksheet concerning child's development in kindergarten', observation cards and observation registers, interviews with parents	Psychologist, speech therapist, special education teacher, teacher, tutor, physiotherapist

2. Creation of favourable conditions for cooperation with parents	1.Preparation of effective information exchange system	1. Creation of 'Parents' corners' 2. Drafting letters to parents 3. Encouraging for reading of pedagogical magazines through proposal of selected articles 4.Preparation of the table 'Life of the kindergarten' for photos taken on ceremonies, parties and events 5.Preparation of schedule of individual consultations with parents 6. Preparation of questionnaire for recognizing parents' expectations, needs and assessment	Teacher, special education teacher, tutor
	2. Parental involvement in co-organisation of activities taken up by kindergarten	1.Stimulating parents' activity through: taking into account and consideration of their proposals, their participation in open workshops, involving them in organisation of the ceremony, personalised thank you cards in the form of 'Heart', diplomas	Psychologist, speech therapist, special education teacher, teacher, tutor, physiotherapist
3. Creation of support system for parents	1.Providing parents with the psychological and pedagogical knowledge	1.Preparing of the list of appropriate literature 2.Pedagogisation of parents 5. Counselling for parents	Psychologist, speech therapist, special education teacher, teacher, tutor, physiotherapist
	2. Creating conditions for enhancement of educational skills and working on themselves	1.Running workshops on selected subjects 2. Organisation of support groups for parents	Psychologist, speech therapist, special education teacher, teacher, tutor, physiotherapist

Source: Materials of the Board of Teachers of Integrated Kindergarten in Stróże.

Programme implementation is closely related to the assessment of behavioural progress of a child. Behavioural progresses of a child are assessed by the use of 'diagnostic worksheet concerning child's development in kindergarten' and it contains general information about a child including intelligence test result and type of disability. Self-service, general knowledge, logical and mathematical thinking, gross motor skills, eye-hand coordination, visual and auditory perception, verbal and non-verbal activity, social contacts with peers and adults, expressing emotions and body control are assessed in further part. Collected details aim to create and modify individual revalidation and therapeutic programme for a child.

It is also worth noting how do parents of disabled children assess revalidation and therapeutic work programme. Thus, anonymous questionnaire consisted of 10 questions and addressed to 10 parents, has been conducted.

Analysis of questionnaires shows positive image of the work of kindergarten. Regarding the question: ’Do you think that kindergarten has a positive influence on the development of a child?‘, all respondents marked ’yes‘ and justified that a child is independent, braver, establishes contact with peers willingly, speaks better and can listen. All answered that a child goes to kindergarten willingly. Surveyed parents (80%) give positive assessment of effects of revalidation and therapeutic work which, as some parents claim, strengthens muscles, improves walking, enhances better concentration of a child. Giving directions, advice and ways of doing exercises at home are 80% of parents’ expectations relating to specialist staff. Whereas, the skill of maintaining discipline, professional care, child’s affirmation, reliability in care and educational work, tolerance, patience and consistency are expectations relating to the whole kindergarten staff. All surveyed parents answered that they primarily expect kindergarten staff to have individual attitude to a child.

According to the headmaster, some parents of children, who are properly psychophysically developed, are not satisfied with the fact that their children stay with disabled ones. They believe that their children will be developing slower (the will not use their own capacity), learn disabling behaviours from disabled children. On the other hand, the headmaster notes that normal children acquire additional interpersonal skills: tolerance, empathy, understanding towards weaker children, willingness to care for them. School teachers (who the headmaster is talking to) emphasizes that children from integrated kindergarten are more socialized, mature, open, they communicate with others better.

It turns out that attitudes adopted by parents of children attending to kindergarten are important issues. According to the source literature, attitudes mentioned above may shape their children’s behaviours in different ways: imitation, identification, modelling. These ways become possible mechanism of parents’ roles and may contribute to shaping attitudes of their children (Pospiszyl,1998; Wiącek, 2008; Wolicki,1983). On the basis of analysis of literature concerning integration and functioning of integration in practice, the following conclusions are drawn:

- it is needed to acquaint children, teenagers and adults with basic types of disabilities,
- to motivate children, teenagers and adults to overcome barriers and fear of contact with disabled people,
- to make children, teenagers and adults aware of issues concerning disability,
- to shape positive attitudes towards disabled people,
- to encourage to eliminate stereotypes which exist in social awareness and concern disabled people,
- to take educational activities, in particular with parents, which aim to shape positive attitudes concerning inclusive education.

Benefits of these activities will be mutual for both non-disabled and disabled and for the whole society.

Bibliography

Bąbka, J. (2001). *Edukacja integracyjna dzieci pełnosprawnych i niepełnosprawnych-założenia i rzeczywistość*. Poznań: Wydawnictwo Fundacji Humaniora.

Hulek, A. (Red.). (1997). *Pedagogika rewalidacyjna.* Warszawa: Wydawnictwo Naukowe PWN.

Popławska, J., Sierpińska, B. (2001). *Zacznijmy razem. Dzieci specjalnej troski w szkole podstawowej*. Warszawa: WSiP.
Pospiszyl, K. (Red.). (1998). *Z badań nad postawami rodzicielskimi.* Lublin: UMCS.
Ustawa z dnia 7 września 1991 r. O systemie oświaty, art. 1, pkt 4,5 oraz art. 2 pkt 1.
Wiącek, G. (2008). *Efektywna integracja szkolna*. Lublin: Towarzystwo Naukowe Katolickiego Uniwersytetu Lubelskiego Jana Pawła II.
Wolicki, M. (1983). Naśladownictwo identyfikacja i modelowanie jako czynnik rozwoju dziecka w środowisku rodzinnym. *Problemy Rodziny,5,* p.18-25.
Zabłocki J. K. (2002). *Integracja szansą wychowania nowego pokolenia*. Płock: Wydawnictwo Naukowe NOVUM.

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PSYCHOMOTOR ORGANISATION OF SIX-YEAR-OLD CHILDREN

Summary: *This paper presents the results of a research which aimed to assess six-year-old children's physical development in terms of the organisation of their psychomotor lower and upper extremities ability, general bodily motor control, the coordination of movement and movement balance. Another aim is for preschool teachers to apply psychomotor organisation tests in order to diagnose children with healthy or immature motor skills and so get to know both the children as individuals and the group they are working with. In that way, they will be able to better plan their physical education and pedagogical activities in accordance with the children's age and individual abilities.*

The research results obtained on a sample of 40 six-year-old children show that there are significant differences between their indicators. The findings have shown that in three trials which assessed the organisation of psychomotor abilities of lower extremity, the motor control of the whole body and the balance of movement in the children yielded good results, which can be explained by a well-developed locomotion of six-year old children. However, the results of the tests which evaluated the organisation of their psychomotor abilities in the upper limbs and movement coordination are below average, which was attributed primarily to the factor of immaturity of this function that is established only at the end of the sixth year of life, but also to children's insufficient physical activity that would contribute to its development.

Key words*: organisation, psychomotor abilities, upper/lower extremities, coordination, balance.*

During the research, whose main objective was to identify and assess the complexity of the psychomotor status of six-year-old children, which is estimated by means of the actual movement or motor tasks, the starting point was the very concept of motor skills, i.e. psychomotor ability and its structure.

During preschool age, motor skills are not yet fully defined. This period is very important in the child's development, especially in terms of the basic (general) motor skills. It seems that it is exactly during performing movement tasks, which seek to assess the child's motor skills, that this general functioning of the child's various abilities and skills is reflected. Practically, it seems that children's performance of the motor movement tasks occurs through the engagement of their overall motor skills. Thus, many experiences indicate that physical exercise in this early period should be based on firm grounds, i.e. on a practical preparation of a solid basis for future development of specific motor abilities.

In its development, motor ability passes through three major periods: the reflex period; sensorimotor period and psychomotor period. These periods in the

development of motor skills show us how the motor activity develops from the very first movement to that period of time when the child starts going to school. This division into periods is not necessarily age-dependent, because there are discrepancies caused by normal individual differences in the development of each function; in the development of the systems and organs, especially the CNS; in gender differences and differences between children in terms of social status.

Motor activity is actually muscular movement effected by moving the body in space, it is the initiator of reflexive or volitional, locomotor and manipulative activities of the limbs and the body. Movement is the elementary characteristic of any motor activity. Muscle with its myofibrils is the basis for the estimation of the quality of motor skills structure. For a quality motor activity to be achieved, it is necessary that all the muscles that participate in it have the same level of the basic or action tone. The quality of motor activity is determined: by the muscle strength which is engaged in that activity (the strength depends on the number of muscle fibers needed for the muscle contraction in order for the muscle to gain in force with which it acts) and by the volume; by the possibility to modulate this strength according to the activities that require precision or according to any other activity requiring a constant increase or decrease of muscle strength; by coordination of movement as a condition of organising complex motor activities (interpretation, Bojanin, 1979, p. 13).

Given that the subject of this study is the assessment of children's psychomotor organisation, this paper will focus on the third, psychomotor period of motor skills development.

The age of three years and on is a child's preschool period and concerns psychomotor activities. „Psychomotor skill involves structures which rely on psychomotor interaction with functions realised through this interaction. Psychomotor activity is always volitional, organised and directed. It is performed by the engagement of extremities, body, parts of the body, speech and mimic musculature" (Čordić, A, Bojanin, p. 69).

In the children of 24 to 36 months of age, motor skills are further developed and become more complex. Further improvement is gained in the elementary forms of movement (walking, running, crawling, hopping ...). Gradual transition of the lower extremities muscles from flexor hypertonia to general hypotonia during the first year of age, leads until the end of the 30th month and in the third year to a full eutonic development, with the child's step now being completely free and his ability to walk fully relying on the motor activity. The number of movements performed by a child grows rapidly, these movements being precise, better coordinated and adapted to the external environment, though still quite chaotic. Locomotion activities become more complex, the child is able to suddenly stop, it can change the direction of movement while walking or running, walk in a straight line or backwards, climb up or down the stairs, hop and jump on both feet. At this age, children master some other forms of movement as well, such as: jumping - high jump and long jump; they combine the run-up with takeoff, flight and light landing; throwing objects at a target - throwing and catching a ball; practical activities like riding a tricycle, bicycle, roller skates, ice skates; including the adopted elements of sports games. Towards the end of their stay in kindergarten, children learn many exercises for the general development of various

muscle groups, both the large and small ones, for precision, durability of movement, and accordance with rhythm, pace and character of music.

Hereby, we are already talking about a complex form of motor skills, i.e. about the volitional and conscious motor activity, which primarily includes conceiving of an action, and then its performance in full control of consciousness. Such complex activities cannot be performed by the oldest preschool children only by playing, which is the landmark of early childhood. Therefore, motor skills are developed and improved as individual tasks through specific forms of work and by systematic practising and learning in a preschool environment. Elementary manipulative movements are improved, and the grip with fingertips and the opposition of the thumb is perfected.

While the process of lower limbs tone differentiation is completed in a child's 30 months of life, the differentiation of muscle tone and appearance of clear movement on the edges of upper extremities (hands and fingers), occurs only at about the seventh year of age. This allows the impulse for movement that is sent to specific muscle groups to arrive there, without being diffused into the adjacent areas. According to the needs, this enables the performance of quite refined manipulative activities. Further improvement of movement, as well as the development of structures involved in movement, will certainly depend on practising and preserving the anatomical and functional integrity of the nerve-muscle interactions. This is the time when the last side movements are lost during the assessment of the maturity of the muscle tone (Bojanin, 1979, p. 22).

For a person to perform precise psychomotor activities with fingers, the differentiation of motor function of each individual finger needs to be within the expected range of the motor skill maturity. Motor maturity allows movement impulses, aimed at a specific group of muscles, not to stimulate other muscle areas, thus stirring side movements that would interfere with the primary psychomotor activity.

At the age six to seven, "the graphomotoric level appears as a sort of test or trial of the organisation of psychomotor interaction. With special training, which means a special level of requirements, this level becomes shaped for very specific actions" (Bojanin, 1979, p. 52).

Most manipulative activities include vision as the primary control for the execution of movement, especially until the automation of movement is achieved. The connection between the muscles of the eyes, fixation and graphomotoric movement is established from the first attempts to hold a chalk, crayons or a pencil. The longer and more varied this preparatory stage is and children more skillful at handling these instruments, the faster, better coordinated, more accurate and reliable hand movements directed by the eye movement will be.

At the end of the preschool period, there is an increase in all quantitative and qualitative indicators of both manipulation and locomotion.

The problem of assessment of motor skills is especially evident in the preschool age. Specifically, motor skills at this age are not yet differentiated, and this often raises the question of usability and validity of certain tests for the assessment of individual (hypothetical) dimensions of the motor status. Another problem lies in the very protocol of measuring motor skills. Measuring motor skills includes maximum engagement of the respondents. At this age, it is practically impossible to achieve,

because children are not aware of the need to achieve maximum energy engagement, which is the basis for a precise determination of the state in certain motor skills.

There are few papers in which the analysis of the level of motor development is used to assess the general level of development of preschool children. Most of these estimates are based on rough differentiation, between children who have reached the required level of development, regardless of the nuances showing to what extent the child exceeds that level, and those below the required level.

In recent years, the most used form of assessment of psychomotor development of preschool children is the so-called Screening, constructed by a group of authors led by Dr. Kovačević. Screening is designed like a classic psychological scale test for the general assessment of psychomotor development of children from three to six years of age, and is based on the description of the occurrence of specific skills and movements. It shows what a child can do at a certain age, but not how he can do it. This process offers no possibility of grading children into a number of developmental categories, but can be used for the assessment of a child's psychomotor development based on seven set requirements. Screening results are entered into a special list for further observation, in which the results are defined and instructions given for their implementation (interpretation, Perić 1991, p. 32).

Bala's paper (1981) presents results after examining the structure of motor space in children aged 6-10 years, where the existence of hypothetical motor dimensions has not been confirmed. Based on the results of the research, the author concludes that it can, at least hypothetically, be assumed that the motor ability of the examined children was of general character and can thus be seen as "motor intelligence." Due to such results, it is concluded that the development of general motor skills in children should be conducted in the direction of an overall and all-encompassing development of general motor skills, whereas the application of specific motor activities up to the age of 12, can only be part of the development of general motor skills at a higher level.

Motor skills are manifested by the ability to compensate for one another, so in different situations and tasks, the child manifests its complex motor skills. (Nićin, 2000). Similar results were also found by Turek (2000) on the basis of research conducted with 7-10 year-old children of Slovak population, using the Eurofit battery of tests. The author concludes that the period of early school age is characterised by a significant variability and still undefined motor skills.

In the examination of motor abilities of preschool children, different batteries of motor tests are applied. Bearing in mind the fact that during the tests of motor skills, a preschool teacher needs to apply different motor test batteries, and that such a method of empirical research requires not only sound knowledge, but also financial resources, time and skills that these teachers are insufficiently trained for, the solution provided herewith was to estimate the quality of psychomotor organisation which provides the preschool teacher with an insight into the psychomotor abilities of the observed child. Based on the insight into what the child as an individual and the group as a whole can do and know, and what their psychomotor organisation, skills and approaches to different physical situations and problems are, the preschool teacher can make assumptions about the children's needs, and their motor and physical developmental level and interests. They can use this information as a starting point for

the planning and implementation of their educational and pedagogical work and for the monitoring of children's individual motor development. This paper presents tests that can be used by preschool teachers to assess the psychomotor organisation of children. The use of the provided trial-tests does not require financial resources, or vast knowledge or skills on the part of the teacher, so they can be easily applied by preschool teachers.

Why psychomotor assessment?

Assessment of motor organisation is a way for a preschool teacher:

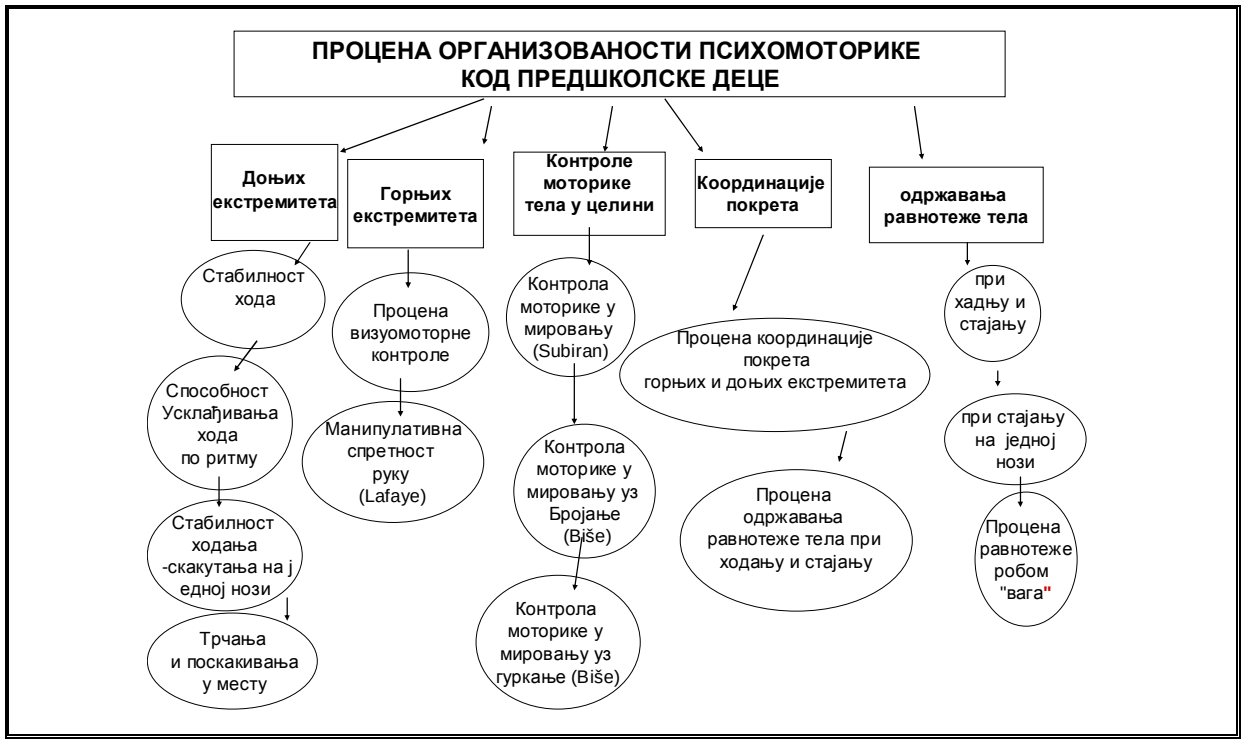
- to get to know every child and the whole group (in terms of their physical, motor and health status);
- to diagnose healthy children and children with immature motor skills based on the assessment of their psychomotor organisation;
- to plan, based on such diagnostics, a programme of specific or complex physical activities with children (healthy children, children with certain motor impairments);
- to encourage children to use their motor abilities better in physical and other activities;
- to provide better information for and cooperation with parents;
- to have an insight into the quality of their own work;
- to monitor the development of the programme in parts and as a whole.

The assessment of children's psychomotor organisation can help a preschool teacher in his/her consideration of the intentions, feelings, attitudes, different abilities, and the quality of the tested child. The data collected about the child are analysed and evaluated very carefully and patiently. The assessment of a child's development is carried out both related to the child as an individual and to the group which the child belongs to. The assessment will be made after the testing and observation of the child in different situations (trials). The result of the analysis and evaluation is not a permanent category; at preschool age it is rather a matter of trends than forms of behaviour that are consistent or completed. The most comprehensive assessment of the psychomotor organisation in a six-year-old child can be achieved by a preschool teacher if all its segments are included in the assessment and if all trial types are applied at the same time.

According to Čordić and Bojanin the assessment of psychomotor skills includes trial-tests: the assessment of the psychomotor ability of upper and lower extremities, evaluation of motor control of the body as a whole, the assessment of maintaining the body balance and movement coordination (Figure 1).

Figure 1.

Tests for the assessment of psychomotor organisation in preschool children



Research methodology

The main objective of this study was to evaluate psychomotor organisation and determine the psychomotor status of six-year-old children. In other words, this survey was to provide the data about the psychomotor organisation of the children whose motor skills had reached a certain level of maturity, and of the children with immature motor skills. The data were necessary for a preschool teacher in order to meet the needs of the tested child in the best possible way; to get to know the child and the group he works with; to plan and organise physical education activities in the group.

The goal was reached and data collected based on the assessment of:

a) psychomotor performance of the lower extremities;

b) psychomotor performance of the upper extremities;

c) motor control of the body as a whole;

d) maintaining body balance;

e) movement coordination.

The sample included 40 six-year-old children of both genders. All the tested children were attending a preschool institution. The results found, their interpretation and conclusions are based on a descriptive method.

Statistical method was used, too in order to specify the phenomena under study and their correlations.

The kinesiology research techniques applied in this paper are the assessment of the psychomotor status – trials, and tests.

Table 1.

The sample of variables for assessing psychomotor organisation in six-year-old children

No.	Parameters	Measurement unit
1.	Ability to coordinate pace with rhythm	Pacing to the rhythm +, ±, -
2.	Manipulative hand dexterity (Lafayette)	sec.
3.	Motor control at rest with counting (Bishet)	sec.
4.	Assessment of coordination of upper and lower extremities	Performance precision
5.	Balance assessment by means of the "crane" exercise	Quality of performance

To assess psychomotor organisation of six-year-old children five trial-tests were applied.

The test *Ability to coordinate pace with rhythm* was used to assess the psychomotor organisation of lower extremities. The task itself includes pacing and the use of lower extremities in games. It includes motor strength, coordination of leg movements with the movements of other body parts, as well as with the body as a whole.

The test *Manipulative hand dexterity (Lafayette)* was used to assess the psychomotor organisation of upper extremities. Psychomotor organisation of upper extremities is in direct correlation with the development of an individual's psychosocial life in general. The activity of upper extremities is connected with speech, intelligence, thinking and emotions, making a unity which is the basic characteristic of psychosocial development and psychosocial life.

The test *Motor control at rest with counting* (Bishet) was used to assess the control of motor skills of the body as a whole. Valon pointed to the fact that every sensible quality is reflected in the child's muscles. Also, the quality of muscle tension or relaxation is related to the object in the sensible sphere.

The test *Assessment of coordination of upper and lower extremities* was used to evaluate children's movement coordination. Coordination in its essence includes the level of experience of one's corporeality as a support to movement, as a source of movement and as a coordinator of a series of movements that make psychomotor activity.

The test *Balance assessment by means of the "crane" exercise* was used to assess the balance of movements in children. The question of balance is the question of the possibility of play organisation, socialised at a concrete age, and on the level of needs and opportunities for learning through sensory-motor experiences.

The psychomotor tests were conducted according to the description and guidelines provided by Čordić and Bojanin "General functional diagnostics in special education" (1992, p. 69-84).

The trial tests were conducted in the following way:

Ability to coordinate pace with rhythm. The child is told to walk in a certain rhythm. It is best if the rhythm is dictated by the metronome. The child is warned that the rhythm of the metronome will accelerate or slow down, and it is expected to also speed up or slow down its pace. In addition, the child is told that he/she must cease walking when the teacher says 'stop'. What is assessed is the child's success in coordinating the pace with the basic rhythm, which is marked with a +, ±, or -. Assessment is also made at slowed rhythm, at accelerated rhythm and finally, at a sudden stop.

Manipulative hand dexterity (Lafayette).
I Trial: The child is given a box with beads and wire and said: "Take one bead and string it down this wire." When the respondent does so and we make sure that they know how to do it, we say: Now you'll take another bead, and another, and another, and so string them down the wire one after another as fast as you can. Start now!" The performance of the tasks is monitored with a stopwatch. The test takes 2 minutes. The method of execution is described and the beads counted, except for the first bead which served as an example.
II Trial: The respondent is told that there are now beads of different colours in the box. He is told that he will be arranging them again, but now in this order: first one blue bead, then one red, then white and finally yellow. Sometimes it is necessary to string them in this order together with the respondent. Then the interviewer says: "Now get along, and do it on your own in the same order, first blue, then red, then white, and finally yellow. Do it accurately and quickly. Start now!" The performance is monitored with a stopwatch and it lasts for 2 minutes. The course of action is described, as well as the accuracy of performance and the number of beads, excluding the first ones used for demonstration. These trial-tests can help the teacher reach completely valid conclusions about the child's manipulative skills.

Motor control at rest with counting (Bishet). Tell the child to stand still in front of you, to close their eyes, hold out their arms and count backwards from 20 to zero.

Assessment of coordination of upper and lower extremities. Assessment of coordination of upper and lower extremities is only used related to walking. When we walk, we automatically coordinate the movements of our upper and lower extremities.
Task one: the child is given the order to bend the arm at the elbow and leg at the knee on one side of the body, then to drop them, and then to do so with the other arm and leg. Then he is suggested to do so alternately in whichever rhythm suits him.
Task two: the child is given the order to bend the arm at the elbow on one side of the body and the leg at the knee on the other side of the body, and to continue to perform this task alternately. He is also suggested to repeat these procedures at his own pace.
Task three: the child is given the order to jump, and while in the air to clap his feet and his hands. When the child does so for a few times, then he is given the instruction to clap his heels and hands twice while in the air.

All these tests are described and evaluated in terms of accuracy of execution, and if somebody's performance is poor or fails completely, this is also duly described. When all such trials have been described, conclusions are made on the effectiveness of tasks completion and the level of coordination in relation to the children's age.

Balance assessment by means of the "crane" exercise. The child is instructed to stand on one leg, to extend the other leg behind, to lean the body forward and spread his arms. The task should be performed on one leg first, then the other. After that the order is to lean back standing on one leg, while the other leg is extended forward, and the arms spread. This exercise is also done first on one leg, then on the other.

The quality of the task performance is recorded, whereby the movement of the supporting leg is observed, imbalance in the task performance, the time, i.e. whether the respondent keeps balance longer on the right or left leg and whether the respondent was even able to perform the test.

In all five tests motor tasks are complex and include testing the psychomotor organisation of children.

This kind of assessment, which cannot be considered as sufficient and valid, because it is based on subjective evaluations of the preschool teacher, will still provide general information not just about the movement skills of individual children and the group as a whole, but also about the ways to manage the process of physical development of children. However, the most effective control system is a system of research monitoring. The system should therefore include a set of tests and trial exercises which would serve to evaluate and assess the child's achievement in movement skills practically from birth to seven years of age. The tests vary in their structure and correspond to the age and individual capabilities of children. As observation instruments, the tests provide fully standardised data. They are based on standards and are helpful in planning individualised educational programmes of physical education.

Results and discussion

The results were interpreted separately for each trial of children's psychomotor organisation. Different statistical values that were found were classified in tables. The columns show the values obtained (+; ±; -) for each group of respondents, formed according to the tasks performed in the trial-tests, as well as the total sum of frequency and relative frequency. The ranks are shown the values obtained for each group of subjects formed by the implementation of tasks in rehearsals-tests, as well as the total sum of the frequencies and relative frequencies. The results are shown in table 2.

Table 2.

The research results of all trial-tests

No.	Trial-tests of psychomotor organisation	Class	Frequency	Relative frequency %
1	Ability to coordinate pace with rhythm	+	32	75
		±	2	5
		-	8	20
		Total	40	100
2	Manipulative hand dexterity (Lafayette)	+	19	47,5
		±	14	35
		-	7	17.5
		Total	40	100
3	Motor control at rest with counting (Bishet)	+	35	87.5
		±	2	5
		-	3	7,5
		Total	40	100
4	Assessment of coordination of upper and lower extremities	+	23	57,5
		±	5	12,5
		-	12	30
		Total	40	100
5	Balance assessment by means of the “crane” exercise	+	28	70
		±	8	20
		-	4	10
		Total	40	100

1. Interpretation, analysis and discussion of indicators of six-year-old children’s ability to coordinate pace with rhythm

The examined children were tested in the performance of coordinating the pace of walk first with a basic rhythm, and then with accelerated and slowed rhythm; it was observed whether the steps were skillfully or unskillfully controlled; whether the knees were raised high or low; and whether the final stop was performed easily and abruptly or followed by swaying and staggering.

Table 3.

Results of the test of ability to coordinate pace with rhythm

	Value	Frequency	Relative frequency %
Ability to coordinate pace with rhythm	+	30	75
	±	2	5
	-	8	20
	Total	40	100

In this test, the results have shown successful coordination of pace with rhythm in 30 children. They have shown successful coordination of pace with slowed and accelerated rhythm and at a sudden stop. These children coordinate their steps well, they raise their knees high enough, they stop without delay at the given signal, without swaying or making any excessive steps and can easily coordinate their movement with the basic rhythm set in the task. Two children can coordinate their pace, but cannot suddenly stop at the given signal; eight children have shown inadequate motor ability in the context of psychomotor activity. These children could not perform any of the set tasks, which shows a form of inadaptability of their general psychomotor organisation to the real life tasks.

The fact that the vast majority of children performed the task successfully can be explained by the well developed locomotion of preschool children. Namely, the locomotor apparatus reaches its maturity in children around 30 months of age; this is the final stage in the differentiation of tone of the lower extremities. Further, it can be explained by the motor hyperactivity of preschool children, and the activities whose contents engage the locomotor apparatus, or tasks that directly and indirectly develop this essential physical property.

2. Interpretation, analysis and discussion of indicators of six-year-old children's manipulative hand dexterity

In this test, the observed category is the quality of the task performance, precision in the task performance, and the number of the strung beads, based on which valid conclusions can be drawn about the manipulative dexterity of a six-year-old child.

Table 4.

Results of manipulative hand dexterity

	Value	Frequency	Relative frequency %
Manipulative hand dexterity	+	19	47,5
	±	14	35
	-	7	17,5
	Total	40	100

The results obtained (Table 2) show that 19 children possess good manipulative dexterity: they are swift at reaching for the beads, they string them on a wire quickly and skilfully, and there's clear directedness in the repeated hand movement reaching for a certain colour of the beads to be strung. These children perform the set task within the defined 2-minute time limit. Fourteen children do not fully complete the task. They string the beads quickly and with dexterity, but they are not consistent in obeying the colour order. However, seven children could not perform the set task despite their effort. Their manipulative dexterity is poor due to their incomplete psychomotor organisation.

Based on the stated values, we conclude that the manipulative dexterity of the examined children is rather poor. The cause of this phenomenon can be sought among numerous factors. By consulting reference literature we conclude that the differentiation of the muscle tone of the upper extremities depends on the nerve and muscle function, and that its full maturity is reached by the end of the 6th year of age. Psychomotor organisation of the upper extremities is in direct correlation with the development of the psychosocial life of a personality as a whole. It induces the basic schemes of thinking processes and participates in the expression of creative needs, both in a child and an adult, in all the areas characteristic of the social domain and one's social life from the very start. The activity of upper extremities is coordinated with speech, intelligence, thinking and emotions, making a wholeness that is the basic characteristic of psychosocial development and one's psychosocial life (Čordić, Bojanin, 1992, 71).

3. Interpretation, analysis and discussion of indicators of six-year-old children's motor control at rest with counting

During this one-minute test, the adult observes the child's still posture. Table 3. shows the data obtained in the trial of children's motor control at rest with counting. The results have shown the following: 35 children fulfilled this task successfully by spending one minute in the required still position, with their arms loose by the sides, no facial contortion, and without any body or extremity movement. There were two children who moved their legs during this time, made faces, turned around, spread their arms up and down and clenched their fists. These children were diagnosed with poor motor control within general psychomotor organisation. The test was interrupted in the case of three children, because they opened their eyes before the time was out. This was recorded as a failure in the task performance.

Table 5.

Results of motor control at rest

	Value	Frequency	Relative frequency %
Motor control at rest with counting (Bishet)	+	35	87,5
	±	2	5
	-	3	7,5
	Total	40	100

4. Interpretation, analysis and discussion of indicators of six-year-old children's coordination of upper and lower extremities

Evaluation of coordination of movements of the upper and lower extremities was performed using three tasks that describe and evaluate the clarity of movement performance.

Table 6.

Results of movement coordination

	Value	Frequency	Relative frequency %
Coordination of upper and lower extremities	+	23	57,5
	±	5	12,5
	-	12	30
	Total	40	100

The results show that 23 children successfully performed all the three tasks, which suggests that their coordination of upper and lower extremities is quite good. Five children completed two of the set tasks, while they failed in the performance of the third one, which included a jump with arm movements. This suggests that their coordination of the upper and lower extremities is underdeveloped. In 12 children, the coordination of upper and lower extremities was not achieved in the set tasks.

5. Interpretation, analysis and discussion of indicators of six-year-old children's balance by means of the "crane" exercise

During this test, the adult observes the child's ability to keep balance on one leg or the other.

Table 7.

Results of balance assessment

	Value	Frequency	Relative frequency %
Balance assessment by means of the "crane" exercise	+	28	70
	±	8	20
	-	4	10
	Total	40	100

The obtained results of the test of balance by means of the "crane" exercise show that 28 children performed both the forward and backward "crane", 8 children managed to do only the forward "crane", while four children were not able to perform it either in the forward or backward direction. It is interesting to note that in the performance of the forward and backward "crane" the dominant leg in all the children was the right leg, as their main support. This test is also important for the preschool teacher from the standpoint of maintaining balance in gymnastics.

Conclusions

Based on the presented results, analysis and discussion, the following basic conclusions were drawn.

The data obtained during the assessment of preschool children's psychomotor organisation included the assessment of the psychomotor organisation of the lower and upper extremities, motor control of the body as a whole, maintaining body balance and

coordination of movements. The results show that there are significant differences between their indicators.

In the assessment of the psychomotor organisation of their lower extremities, the coordination of pace with the basic rhythm was achieved by 30 children. With these children, successful performance was also achieved with coordinating pace with slowed and accelerated rhythm and with a sudden stop, which can be explained by well-developed locomotion in preschool children.

In the assessment of the psychomotor organisation of six-year-old children's upper extremities, by testing their manipulative hand dexterity, it was found that only 19 children could perform the task completely, 14 of them partially and 7 children could not perform the task at all. The major factor that accounts for such results is the still present immaturity of this function, as it fully develops only by the end of the sixth year of age. Another reason is children's insufficient engagement in physical exercising, which could enhance the development of this function.

On the other hand, it is very interesting to note that the tested children have good motor control at rest (35 of them). This can be explained by their age; that is, six-year-old children have reached a certain degree of physical maturity when they can largely control their body at rest and in movement.

In the test of children's movement balance, the "crane" balance test has yielded excellent results. In 28 children the balance is well developed, which is interpreted as a certain maturity of the function. On the other hand, it provides better opportunities for its improvement in spontaneous and organised exercise.

Finally, the results of the coordination of movements of the upper and lower extremities have proved to be on a level below the average for this age. This is primarily due to the developmental characteristics causing a delayed onset of this feature in children, despite their established good balance.

On the basis of the obtained values we can conclude that the three trials which evaluated the psychomotor organisation of the lower extremities; motor control of the whole body and the movement balance in the tested children yielded good results and suggest that the psychomotor organisation of these children is at a high level. Indicators of the trials which evaluated the psychomotor organisation of the upper extremities and movement coordination in the children are below average. These data suggest the presence of children with immature psychomotor organisational level, which can be corrected by applying special programmes and systematic exercise. Therefore, the purpose of these tests is to identify the level of psychomotor organisation of preschool children in order to plan and organise exercising activities and to adapt them to individual abilities of the children. Effective planning and implementation of physical education in preschool institutions implies possession of information on the most important indicators listed above, which are at the same time indicators of movement skills and health of preschool children.

Data obtained from the results of the assessment of six-year-old children's psychomotor organisation should form the basis of analytical reports in the formation of an organisation's strategy and the development of special programmes at different age levels, based on individual abilities of children and a differentiated approach. The data have enabled:

- identification of children with good motor organisation;

- identification of children with hyperactive motor skills;
- identification of children with immature motor organisation and limited movement abilities;
- effective planning, organising and adaptation of physical activity to individual abilities of children;
- differentiated approach to each child;
- informing parents and the wider community about the results obtained;
- practical use of the results obtained through such diagnostics. The results should be used by pedagogues, preschool teachers, etc. in order to plan, develop and implement both modern programmes of physical activity according to children's individual abilities, and specific programmes for hyperactive children and children with limited movement abilities.

Bibliography

Antropova, M. V., Koljcova, M.M. (1986). *Psihofiziološka zrelost dece*, Zavod za udžbenike i nastavna sredstva, Beograd.

Bala, G. (1981). *Struktura i razvoj morfolških i motoričkih dimenzija dece SAP Vojvodine.* Novi Sad: Fakultet fizičke kulture.

Bala, G. (2008). *Uspešno pisanje u kineziologiji*. Novi Sad: Fakultet sporta i fizičkog vaspitanja.

Bala, G., Stojanović, M. i Stojanović, M. (2007). *Merenje i definisanje motoričkih sposobnosti dece*. Novi Sad: Fakultet sporta i fizičkog vaspitanja.

Bojanin, S., Tomić, S. (1978). Poremećaj ponašanja i njihova učestalost u dece na predškolskom uzrastu sa aspekta defektološko vaspitačke službe u predškolskoj ustanovi, *Predškolsko dete*, Beograd, p. 299-306.

Bojanin, S. (1979). *Neuropsihologija razvojnog doba i opšti reduktivni metod*, Privredna štampa, Beograd.

Bojanin, S. (1985). *Neuropsihologija razvojnog doba i opšti reduktivni metod* (II izdanje), Zavod za udžbenike i nastavna sredstva, Beograd.

Čordić, A., Bojanin, S. (1992). *Opšta defektološka dijagnostika*, Zavod za udžbenike i nastavna sredstva, Beograd.

Čuturić, N. (1978). *Psiho-motorni razvoj dijeteta u prve dvije godine života sa normama razvoja*, Ljubljana.

Džinović, Kojić, D. (2000). *Fizička zrelost dece za polazak u školu*, Zajednica viših škola za obrazovanje vaspitača Republike Srbije, Beograd.

Išpanović-Radojković, V. (1986). *Nespretno dete-poremećaji praksije u detinjstvu*, Zavod za udžbenike i nastavna sredstva, Beograd.

Lisina, M. I., Njeverovič, J. Z. *Razvoj motorike i formiranje motornih navika*, u: Zaporožec i Eljkonjin, p. 175, 226.

Momirović, K., Viskić, N., Horga, S., Bujanović, R., Volf, B., Mejovšek, M. (1970). *Faktorska struktura nekih testova motorike, Fizička kultura*, br. 5-6, Beograd, p. 37-42.

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PUPILS' EMOTIONAL ATTITUDE TOWARDS CAPABLE ONES

Summary: *The article focuses on important and current issue concerning capable students as well as their being perceived and judged by peers in a class. Research has been done among 113 pupils from five classes of sixth class of primary school. 35 capable pupils were identified in this group. Diagnostic research carried out with the use of several techniques gave the answer to the issue concerning emotional attitude of pupils in a class towards capable ones.*

Key words: *capable pupil, defining capable pupil, attitude towards capable pupils.*

Introduction

Contemporary world is set for success and promotion of individuals by whom it may be achieved. Thus, it would appear that exceptionally gifted pupils have favourable conditions for development in contemporary school and peer environment. It seems also that capable pupils should be easily accepted in family, school and peer environment because they fulfil one of the most important contemporary requirements – they can win, be creative, involve in various activities and achieve above-average results in school. However, as it was analysed on the basis of psychological and pedagogical literature and observance of life situations, it does not have to be the case. Capable people may be misunderstood, underestimated and rejected by immediate environment because of their dissimilarity resulting from demonstrating outstanding abilities. The world, in which we are living, promotes success, but not necessarily people who achieve it. Thus, it is worth thinking about the issue whether and how school and peer environment satisfy emotional needs of capable pupils. Are capable students positively perceived by peers in a class; or maybe are they treated instrumentally – as tools for producing good ideas, finding proper problem solutions, winning first places in subject-area contests or olympiads?

The issue concerning capable pupils is not always appreciated despite of being still important and current. Thus, it acquires special meaning in paradigm of inclusive education. Capable student, as any other one, has his/her own fears, anxiety and concern. His/her emotional sensitivity over opinions, judgements, self-assessment and self-criticism are closely related to fulfilment of needs concerning belonging and acceptance by peer group in a class.

Observing specific developmental needs of capable teenagers, it is needed to draw attention not only to educational requirements which are imposed on tutors and teachers by capable children but also to emotional dimension of development of their personality and needs resulting from this development. Capable pupil is a challenge for teacher not only in intellectual dimension but also regarding his/her emotional sphere of personality. Teacher should ensure that outstanding people are kindly

perceived by peers so as they can be accepted and considered as valuable persons, having a lot of positive personality attributes.

Referring to emotional needs of capable pupils, I tried to investigate what is emotional attitude of pupils towards their capable classmates. I think that acquired research material may be a premise for the answer to another question: Can emotional needs concerning friendship contacts of outstanding individuals be satisfied in the peer group in a class? This, however, requires additional and in-depth pedagogical research.

1. Capable pupil – theoretical considerations on the basis of psychological and pedagogical literature

Defining capable pupil

Defining capable pupil is ambiguous in psychological and pedagogical literature. Different authors use various terms in order to precise definition of pupil with above-average capacity

In research work, I followed definitions of capable pupil proposed by E. Gondzik and M. Tyszkowa. E. Gondzik writes that a capable pupil is the one who: 'apart from high general intelligence, he/she is distinguished by: possibility of creative achievements in school career in any socially useful area (participation in contests, olympiads); creative imagination; outstanding special abilities; the ease of learning; wide interests as well as high self-criticism and diligence' (after Abramczyk, 2003, p.18). On the other hand, M. Tyszkowa draws attention to intellectual abilities of capable pupil. She writes: 'we are speaking of capable pupils when we refer to individuals who demonstrate high level of general ability (intelligence) or who have got a special ability in the sphere of intellectual activity' (ibid. p.19).

Thus, according to E. Gondzik, a capable pupil is characterised by not only specific intellectual features (intelligence, special abilities) but also identifiable activity (participation in olympiads and contests). He or she has also personal predispositions for high achievements thanks to the ease of learning, self-criticism and diligence. On the other hand, M. Tyszkowa disregards specific personal features of capable pupils. When defining those, she writes only about their general and special abilities.

In the source literature, defining capable pupil is connected with the terms: intelligence quotient, special and general abilities, talent. When analysing ceiling of intelligence quotient which allows to consider particular individual as exceptionally gifted one, authors take diverse limits. L.M.Terman assumes that 120 points, achieved in standardised intelligence tests, are enough to consider a person as exceptionally gifted one. J.M. Dunlop claims that the limit of 132 points is considered as a characteristic for exceptionally gifted individuals whereas P.M. Packard regards 140 points as a lower limit of intelligence quotient for capable pupil (Lewowicki, 1986, p.41). After T. Lewowicki, I assumed that capable individual is characterised by high level of special capacity and abilities. Above-mentioned M. Tyszkowa, considers capacity as 'proficient or efficient side of actions' (Abramczyk, 2003, p. 18) whereas W. Szewczuk defines it as 'a structure of internal conditions of particular individual which decides about level and quality of individual's achievements in realised activity' (ibid. p. 18). Thus, it can be assumed that pupils with wide general abilities will have

outstanding achievements in many different areas whereas pupils characterised by special abilities will have high proficiency and efficiency of activities only in some areas. What is more, it should be assumed that the term ability is broader than the term capacity because only the complex of capacity may become ability. For example, a pupil mathematically gifted has above-average ability in synthesis, analysis, logical thinking, calculation, etc. W. Okoń when writing about abilities, emphasises that ability is a peculiar structure of capacities which contributes to above-average level of performing particular type of activities, e.g. musical, technical, sport, etc. (ibid. p.18-19).

F. Painter presents valuable, especially for teachers, views on identification of capable pupil in a school class. He distinguishes twelve elements characterising capable pupils. They are as follows: high level of language proficiency, exceptional ability in deducing, quick thinking, strong imagination, good memory, interest in observations, exceptional capacity for concentration, raising original questions, putting forward unconventional suggestions, ability in noticing and solving problems, wide range of reading interests, the lack of persistence in doing routine tasks (Painter, 1993, p.50). These elements are possible to be observed in educational process. Thus, they allow teachers to find out which pupils from particular class may be included in the group of capable ones.

Personality of exceptionally gifted individuals on the basis of source literature

Having abilities has a big influence on personality and development of individual's temperament and character many a time. Personal attributes of capable pupils, shaped under the influence of their intellect and particular abilities, correspond to their being perceived in immediate family and school environment. J. Abramczyk writes that a capable pupil is characterised by high self-criticism, diligence, intellectual curiosity, ability in concentration, high emotional and moral sensitiveness, ingenuity and persistence. He mentions also emotional balance and easy establishing cooperation with school friends (Abramczyk, 2003, p. 19-28). These features, however, are not mentioned by other researchers. Thus, they cannot be treated as characteristic differentiator for capable children.

According to other authors (Sękowski 2004, Limont 2002, 2010, Borzym 1979), inherent ability in identifying problems in the world may sometimes be a cause for emotional instability whereas great proficiency in executing tasks designed by the teacher may lead to conflicts with slower and less clever school friends with whom the top student will be supposed to learn. The analysis and comparison of different authors' views on assessment of emotional stability of capable students conclude that the clarity does not exist. They may be characterised by both great and low emotional balance which is, undoubtedly, significant in establishing and maintaining contacts with peers. Self-criticism of capable children, listed by J. Abramczyk, may result in negative perception of themselves and withdrawal from social life. Self-criticism may also lead to excessive perfectionism of outstanding individuals. A person gifted with such kind of personality attribute may have problems in fulfilling his or her own expectations or impose their own perfectionistic standards on other people. Excessive emotional and moral sensitivity of capable people may also be a cause for having very high moral standards towards themselves and others. Moreover, it may generate

personal conflicts of capable child as well as problems resulting from imposing his or her own high ethic expectations on others. J. Rostowski mentions independence as one of the features of outstanding people, apart from self-confidence in planning work and deciding (J. Rostowski, 1989). This feature may also impinge on the quality of friend contacts because it may restrict not only the tendency to listen to people who have different views but also reaching a compromise. A. Strzelecki mentions the following features of capable pupils, which may influence on the way of their being perceived by peers: desire to dominate, leadership features, gentleness, introversion and low emotional stability which can be used in taking actions at the same time. The two first features may be the source of shining in peer group – if outstanding individual's leadership is accepted by peer group, as well as, rejection by classmates – if outstanding individual wants to impose his or her leadership against others' will. Low emotional stability may cause unpredictable reactions and behaviours which are difficult to be accepted by peers. On the other hand, emotional sensitivity may open capable individual to others' needs and problems as well as boost the empathy. Introversion listed by A. Strzelecki as a feature characteristic for capable individuals may, however, restrict ability of capable pupils in establishing friendship contacts and influence their being perceived by classmates (Borzym, 1989, p. 93).

I. Borzym divides capable pupils on those who achieved school success and those who did not achieve good results in education process in spite of their capacity. The author emphasizes that only capable pupils achieving educational success, have personality of developed positive features of a top student. These are: huge ego, high self-esteem, emotional balance and stability as well as high pace of work. On the other hand, she claims that there are also children in this group who are anxious and less resistant to failures. Capable pupils achieving school success usually feel very positive towards teachers and classmates. They willingly get involved in class life, help teachers and easily establish contacts with others. Capable pupils who are good learners are also more unconventional, sensitive, diligent and introverted than capable peers who do not achieve educational success. They are more scrupulous, responsible, independent and creative as well (Borzym, 1979, p.113-115). Personality attributes listed by I. Borzym are not entirely clear when assessing their influence on capable student's being perceived by peers. Emotional balance and stability, scrupulousness, responsibility, creativeness and positive attitude towards friends in a class are those features which trigger positive emotional attitude among classmates. Whereas, independence, high pace of work, ability in easy establishing contacts with teachers and huge ego of capable pupils are not necessarily considered by peers as welcomed. Independence and huge ego may be perceived by classmates as features of domination as well as imposing top student's views and opinions on others. Whereas, high pace of work of outstanding individuals may hinder their cooperation with less gifted friends who may not follow their reasoning. The ease in establishing contacts with teachers, listed by I. Borzym, may cause that capable pupil will be perceived as a teacher's pet and his or her favourite what may be an obstacle for establishing friendships in a class (Rimm, 1994, p. 201).

L.M. Terman, when analysing the issue of emotional and social development of capable pupils, distinguished a group of children with IQ 120-145 and a group of pupils with IQ > 145. He demonstrated that children from the first group are better

adapted to peer environment and do not have problems in contacts with people whereas pupils with IQ higher than 145 cannot adapt to people from their environment. Moreover, great intelligence may be a problem for them. This author notes that many features which are characteristic for capable pupil and generally considered as positive ones may, in some situations, lead to improper emotional and social development of capable pupil (after: Sękowski, 2001, p.71)

In psychological and pedagogical literature, situation of a capable child in a class is described as complex one. On the one hand, they are considered as 'specific', 'different' and what follows, less popular among peers. On the other hand, young leaders of the group are characterised by higher intelligence than the average one (Borzym, 1979, p.145) These results seemingly appear to be contradictory. However, L.M. Terman considers this impression as apparent because, according to psychologists, having at least average intelligence is a condition for acceptance of an individual in a group. High IQ and great abilities of outstanding individuals, however, may contribute to grant capable pupil high social status if only they are perceived by a group as its source of benefits. S. Baley writes that only such a capable individual whose 'otherness is accepted by a group' is positively welcomed in a group (ibid. p.146). Thus, it may be concluded that there exists a convergence of conclusions reached by L.M. Terman and S. Baley, concerning assessment of functioning of capable individuals in a group. According to L.M. Terman, people with above-average intelligence but not outstanding (i.e. with IQ<145) may be accepted by a group and be positively perceived by its members whereas people who substantially exceed members of a group in terms of intelligence, may have difficulties in acceptation within a group - their otherness may widely diverge from expectations and standards of a group.

I. Borzym dealt with the issue of acceptation of capable pupils at school. She examined the level of sympathy towards capable pupils in a group and leadership of gifted pupils on the basis of merit with the use of Moreno's sociometry method. In her research, study group was divided into three groups of pupils: capable (1st group), less capable (2nd group) and the least capable (3rd group). Among capable pupils, 23% of them proved to be very liked, 46% of them achieved level of sympathy higher than average one and 30% of them were assessed by peers low on the scale of sympathy. On the scale of prestige, results of capable pupils achieved by I. Borzym are as follows: 38,4% of pupils was granted sociometric star status, the same number of pupils achieved status higher than the average. The rest enjoyed average prestige. The research clearly shows that children in primary school appreciate their capable peers and irrespective of sympathy offered them, they esteem their role in a class. Research results show that less capable pupils are more appreciated than capable ones, both in terms of sympathy and in terms of prestige. As many as 60% of sociometric stars are less capable pupils whereas 58% of pupils who achieved the highest results on the scale of prestige is included in this group as well. Better prognoses for capable pupils may be predicted in secondary school since pedagogical research made by I. Borzym showed that as many as 85% of pupils of secondary schools characterised by high social acceptation, has high or very high intelligence. To compare, only 12% of children with such result of measurement of acceptation has average intelligence. However, research on capable pupils in secondary schools indicates another extreme

approach to capable pupil in a class. Unfortunately, rejected (60%) and isolated (72%) people usually come from the group of the most capable teenagers. This research proves that assessment of capable pupils made by a class is usually extreme – either positive or negative. Such results shall contribute to detailed discussion on improvement of capable pupil's situation among peers in a class. If the major part of sociometric stars has high intelligence at the same time, then the reason of their rejection by a class is not only the level of intelligence of an individual but also additional factors such as: personality of capable pupil, his or her willingness to help others, the level of courteousness, kindness, altruism, etc. Important tasks for teachers and tutors result from this fact. They should guide the personal development of capable human in such a way that his or her above-average intellectual ability would not contribute to the development of the arrogance, egocentrism as well as desire to dominate and demonstrate their superiority (Partyka 1997, p.50-69).

2. Methodological basis for own research

Research issues

Observing the importance of proper emotional and social development of capable pupils concerning the way of perceiving them by peers in a class, I carried out research among sixth-class pupils in nowosądecki district. While planning the organisation and the scope of research, I focused on a question which was a part of main problem of my research investigation. It was defined as follows:

- What is emotional attitude of pupils towards capable ones in a class?

I assumed that particular emotional attitude is related to externalised attitude of a person who demonstrates relatively stable behaviours. This tendency which is the source of intellectual experiences, is emotionally coloured and determines relationship between people and the attitude object (in this case, between pupils and top students in a class). Attitude is always related to affective judgment and contains positive or negative assessment. Attitude towards external environment and towards oneself is based on emotional involvement and manages relationships between environment and a human. It follows that emotional attitude of pupils from a class towards capable classmates will be demonstrated by particular behaviour and opinion on top students. Receiving signals, concerning particular behaviour and opinions on capable people, from peers will have an impact on their well-being in a class as well as fulfilling the need for approval and affiliation in a group. It will be connected with their experiences and emotional sphere of their personality at the same time.

Methods and techniques of research

During my research, all pupils who learn in tested classes were taken into consideration, including gifted sixth-class pupils. Such research procedure indirectly allows to establish how capable pupils perceive other capable pupils from their class and school. I decided to select capable children from tested classes in order to make my research results credible and relatively objective. I assumed that the number of capable children in a class as well as the quality and the scope of their achievements may influence the way of their being perceived by peers. When selecting top students, I used purposive sampling for the test. On the basis of psychological and pedagogical

literature, in the process of identification of capable pupils I used: criterion of nomination from peers (as one of tasks in the test with unfinished sentences, provided to all pupils), analysis of results of knowledge tests (data received from class register – I used technique of analysis of formal, existing documents) and analysis of achievements in subject-area contests and olympiads (Painter, 1993, p.49) about which I have learned from analysis of documents as well – class registers.

Above methods of classification enabled me only to select those capable pupils who achieve good educational results (I did not have possibility for selecting capable pupils who are affected by Underachievement Syndrome) and are characterised by considerable degree of general abilities reflected by school marks. I took into consideration those pupils who had almost the highest marks, only five (B) and six (A) (in some case, I took into consideration pupils who had four (C) in any subjects – I did so only in case when such pupils received frequent nominations from peers). This method of classification did not help in selecting people artistically gifted – I decided that marks in artistic subjects do not have diagnostic character (too many pupils have six in artistic subjects and the majority of children in a class has five). I assumed that good results of pupils are not only the result of their diligence and scrupulousness. The choice of sixth classes was justifiable in this case and it was supposed to serve in order to eliminate 'nerds' – I decided that the higher class of primary school is, the more difficult the curriculum is. It is not so easy for only diligent and not capable pupil to achieve six and five marks in education. This was used in order to replace impossibility of verification of general abilities of children through examination with the use of psychological tests (which would allow for assessment of pupils' IQ who were classified in 'the capable' group).

Searching for the answer to the research question, I used diagnostic survey method - including a poll form within it – and unfinished sentence test. I applied closed survey question with the possibility of a single-choice according to Likert's scale. Pupils were supposed to answer to the following question: To what extend do you agree with the statement that capable pupils are usually good friends? In response to this question, pupils from tested classes were supposed to choose one of the following five options: I strongly disagree, I disagree, I neither agree nor disagree, I agree, I strongly agree. In unfinished sentence test, pupils were supposed to finish the following four sentences: Friendship with a top student...; If someone is a top student, he or she usually behaves...; Capable pupil in a class...; If capable pupils are sometimes liked, it is because...

When applying unfinished sentence test, I tried to collect both positive and negative opinions of children on top students. Sentences were prepared in such a way that their content did not evoke negative associations for pupils who were supposed to finish them. On the basis of unfinished sentences presented above, only the last one has negative connotations.

Place of conducting the research and research group

I carried out the research in two primary schools in nowosądecki district. I took into consideration exclusively pupils from sixth-classes. Entire population of sixth-class pupils (3 classes) took part in the research in one of the schools, and 2 parallel classes in the second one. I applied selection of available sample - headmasters

and teachers agreed on pedagogical tests. They were interested in the issue and results of the research. Taking into account the protection of personal data, it was significant to me because it was helpful in collecting objective and reliable factual material.

113 pupils from five sixth-classes of primary schools took part in my research altogether, including 61 people from one school and 52 people from the second one. These pupils constituted a group in which capable pupils were selected. Selection of capable pupils within a tested group aimed to help me in making assumptions concerning the relationship between the number of top students in a class and the way of their being perceived by peers. Speaking of a group of top students, I mean these ones who achieved school success when having high education results and win top places in subject-area contests. There were 20 of them in one school, including 13 girls and 7 boys. In the second school, I selected 15 ones i.e. 9 girls and 6 boys. A group of capable children was consisted of 35 people altogether.

When presenting analysis of research results, I do not make the difference between sexes of tested people. I do so because both tested boys and girls thinks and judges similarly (I did not notice any differences in terms of sex). Therefore, I treat the tested group as a homogeneous one.

Table 1.

Tested group of pupils from sixth-classes of primary schools

Primary School										**IN TOTAL**	
The first one						**The second one**					
Number of capable pupils in classes											
VIa		VIb		VIc		VIa		VIb		Number	%
16		23		22		22		30		113	100
Number of capable pupils in classes in terms of sex										**IN TOTAL**	
g.	b.	g.	b.	g.	b.	g.	b.	g.	b.	Number	%
3	2	4	3	6	2	6	2	3	4	35	30

*g. – girls; b. – boys
Source: own research.

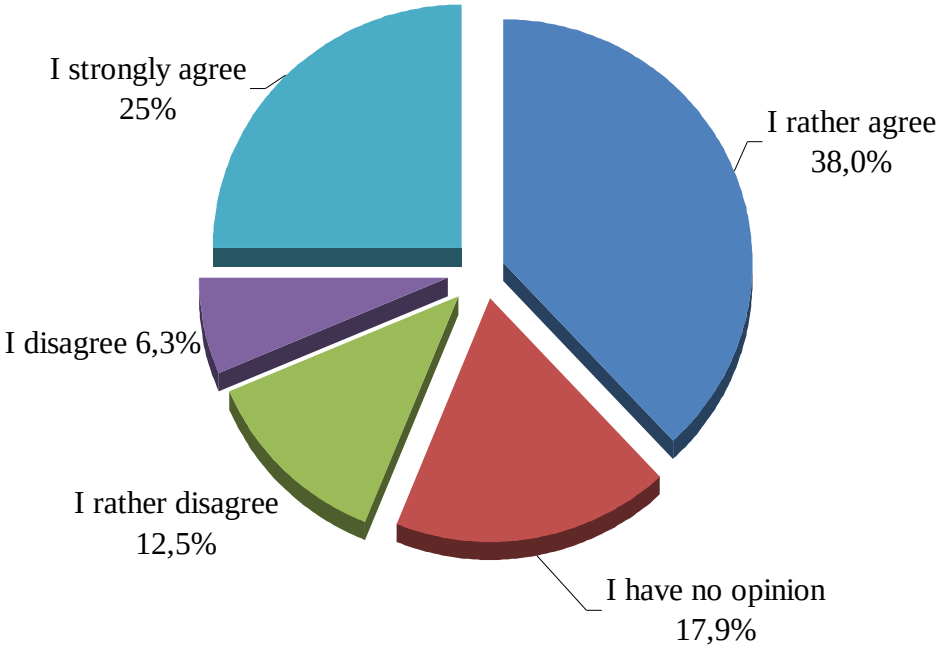
Data presented in Table 1 suggests that for 113 tested pupils, we have 30% of them who are capable ones. Within the first tested school for 61 tested pupils, we have 20 capable ones whereas in the second school for 52 children, we have 15 top students. Thus, pupils considered as capable ones are more in the first school, according to the criteria adopted by me. This is demonstrated by both absolute figures and the ration of capable pupils to total number of tested children.

3. The analysis of the results of own research

Pupils' emotional attitude towards capable ones

When analysing research material collected with the use of poll form, I received 112 answers from tested sixth-class pupils - one of the pupils did not answer to the question. I presented distribution of answers on chart 1.

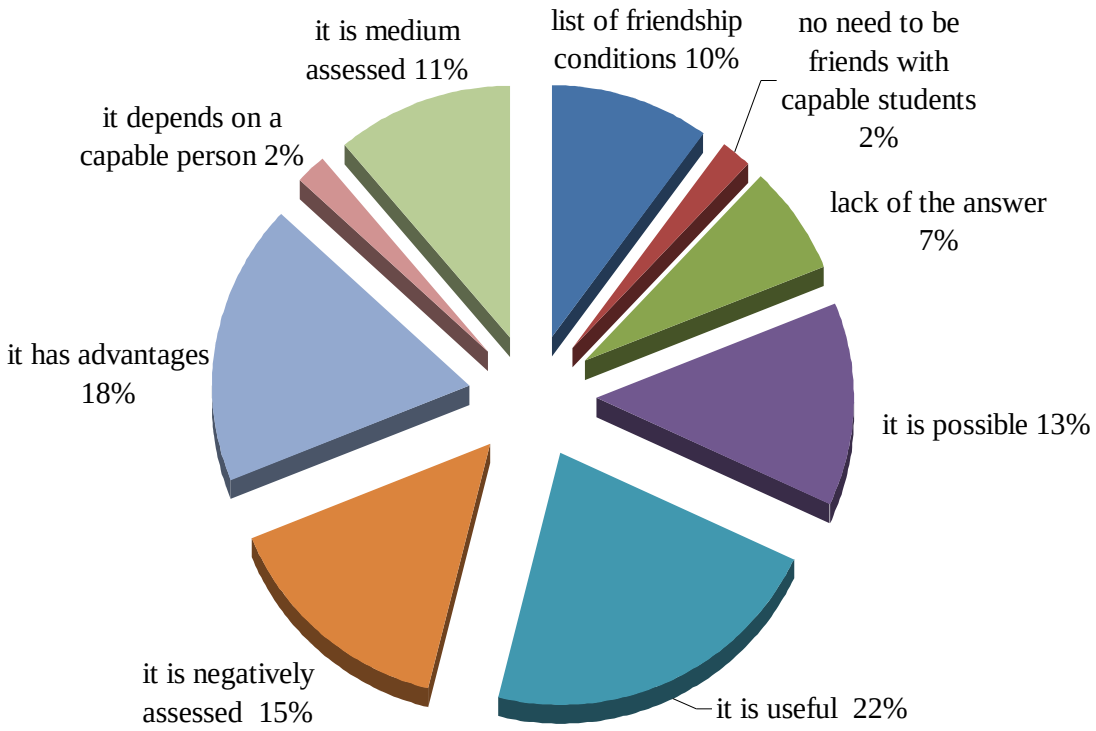
Chart 1.
Perception of capable students as good friends - opinions of classmates (N=112)



When analysing data presented in chart 1, rather positive conclusion may be reached since 71 pupils (63%) favourably assess capable pupils as friends. In the group of 20 people (17,9%) who 'neither agree nor disagree', they often wrote additional comment, for example, 'it depends who', 'it depends on the character of a pupil'. Such answers prove that sixth-class pupils realize that not only achievements of capable pupils are reasons for their being accepted or rejected by a peer group but also their personal attributes. Less than 7 (6,3%) pupils negatively assess capable peers whereas 14 (12,5%) of them are convinced that capable children 'probably' are not good friends. In total, it gives a group of 19% out of tested people in which they do not think that capable students are good friends. Pupils in this group emphasize that they (capable pupils) impose their opinions on others, do not make it possible to crib on tests and manifest their wisdom. On the basis of presented results, it may be assumed that almost one fifth of children in tested group rejects capable pupils and thinks that they cannot be good friends. Capable students are probably isolated and not accepted.

I achieved the expansion of research issue through analysing pupils' answers to four unfinished sentences in a test targeted at all pupils in tested classes. Children came up with 105 responses (8 pupils were absent in this day) when they were supposed to complete sentence 'Friendship with a top student...'. Pupils in their responses considered the fact whether such friendship is possible, can be useful and why and also which conditions should it fulfil to be recognised as good. Different categories of pupils' answers were grouped and listed in chart 2.

Chart 2.
Description of friendship of a top student with his or her classmates (N=105)



The analysis of collected and segregated material indicates that friendship with a top student is possible only for 14% of tested pupils (16 persons). Nonetheless, the difference in views of pupils in two tested schools can be observed. Such view is shared by 14 children in the first school. In the second one, however, it is shared only by 2 pupils. Similar difference may be observed in the category of 'friendship usefulness '. In the first school, this value of friendship with a top student is noticed by 17 pupils. In the second one, however, only 9 pupils think the same. More positive perception of friendship with a top student in the first school may be connected with the fact that far more children in sixth classes have high average marks (5,0 - 5,6) and achieve high results in contests (f. ex. within the Top 40 in Kangur mathematics contest). It therefore appears that being capable student in this school is more ennobling and is considered as undeniable sign of success. Percentage of capable pupils in a class is also significant – I obtained this information from analysis of class registers of tested schools. When making qualitative interpretation of achieved results, it should be noted that not all pupils were present at school on the day of testing. It caused the difference in the number of pupils in classes. The ratio of capable children to all pupils in a class is 5/19, 7/23 and 8/23 in three tested classes of the first school. This means that almost ¼ to 1/3 of pupils in a class has average marks between 5,0

and 5,6. Such great number of capable individuals in a class may cause that they will have a positive influence on a class and contribute to the establishment of standards which prevail in a class – creating climate of respect for knowledge, intellectual effort and achievements. To compare, in the second tested school, the ratio between pupils having average marks higher than 5,0 to the rest of pupils in a class is 4/27 and 2/32. It is therefore seen that there are much less exceptionally gifted pupils in the second tested school. Consequently, they have less chance of instilling deference towards intelligence, creativity, imagination and motivation for learning in peers. Average and weak pupils prevail in this school so values and standards demonstrated by capable pupils are perceived as imposed on people in a class. In this situation, negative pressure of a group may be put on capable pupils in order to exclude them from their peer group. This interpretation is supported by the fact that more pupils, in the second tested school, consider friendship with a top student as impossible or even negative – 11 people think so. Moreover, great number of people in this school – 9 pupils – thinks of friendship with a top students in a sceptical way. In the first tested school, only 4 pupils expressed the same opinion.

Definitely positive perception of friendship with top students is demonstrated by noticing its advantages. Pupils write: 'he/she helps to learn', 'capable pupil can help in problems', 'he/she is helpful because you can crib for free', 'he/she is helpful for weak pupils'. Such views indicate utilitarian approach to friendship with top students which is widespread among pupils. They want to derive profits from friendship. These profits are considered to be the main purpose of maintaining close relationship with capable pupils. Such opinions which prevail among young people may - as was said by one of the pupils - contribute to the exploitation of a top student for their own purposes or purposes of the whole class. Fortunately, when writing about positive feelings resulting from friendship with capable pupils, some people notice its other advantages. Pupils write: 'he/she is easy and sincere', 'he/she is cool', 'he/she is very friendly', 'it is a cautious friendship', 'he/she is great, we spend a nice time, we always do something interesting'. The above answers suggest that their authors appreciate value of friendship with top students in terms of its quality and character, not in terms of derived benefits. Such approach is definitely more positive because it determines sincerity and honesty in interpersonal relationships established by pupils. 15 pupils from the tested group place certain and specific demands concerning circumstances or character features of a top student. These pupils write: 'such friendship would not be nice unless a top student was ok for me', 'it is rarely seen, but not always', 'it is good but it depends on the character of a person'. These opinions confirm previous conclusions that for some sixth-class pupils it is not their own benefits that are reasons for establishing friendship with a capable pupil but his or her character, valuable personal attributes and quality of friendship which he or she is able to establish with less capable classmates.

Pupils give bad consequences of such friendship for themselves or else negative behaviour or features of capable classmates as a justification for negative assessment of friendship with top students. Pupils write: 'friendship with a top student leads to the loss because no one likes them and what follows their friends as well', 'it is not real for sure because top students constantly attract attention', 'it is hard to maintain it because they are boastful'. The above statements suggest that it is a problem for

average pupils to maintain friendship with someone who is better in learning and more capable because they feel inferior to their capable classmates. Such unfavourable situation is exacerbated by behaviour of capable children who are perceived as those who want to dominate over their classmates, are independent and look down on others because they are liked by teachers.

Analysis of the content of pupils' answers to the rest of unfinished sentences provided research material as well in which top students were presented both in positive and negative light. This analysis also shows different emotions of these statements.

Good marks, willingness to help others in learning, diligence, broad knowledge and contribution to good name of a school are advantages of capable children which are mentioned by pupils. When they write f. ex.: 'they learn well', 'they raise class average', 'they have good marks', they indicate that good education results of top students are a reason for not only jealousy but also for splendour of a class and a school. Such views are shared by 20 pupils in a tested group, what constitutes 17,7%. I. Borzym obtained similar results; the more capable a pupil is, the better results on the scale of prestige in sociometric examination he or she has (Borzym, 1979, p.149). She paid attention to the fact that good achievements of capable children have an influence on their being perceived as competent and respectable people.

Capable pupils are liked also for their help in learning offered to weaker persons and for solving class problems - it was emphasized by 63 pupils (55,7%). 11 children (9,7%) appreciate capable pupils for positive character features and behaviour. They write that capable pupils are nice, kind, friendly, well-mannered and they do not tease anyone. Diligence and orderliness were mentioned by one person as highly appreciated values of capable peers. 12 people (10,6%) think that capable pupils are liked thanks to their various talents, interests and broad knowledge. When pupils write: 'they know something', 'they know everything', 'the can do something', they pay attention to the fact that skills and knowledge may be a determinant of prestige among sixth-class pupils. 5 pupils (around 4%) perceive capable pupils as a source of prestige for a class and a school. They express opinions that 'they care about good name of a school' and bring glory to class and school in competitions and contests organised both in local environment and on a nationwide scale.

Unfortunately, the tested sixth-class pupils notice also several disadvantages of capable pupils and they note that by making statements in the form of unfinished sentences. Sense of superiority, demonstrating wisdom and licking teachers' boots are the main negative behaviours of top students, mentioned by pupils. 40 pupils (35%) think that capable pupils have many negative personal attributes. To confirm these words, they write: 'they do not help', 'they are selfish', 'they are egoists', 'they do not adapt to others', 'they offend weaker people', 'they do not want to help during tests'. These opinion suggest that such capable pupils are not liked who want to keep their abilities to themselves and do not want others to benefit from these abilities. Such top students probably isolate themselves from a peer group and create barrier between themselves and less capable friends.

One of the main reasons for not liking top students given by sixth-class pupils in a tested group was the fact that they have very good marks. 35 pupils (31%) think so. This attitude is expressed in the following opinions: 'because they are wiser than

others', 'other people are envious of their good marks', 'they are always better'. On the basis of these statements, it may be assumed that there exists jealousy towards top students which results from negative effect of the act of comparing classmates with them. Such opinions are extremely unfair to capable young people because top students in this case do not deserve such negative emotional attitude of their classmates. Rejection of capable children only in terms of their good marks is particularly negative because it omits personality and many valuable features in the process of assessing them by peers.

However, top students often worsen their image in the eyes of classmates. For example, they behave haughtily and endear themselves to teachers what, at the same time, discourages their peers to make attempts at establishing friendship. 46 pupils (40,7%) express such views. People in this group notice the fact that capable classmates 'brag', 'demonstrate their wisdom', 'show off' and 'laugh at the weaker pupils'. Such pupils' opinions suggest that it is necessary for teachers to have an educational influence on capable pupils through encouraging them in positive demonstration of their abilities, e.g. through willingness to help others instead of laughing at others and depreciating their values. Pupils confirmed their previous opinions on top students when they finished the following sentence: 'if someone is a top student, he or she usually behaves...'. I divided their different statements into content categories which were similar. They show that the tested sixth-class pupils wrote that they perceive capable pupils as those who demonstrate superiority (27,4% of pupils), have negative attitude towards others (26,5%), are polite and have exemplary behaviour (23,9%), are calm (11,5%), are diligent (8,8%), are helpful and good classmates (3,5%) and are easy-going (2,6%). These answers confirm previously mentioned contrast of opinions and completely different peers' perceptions of capable pupils. On the one hand, they are perceived as polite, well-mannered and friendly people. On the other hand, they are recognised as haughty pupils who have negative attitude towards peers.

Some of the tested people referred to their own emotional attitude towards top students when they fnished the following sentence 'Capable pupil in a class...'. 6 people (5,3%) expressed strongly negative view on capable pupils in this sentence. They considered that capable pupils are not liked in a class. 4 people (3,5%) stated that capable pupils are boastful about their very good marks. 1 person mentioned top students' negative attitude towards other children in a class. 5 people (4,4%) stated that top students excessively seek for teachers' acceptation whereas 21 children (18,6%) drew attention to the fact that capable pupils often help weaker classmates. I did not take into consideration other statements because they were relating to the issue concerning identification of a capable pupil in a class which did not cover raised research question.

Conclusions from the research

The research shows that the emotional attitude of pupils to their talented peers is dichotomous: a positive or strongly negative. It is determined by way classmates perceive top students and it is related to roles which are dictated for top students by their peers: a helpful person, a good friend, a role model, a nerd, a toady or a boaster. Quality of emotional attitude depends also on personality of talented children, their

character features, type of their behaviour which was observed. These observations allow to conclude that there is a need to modify the way other children perceive top students, so the other students could compel a positive emotional attitude in relation to talented colleagues. It is important that teachers and tutors was able to show the other pupils valuable personality traits of capable children, their strengths and talents, so not to develop resentment in less talented children to top students. Teachers should praise and talk about the achievements of gifted children to show their value to the class community. Highlighting the talents and achievements of top students should not be associated with placing them over the class standards and displaying excessive sympathy for capable children from the teacher's and tutor's part. While highlighting the benefits for the class and the school from having a capable pupil seems to be, perhaps, too instrumental treatment of a top student, it allows to show pupils benefits of having such a colleague in the classroom and can have a positive influence on the process of integration of the class. Sixth-class pupils spontaneously expressed respect to certain personality traits of top students and this trend should be reinforced in educational messages directed to pupils. Teachers can emphasize not only successes and measurable learning outcomes of capable pupils, but also can talk about the merits of their personality and character. Therefore, peers from class could see that visible achievements of capable classmates often stem from: positive intrinsic motivation to learn and ability to learn, diligence, intellectual effort, creativity, ingenuity and reliability. Exposing acceptance and respect for these very traits of capable children through teachers' messages can help in creating a positive emotional attitude towards capable pupils and also can affect important tasks in the process of intellectual and moral education of pupils. Awakening attention to character traits which allow to achieve high scores in learning can build positive motivation to learning in all pupils, encourage them to develop interests and develop skills and personality dispositions which facilitate learning and self-study.

We cannot forget about the need for special attention to the personality of capable pupils. Many of them, as their classmates claim, have negative personality traits which may make entering into friendship difficult. Teachers should encourage capable young people to develop altruism, emotional sensitivity, empathy, willingness to help. It would be good for top students to see that their talents can potentially help them in gaining friends and colleagues. They should be encouraged by tutors to make use of their talents not only for their own good and individual successes, but also for the good of school and class community.

The suggestions of educational proceeding outlined above can facilitate building a positive image of capable pupils in their peers eyes and contribute to the development of a positive emotional attitude of pupils towards capable children. It should also be underlined that intellectual diversity and specificity of the personality of pupils who have deviations from the medium in development concerning intellectual sphere does not have to isolate them from their peer group. Wise, deliberate and proper conduct of education and the creation of appropriate standards and principles in the classroom can increase the consistency of the class, integrate peer group and improve the atmosphere in it for the benefit of all members of the group.

Bibliography

Abramczyk, J. (2003). Czy mamy system opieki dla uczniów wybitnie uzdolnionych, *Nowa Szkoła*, nr 5, p. 18-22.

Borzym, I. (1979). *Uczniowie zdolni*, Warszawa: PWN.

Czaja-Chudyba, I. (2009). *Jak rozwijać zdolności dziecka?* Warszawa: WSiP.

Limont, W. (2002). Model wzbogaconego kształcenia ucznia zdolnego, *Ruch Pedagogiczny*, nr 1-2, p.5-19.

Limont, W. (2010). *Uczeń zdolny: jak go rozpoznać i jak z nim pracować?* Sopot: GWP.

Lewowicki, T. (1986). *Kształcenie uczniów zdolnych*, Warszawa: WSiP.

Painter, F. (1993). *Kim są wybitni?* Warszawa: WSiP.

Partyka, M. (1997). Wokół diagnozy dziecka zdolnego, *Problemy Poradnictwa Psychologiczno-Pedagogicznego*, nr 2.

Rimm, S.B. (1994). *Bariery szkolnej kariery – dlaczego dzieci zdolne mają słabe stopnie*, Warszawa: WSiP.

Rostowski, J. (1989). O zdolnościach i uczniach zdolnych - rozwijanie zdolności i uzdolnień dzieci i młodzieży, *Oświata i wychowanie*, nr 20.

Sękowski, A. (2004). Psychologiczne uwarunkowania wybitnych zdolności, W: A. Sękowski (Red.), *Psychologia zdolności. Współczesne kierunki badań*, Warszawa: PWN.

Sękowski, A. (2004). Porozmawiajmy o uczniach zdolnych, *Psychologia w szkole*, nr 31, p. 73-81.

Sękowski, A. (2001). *Osiągnięcia uczniów zdolnych*, Lublin: Towarzystwo Naukowe Katolickiego Uniwersytetu Lubelskiego.

Tyszkowa, M. (1993). Uczeń zdolny, W: W. Pomykało (Red.) *Encyklopedia Pedagogiczna*, Warszawa: Fundacja Innowacja, p. 864-867.

Zacłona, Z. (1989). Psychologiczno-pedagogiczne uwarunkowania pracy z uczniem zdolnym. *Problemy kształcenia i wychowania*, nr 4, p. 22-37.

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EDUCATIONAL ACTIVITY OF THE SENIOR CITIZENS AS A CHANCE FOR PREVENTING SOCIAL EXCLUSION OF ELDERLY PEOPLE

Summary: *The issue of ageing population is a strategic objective of many countries which is perceived in the context of human development and lifelong learning. Respecting rules of appealing to all age groups in social policy, appreciating possibilities of mature age, adopting strategy of active ageing favour the creation of conditions for the fulfilment of needs and cognitive interests of elder people. Educational proactivity is an essential element in preventing social marginalization and exclusion of senior citizens. It is also an example of active lifestyle and its better quality in the contemporary life.*

Key words: *senior citizen, elder person, educational activity, social exclusion.*

Introduction

The population ageing is a clear sign observed around the world. Although the process of population ageing concerns mainly North America and Europe nowadays, it will become worldwide and global process in the future (Racław, Rosochacka – Gmitrzak, 2013, p. 9). Most European countries are largely affected by the process of population ageing. This is a tendency that cannot be changed due to the fact that it is an imminent phenomenon, however, easily predictable at the same time. It concerns Poland, as well, which will be its leader in the European Union in the second half of the 21st century. The Eurostat long-term predictions prove that by 2060, the percentage of elder people (above 65 years old) in the European Union will have been significantly increased and it will have been 36, 3% in Poland (ibid. p. 10).

This data suggests that the issue of elder people is important and current. Therefore, it assumes the proportions of strategic challenges of individual countries in Europe. For several years now, specific efforts have been made in order to protect senior citizens' rights, improve their life, awake their cognitive needs and offer education, unlimited by age (Polska..., 2002, p.3). This issue should be considered in a broad context of global information society, in which education is seen as a lifelong learning. It is believed nowadays that learning is relating not only to young people but also to the whole human beings of all ages. Such approach is consistent with general educational objectives, which are called by J. Delors as pillars of the 21st century education. according to. These objectives describe and explain the meaning of lifelong learning. According to them, learning is treated as a human's attitude towards knowledge and his or her own life. These objectives, which centre on four basic pillars, are expressed in the J. Delors report as follows: people learn in order to be, know, do and live together (Delors, 1998). In such education, unlimited by age, there is a sense of society development, which is consistent with the ideals of the knowledge

society and the necessity for using modern technologies. Through lifelong learning, senior citizens may have a better understanding of the reality which surrounds them, benefit from the cultural heritage, actively involve themselves in social life but also consciously protect their health and care for their future (Polska …, 2002, p. 4).

The guiding principle -education for everyone- in a wide area of most of the developed countries in the world, based on the paradigm of inclusion, presupposes respect for diversity, different needs, abilities, expectations and mental characteristics of man. In this context, the inclusion should be understood as standing in opposition to marginalization, exclusion and segregation on the grounds of social origin, language, culture, level of mental and physical development, age or gender, etc. The discourse on the issue of combating social exclusion due to age is now important and undeniably current problem in the European and Polish social practice.

Polish action strategy in the aging society – public policy aspects

The actions of the state in basic directions and political issues and in the area of functioning of the administrative authorities should effectively protect the elderly. In appropriate, non-discriminatory decisions, the state should take care of their rights so they will not be violated. Human Rights Defender, I. Lipowicz, says, "In terms of respect for the rights of older people in our country, there are a lot of things that need to be changed. State action should be taken as a coherent, coordinated (...) focused on the priorities, not just the occasional action" (Lipowicz, 2012, p. 8).

Expanding this thought on particular actions, B. Szatur-Jaworska, thinks that, in the context of the broad issues of aging, people should be talking about three measurable aspects of public policy of the state. The first aspect is policy towards the aging of the population, understood as a conscious and deliberate actions of the state in economic, social, migration sphere and development of space. The second aspect is pursuing the elderly policy, which aim is to meet needs of this group in particular population. It is based on understanding of the current situation of seniors and forecasting their needs in perspective of several or more years. Policy towards old age is the third aspect of public policy. It refers to the phase of life in old age, and its primary goal is to ensure equal position of old age with other periods of life, creation of a positive image of seniors and prepare the younger generation for their old age (Szatur-Jaworska, 2000, p. 119-136). These ideas contain a message for society which is open to all age groups, respect the specificities and needs in different periods of human life. The aging process is a continuous throughout the whole life, and so it should be seen, therefore, it is necessary to prepare the whole society to the next stages of life. It is as an important element and an integral part of social policy.

It should be underlined that these three mentioned aspects of the state's public policies are consistent and clear dimension of the objectives and tasks in aging societies. They addressed, however, not only people in their late maturity, but the whole of society. Only then we can talk about the meaning of such actions contained in clearly defined standards and directives in the social area which is open to all age groups.

Tangible evidence that Europe respects the principle of an open society for all ages was the decision of the European Parliament and of the Council to declare 2012 as the European Year for Active Ageing and Solidarity between Generations (Decision

..., 2011, No. 940). Wanting to emphasize the importance of education for the development and use of the potential of older people generation and appreciating the role of self-help organization for seniors, the Senate of the Republic of Poland established 2012 as the year of Universities of the Third-Age (Resolution ..., 2012). The main purpose of this provision was to recognize and raise public education of the elderly to the level of government administration task. Scientific patronage on this project was assumed by the Polish Society of Gerontology, and two parliamentary assemblies, i.e. Team in charge of Older People and Team in charge of Universities of the Third-Age declared their active support of this initiative.

This has activated Polish government to a thorough look at the new area of policy on active aging in population, and the public became convinced that common stereotype of the passive seniors can and should be changed, but also to appreciate its features in active operation, both in public and social.

In Poland, an example of a major initiative for seniors was the adoption of "Government Program for Senior Citizens Social Activity". It includes a long-term policy concerning seniors and government programs as well as grant competitions to support educational activities seniors.

In the national conference under the patronage of the Speaker of Parliament summarizing the Year of Universities of the Third-Age, TAU representatives adopted an important document 'Pact for seniors' covering indication of the directions of policy concerning seniors addressed to the state authorities, local governments and TAU.

Promoting passwords concerning "active aging" has a deep meaning, especially in view of the forecast that more better educated people will successively enter into old age. This is why the actions of government should see diverse seniors activity not related to employment, but primarily to their usefulness in the life of the closest environment and local communities. It seems important to create favourable conditions to meet elder people needs and cognitive interests in various forms of education. At the same time we cannot forget the need for a holistic, but multi-faceted look at the issue of population aging. Seniors group cannot be seen because only in one term, as a uniform and homogeneous group, having similar expectations and needs. Many of the older people due to their specific situation in life and health, will need systematic support and constant care, which is why the actions of state policy must include variety of tasks and actions that meet different needs and expectations of seniors and their various life styles.

Active aging

The problems of old age and aging is dealt by a scientific discipline called Gerontology. In the range of its theoretical and research interests covers broadly recognized aging, prevention, treatment of the elderly, but also the social dimension of the aging population. It explains and describes the various aspects of personality of seniors, it refers to their gaining of sense of dignified and serene old age. The complexity of the aging process in the context of research is recognized as a long and inevitable, and old age is defined as a specific phase of life, which is characterized by both quantitative and qualitative changes. These changes can have a positive as well as negative dimension. In fact, they relate to all personal dimensions of human existence

In geriatric psychology it is noted that seniors are a very diverse group, therefore the criteria for the division of the elderly are varied and relate to their physical, mental and intellectual strength, but also to age. In scientific publications authors agree that old age is the last phase of human life, but also believe that one cannot definitively and clearly define its start. It is impossible to precisely determine the framework for early and late old age, because each person has an individual course of old age which covers the scope and pace of change physical and psychological changes.

An 'elder' person is a person who is over 60-65 years and after 75 years a person is referred to as the "old". Taking the most common criterion of registered age (calendar age), which means number of years lived, though, is the simplest and most widely used, does not differentiate the elderly in relation to age: biological, functional (status of life performance), psychological (mental acuity and quality of psychosocial functioning), or social age (scope and hierarchy of performed social roles), economic (working, non-working) and social age (the right to social security benefits) (Jakimowicz-Klein, 2012, p.13).

Referring to social gerontology, and especially to the well-known theories of aging, it must be emphasized that one of them proves that the condition for a successful old age is the active participation of elder people in various forms of activities. The creator of this concept – R. Havighurst believes that research confirms a positive effect of the activity on vital functions of the elderly and not diminished sense of satisfaction with life. Generally it can be said that this theory is based on the positive correlation between the activity, happiness and well-being of seniors (Halik, 2002, p.19).

Currently, social policy for the elderly in our country is being created, but it is guided by the idea which originates from the policies observed in the European Union countries which adopt policy of 'active aging' as a priority. It is a multi-faceted and very ambitious program, and concerns staying in the labour market as long as possible, social security sphere, concerns about health and physical fitness, health promotion and prevention, and care for the elderly.

It should be clearly said that in the light of European societies, Poland adversely stands out with the degree of engagement of the elderly, not only in social live but also with small activity of seniors and their withdrawal from participation in civic affairs (Government Program ... Diagnosis 2012, p.24). This thesis is also confirmed by the results of research on leisure activities of seniors. They show that 64% of people over 60 are not interested in the use of cultural goods, or in active recreation or leisure. These people do not see the need to use new technologies, do not take up activities for the environment in which they live (Wądałowska, 2010). From these facts one can conclude that in Poland there is an urgent need to promote and create a positive attitude towards the activities to prevent marginalization and self-exclusion of seniors. Changing attitudes and preferences in the area of leisure time activities should be related to the potential of older people and motivating them to self-realization in various activities, by reserving for them a specific place in public space.

This is very important issue in the context of upcoming social changes and developing an offer of educational activities for seniors. J. Halik says that number of people with higher education among the elderly will clearly increase by the year 2020

in Poland. Because the level of education has a significant impact on life expectancy, a group of people who reach old age will include much more people with secondary and higher education than ever. This forecast also shows that significant changes in the behaviour and attitudes and lifestyles of future seniors will be observable. They will be focused on the need for active forms of recreation and participation in culture, but also will extend the time of activity in the field of mental work (Halik, 2002, p. 16) and expand the cognitive interests.

In the modern mainstream discussion on aging and old age, proactivity is pointed out as an important factor in shaping the quality of life in a growing number of seniors. Possibility of optimal adaptation and development of the elderly is emphasized, as well as responsibility of each person for the shape of the final stage of his or her life. Aspects of successful aging by triggering initiative, creating new ideas, strengthening personal resources are shown in positive light (Brzezińska, 2011, p. 7). The concept of proactivity is focused on the objectives and efforts aimed to personal development and learning of one's own potential in context of sense of one's own effectiveness and deciding about one's own life.

The trend observed in scientific literature, which emphasizes the development opportunities of older people, improving quality of their life in terms of lifelong learning, is a request of optimization of their lives, but also seek opportunities to mitigate and compensate for deficits occurring with age. In this sense, old age is not presented as a period of losses and negative aspects, but it is shown as valuable life changes that open up new spaces for active seniors, breaking the hitherto prevalent social stereotypes in the context of late maturity.

Against stereotypes and discrimination on grounds of age

Researches on stereotypes show that older people are perceived more often in the context of negative than positive stereotypes. Seniors are shown as persons which are devoid of energy, depression, submissive, sickly, poor, infantile, overly religious, malicious, quarrelsome, geriatric, isolating themselves from others. In social attitudes towards the elderly visible are opinions that they are dependent on the surrounding, sickly, retreating from life, do not have friends, have low self-esteem and show severe cognitive deficits (Nawrocka, 2013, p. 21-22).

Stereotypical, usually negative perception of older people affects the attitudes containing light and nasty types of prejudice. Nasty prejudices are formed in result of stereotyping which strengthen convictions concerning worthlessness of older people. Such image is popularized e.g. in the media (ibid, p. 42). Bias associated with stereotypes and discrimination on grounds of age are rooted in the conviction concerning lesser importance and usefulness of any age group - usually the elderly.

In Poland, discrimination because of age is most often seen in the area of health care, the labour market and financial services. The elderly are worse treated in health centres, offices, public transport, on the streets, often in the neighbourhood (Brzezińska, 2011, p. 52). This issue is directly related to ageism, synonymous of attitudes towards seniors, meaning their discrimination on grounds of age. It is thought that ageism is form of prejudice against age (including the elderly), which is the basis for the assessment of human social attitudes. Researches show that in modern societies seniors are situated low in the social hierarchy. One witnesses the phenomenon of

stigmatizing them, precisely because of old age. It is generally acknowledged that such behaviour is an expression of social anxiety of old age and as a consequence it produces bias against older people. Older people are seen as a burden on society, therefore, they are discredited and humiliated (Szarota, 2004, p. 5-7) put on margins on social life, which is evident in their specific exclusion and discrimination.

It should be underlined, however, that in addition to the nasty stereotypes on old age, there are also positive stereotypes - they generate a positive impact on attitudes of seniors to age and quality of life. Advantages such as practical wisdom, cheerfulness, freedom of opinion, the distance to unimportant matters, prudence and understanding, professional knowledge, life experience, and many others which are perceived in the elderly and contribute to meeting their basic, but extremely important needs: respect and discretion. There also constitute an inspiration for family, social or educational activity.

Educational activity of seniors and better quality of life

J. Nawrocka claims that positive attitude, accepting and friendly attitude towards the elderly are closely related to their activity, but also to their role in family and society. Activity for others allows to appreciate their involvement in the group of older people and the close environment (Nawrocka, 2013, p. 49). Mental change in the group of older people, increasing health awareness, willingness to perform different activities does not allow to ignore their needs.

Although old age cannot be stopped, it is possible to be independent, fit, healthy, and optimistic oriented to life in the old age. In terms of active life a lot can be done by introducing new rules, changing lifestyles and using the opportunities for a better quality of life. Developmental tasks of the old age include maintaining interest in the modern world, taking up roles, tasks and activities which fill free time with activities typical for mature people. From the point of view of geriatric psychology of the great importance is also acceptation of the inevitable process of aging, not focusing on the hardships and shortcomings of life, care about social interaction, preserving sensory skills, building inner harmony, accumulation of life activity and having distance to life (Leszczyńska-Rejchart 2010, p. 50-51).

Adaptation to old age and successful aging has two closely linked elements, i.e.: adaptation which involves taking up tasks adequate to the potential of the individual and the formation of a new life, understood as a personal development and seeking interests and discovering talent (Wiśniewska-Roszkowska 1986, p. 52).

Human activity in the old age is of particular importance because it prevents alienation, isolation and withdrawal from social life. It determines fulfilling biological, social, cultural and educational needs, and thus it is related to the performance of roles, activities taken up in a group, or animating social initiatives. Lack of activities causes loss of acceptance in society, and consequently leads to loneliness (Pikuła, 2013, p. 95). Therefore, special care for seniors in terms of their activation in the second half of life is fully justified.

W. Wnuk believes that the idea of development is a factor in the prevention of aging, because it aims to extend the period of activity, preserve health and creative life, which are implemented in the educational model of old age (Wnuk, 2008, p. 145). This model allows to experience satisfaction with life, fills time with content resulting

from lifestyle and attitudes of seniors towards learning at every stage of development. Successful aging is associated with positive interpersonal contacts, self-acceptance, having a purpose in life, activity and personal development. It is also said that mature age constitute a chance to fulfil dreams and implement educational aspirations which did not have favourable conditions for development in the earlier period of life. Educational activity in this aspect has a developmental dimension based on self-awareness and the desire to create one's own life with a sense of identity. Development of an elderly man should be concerned with deepening meaning of life and maintaining interest in contemporary problems.

The older people learning is an activity that gives knowledge about themselves and others, shows the perspective of exploring the world and its understanding in evaluative terms. It results in better quality of life of seniors and the perception of its meaning in the axiological dimension. Developing active and constructive attitudes reinforces the elderly in the belief that they are subjects which influence and shape their own lives.

Educational and activating offer for seniors in the University of the Third-Age

Preventing passivity in every sphere of mature human life makes his or her life more valuable. One of the most important forms of activity of the elderly is education, which has a special importance because it is considered as an important element of preventing anti-discrimination of seniors due to age and form which prevents social marginalisation of this group of people (Fabiś, 2005, p.91). Using educational and activation programs by the elders gives them a chance to adapt to the surrounding reality, develop and tend interpersonal relationships in social relations and take an active part in the life of the nearest environment. If such activity gives satisfaction and is accepted, it can become a determinant of dignified and satisfactory aging. Educational activity of people in late adulthood is also focused on self-development – says A. Fabiś (2008, p.13).

Education in old age is a major ground for training of mind, it determines the lifestyle of seniors, which is based on patterns of positive aging. Meeting cognitive needs in multilateral intellectual and physical peer group – persons with similar interests or views, makes it easier to overcome difficulties and constraints due to age and adapt to changes in the social, economic, cultural and moral life of the country (Sapia-Drewniak, 2007, p.120).

It is worth underlining that the educational activity of seniors has also therapeutic role because it reduces or eliminates the adverse effects of emotions and negative feelings, i.e. hostility, anger, anxiety, or depressive states on their functioning in the social environment.

Engagement in activities which give sense of satisfaction and conviction about attractiveness of the educational offer enhances positively personal development of seniors and prevents regress. Activity means a constant effort adapted to possibilities of an individual person. It is a condition for proper development and allows to lead a harmonious life and slows down the aging process. Activity is the basis for self-realization of older people, a way to find new values and goals in life (Jakimowicz-Klein, 2012, p. 58). It is also the process of creating one's own existence and giving sense for relationships with other people. The aim of the educational activity is to

maintain intellectual performance. We cannot forget that people who are mentally active are able to creative work up to late years. It is easier for them to adapt to different situations and they accept their own old age, they preserve mental ability, because their imagination, thinking and attention are constantly exercised.

One of the forms of training of intellectual capacity and systematic stimulation of development of seniors in many areas are Universities of the Third-Age. "It can be said that the activities of the Universities of the Third-Age tend to broad inclusion of older people in a multi-dimensional process of education, activation and integration, which gives meaning to life during civilizational changes. They inspire seniors to various activities and are aimed to prevent their social exclusion and forms of discrimination. It is also an expression of concern to ensure a dignified place for the elderly in civil society" (Borczyk, 2012, p.31). Universities of the Third-Age meet the educational aspirations of seniors. They fulfil tasks concerning inclusion of older people in lifelong learning system. Due to this students of Universities of the Third-Age actively fit in the space of fulfilling their needs and feel more valuable for the whole society. Reflections on learning of older people and the acquisition of life competence in the context of their educational activity, bring to the conclusion that knowledge is useful in family, social, and intergenerational contacts. Exercising and improving skills of learning, thinking, broadening general knowledge, acquisition of new experiences provide understanding of the social and economic reality (Konieczna -Woźniak, 2011, p. 167). This aim is accomplished by taking into account issues relevant to contemporary society, such as globalization, Europeanization, computerization and communication the current educational programs. Due to this content it is possible to prevent or reduce problem of social exclusion and isolation of the older generation.

Encouraging older generation to use the Internet is widely disseminated and it is included in the scope of educational activity. It is said that there exists a correlation between using the Internet by older people and their increased activity in other fields, i.e. doing sports, participation in culture and social life (Kowalik, 2011). It is a very important issue because new technological developments, new devices and technologies, by their nature, become a barrier to older person. Therefore, technological and IT education shall be promoted and widely accessible for seniors.

Shaping and developing attitudes towards healthy lifestyle and raising awareness of the necessity of exercises in everyday life of seniors are included in subjects of gerontological prevention and promotion of healthy lifestyle, based on physical activity.

Interpersonal contacts are also not without significance. Integration of older people's environment is implemented in order to maintain interpersonal relation through meetings with other people who have similar problems, concerning age restrictions. The sense of belonging to a group contributes to mental improvement and also enhances physical condition. Doing exercises in a group stimulates brain to produce higher amount of happy hormones (endorphins). The company of other people and establishment of friendships are also substantial dimensions of functioning in a group because they often fill the emotional void and the sense of isolation. It is also a pretext for going out what is extremely valuable for senior's mental health.

The immense diversity of offer of the Universities of the Third Age in Poland is a conscious and considered goal of their functioning. In mature age, when ageing processes gather pace, it is essential not to engage only in one action. Having and developing various interests allow for better functioning in everyday life, as well as, protecting people against dementia. The possibility for pursuing dreams, hobbies and talents, through participation in group educational classes at University of the Third Age, strengthens self-esteem of every person, affording satisfaction and the sense of fulfilment.

Encouraging and motivating seniors to participate in social, cultural, educational and political life lead them to meaningful engagement in the functioning of the closest social sphere or environment. A great number of contacts with different people positively affect general well-being of older people. It is also an illustration of the fact that, for example, voluntary work for other person, allows for using mature people's capability, their wisdom and long professional experiences while appreciating older person's place in the society, at the same time. Mature people, already retired, are valuable capital for every region. The main objective of the education is to notice and use it appropriately. Due to administrative and civic education, seniors are prepared for active participation in the life of the closest geographical and social environment.

Intergenerational integration is the essential goal of the University of the Third Age. It has got a profound importance concerning mutual learning from each other of people of different generations. In these axiology-based interpersonal contacts, the past, history, tradition, customs, ethical principles and values meet with contemporary world: with technological progress, technological and civilizational changes and culture.

To sum up, it is worth emphasising that the University of the Third Age allows for approaching the people and meeting new persons while creating opportunities for spending time in an interesting way and using their own intellectual capabilities. W. Wnuk claims that the Universities of the Third Age meet different needs, for example: intellectual ones, meeting new people what counteracts loneliness and favours ambition, as well as, developing passion and interests. Moreover, it gives a feeling of safety, induces usefulness and support of a group, as well as, sympathy and belonging to the group of peers. As a result, it enhances self-esteem, builds positive self-perception and provides positive emotional experiences. Involvement of older people in the life of the closest environment shapes socially and health-oriented attitudes while building standards of acceptation in aging period, at the same time. It teaches how to live in order to remain optimistic, preserve sense of liberty, self-contentment and inner happiness. On the other hand, autonomy and the sense of control over one's own life motivate for living a fulfilled life in an active and educational lifestyle.

Shaping culture of innovation among teachers is made through:

- comprehensive management of innovation based on thematically cohesive teams of teachers (human capital management);

- creating for teachers conditions which help them in generating and implementing new innovative educational ideas and creating a favourable climate for searching for innovation;
- raising awareness of continuing professional development and personal development in order to make changes for the better and to improve the effects of educational work;
- motivating teachers to be creative and to propose innovative projects, and rewarding them for innovation;
- popularizing the idea of innovation and dissemination of innovative attitudes;
- development of self-creation and acquisition of skills concerning implementation of innovative solutions to educational practice;
- developing openness and adaptability to change, and reducing or eliminating barriers to innovative ideas;
- improvement of work in teaching task forces, raising awareness of the value of cooperation and active interaction, and enhancing the communication process.

Shaping culture of innovation among pupils means:

- developing awareness of the need for lifelong learning in the knowledge society;
- teamwork skills aimed to better effect and developing communication skills;
- execution of group research, educational or implementation projects;
- releasing creativity, implementation of creative thinking and unusual activities
- engaging in co-creation of knowledge;
- development of reflective perception of reality and development of needs for constructive changes;
- motivating to follow good practices of innovative activities, stimulating creativity;
- active participation in innovative activities (implementation of pro-innovation attitude);
- understanding of the meaning of the use of their intellectual capacity and creative features in creating innovative ideas;
- attention to attitudes of openness and flexibility of thinking in new, difficult, unusual situations.

Conclusion

B. Suchodolski draws the attention to the fact that rapid changes, occurring in different areas of contemporary world, severely affect older people (Suchodolski, 2003). On the basis of this assumption, popularising educational way of life appears to be the best gerontological prevention and optimal solution for many older people (Borczyk, Wnuk, 2012, p.73). At the same time, this tendency relates to the knowledge and information society, as well as, lifelong learning – which are basic dimensions of contemporary world.

The old age is the most differentiated and the most individualised period of life. Education in the late adulthood period refers to life plans and orientation of older people.

The aims of this education are associated with: conscious self-improvement of a person; formation of social attitudes; all dimension of human's life; satisfying his or

her needs; knowledge of living environment and life experiences; and also, self-reflection on understanding of life, as well as, wisdom as the final stage of human's intellectual development (ibid., p.76).

Education of seniors aims to acquire not only resourcefulness and self-sufficiency in contemporary reality but also new practical skills needed for living and activities for the society. The context of education, which helps to resolve life problems, specific in the late stage of life, is valuable.

Educational and encouraging offer of University of the Third Age in Poland, being diversified, rich and satisfying the requirements of life in contemporary world, is an example of commitment and multilateral activity of seniors. Active lifestyle improves the quality of life of the people in the middle age and under 18 years old. It is also a good example confirming rightness and necessity for providing opportunities for mature people's involvement in many actions. Proactive old age and promoting successful ageing, concerning education, favour right, realistic and adequate adaptation to the early, middle and late adulthood.

Bibliografia

Borczyk, W. (2012). Sytuacja osób starszych w kontekście doświadczeń Uniwersytetów Trzeciego Wieku. W: *Aktywny senior*, Warszawa: Wspólnota Robocza Związków Organizacji Socjalnych, p. 22- 51.

Borczyk, W., Wnuk, W. (2012). Edukacja w starości i do starości. W: B.S Szatr-Jaworska (Red.), *Strategie działania w starzejącym się społeczeństwie. Tezy i rekomendacje*. Strona internetowa Rzecznika Praw Obywatelskich, p.73-81.

Brzezińska, M. (2011). Proaktywna starość. Warszawa: Difin.

Deklaracja końcowa uczestników konferencji Uniwersytetów Trzeciego Wieku zorganizowanej dla podsumowania obchodów roku UTW, Sejm 19 listopada 2012 r. W: Aktywny senior najlepszy rzecznik swoich społeczności, Wspólnota Robocza Związków Organizacji Socjalnych (2012). Warszawa, p. 47-51.

Delors, J. (Red.). (1998). *Edukacja jest w niej ukryty skarb*, Warszawa: Wydawnictwo UNESCO.

Fabiś, A. (2005). Aktywność kulturalno-oświatowa ludzi starszych. W: A. Fabiś (Red.), *Seniorzy w rodzinie, instytucji i społeczeństwie. Wybrane zagadnienia współczesnej gerontologii*, Sosnowiec: Wydawnictwo WSZiM w Sosnowcu.

Fabiś, A. (2008). Wstęp W: A. Fabiś (Red.). *Aktywność społeczna, kulturalna i oświatowa seniorów*, Bielsko-Biała: Wyższa Szkoła Administracji w Bielsku-Białej.

Halik, J. (2002). Starzenie się społeczeństw jako proces demograficzny i społeczny. W: (Red.) J. Halik, *Starzy ludzie w Polsce. Społeczne i zdrowotne skutki starzenia się społeczeństwa*, Warszawa: Instytut Spraw Publicznych.

Jakimowicz-Klein, B. (2012). *Poradnik na drugą połowę życia*, Warszawa: Świat Książki.

Konieczna-Woźniak, R. (2011). Nabywanie kompetencji życiowych przez ludzi starszych. W: *Standaryzacje socjalizacji inkluzyjnej. Dorosłość i starość*, Leszno: Państwowa Wyższa Szkoła Zawodowa.

Kowalik, W. (2011). Starzy i młodzi w Internecie – społeczne konstruowanie generacji w świecie wirtualnym. W: J. Mucha, Ł. Krzyżowski (Red.), *Starzenie się w przebiegu życia jednostki w warunkach dynamicznych przemian*. Kraków: Wydawnictwo AGH.

Leszczyńska-Rejchert, A. (2010). *Człowiek starszy i jego wspomaganie w stronę pedagogiki starości*, Olsztyn: Wydawnictwo Uniwersytetu Warmińsko-Mazurskiego.

Lipowicz, J. (2012). *Strategie działania w starzejącym się społeczeństwie. Tezy i rekomendacje*, B. Szatur-Jaworska (Red.), strona internetowa Rzecznika Praw Obywatelskich.

Nawrocka, J. (2003). *Społeczne doświadczenie starości. Stereotypy, postawy, wybory*. Kraków: Oficyna Wydawnicza „Impuls".

Pikuła, N. (2013). *Senior w przestrzeni społecznej*, Warszawa: Wydawnictwo BORGIS

Polska droga do globalnego społeczeństwa informacyjnego. Raport o rozwoju społecznym. Program Narodów Zjednoczonych ds. Rozwoju (UNDP), (2002). Warszawa.
Racław, M., Rosochacka-Gmitrzak, M. (2013). Proces starzenia się w kontekście wyzwań demografii, polityki społecznej oraz doniesień badawczych. W: *Aktywny senior*. Warszawa: Wspólnota Robocza Związków Organizacji Socjalnych.
Rządowy Program na rzecz Aktywności Społecznej Osób Starszych na lata 2012 – 2013: Diagnoza, dostępny na stronie://www.mpips.gov.pl/…Aktywność/Seniorzy/ Rządowy%20Program20ASOS_ 2012-2013.pdf
Sapia-Drewniak, E. (2007). Kreatywna rola uczenia się w procesie rozwoju człowieka starszego. W: S. Rogala (Red.), *Wybrane problemy procesu starzenia się człowieka*, Opole: Wyższa Szkoła Zarządzania i Administracji w Opolu.
Suchodolski, B. (2003). *Edukacja permanentna, rozdroża i nadzieje*. Warszawa: TWWP.
Szarota, Z. (2004). *Gerontologia społeczna i oświatowa. Zarys problematyki*. Kraków: Wydawnictwo Akademii Pedagogicznej w Krakowie.
Szatur-Jaworska, B. (2000). *Ludzie starzy i starość w polityce społecznej*, Warszawa: Aspara – JR.
Uchwała Senatu Rzeczpospolitej Polskiej z dnia 1 lutego 2012 roku.
Wądałowska, K. (2010). *Obraz typowego Polaka w starszym wieku*. Komunikat z badań CBOS, BS/2/
Wiśniewska-Roszkowska, K. (1986). *Nowe życie po sześćdziesiątce*, Warszawa: Państwowe Wydawnictwo Wiedza Powszechna.
Wnuk, W. (2008). Idea rozwoju jako czynnik profilaktyki starzenia się. W: A. Fabiś (Red.), *Aktywność społeczna, kulturalna i oświatowa seniorów*. Bielsko-Biała: Wyższa Szkoła Administracji w Bielsku-Białej.
Zacłona, Z. (2012). Polskie Uniwersytety Trzeciego Wieku w Europejskim Roku Aktywności Osób Starszych i Solidarności Międzypokoleniowej, *Krakowskie Studia Małopolskie*, nr 17, p. 79-98.

Chapter III

Teachers preparation to inclusive education

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THE COMPETENCE OF TEACHERS AS A CONDITION FOR IMPLEMENTATION OF THE INCLUSIVE EDUCATION AT THE VARIOUS STAGES OF EDUCATION

Summary: *This publication concerns the conditions for the implementation of the inclusive education resulting from the psycho-pedagogical competence of teachers. The introduction to psycho-pedagogical assistance for pupils with special educational needs is the basis for the empirical analysis. Analysis of data obtained during the research allows to make a comment about the self-assessment on teachers' competences in the field related to the topic of study. The summary contains proposals for complementing the contents of teacher training with issues allowing to gain the competencies necessary for the implementation of the inclusive education.*

Key words: *psycho-pedagogical assistance, special educational needs, inclusive education, competence of teachers, contents of teacher training.*

1. The introduction to psycho-pedagogical assistance for pupils with special educational needs (SEN)

Psycho-pedagogical assistance in school practice means activities relating largely to work with pupils with special educational needs. According to M. Bogdanowicz (1995), special educational needs concern pupils who cannot cope with the requirements of generally applicable educational program. F.J. O' Regan (2005), underlines the fact that they have much greater difficulty in learning than their peers and they need specific conditions, appropriate to their individual abilities and limitations. Guidelines concerning assistance are regulated by the Regulation of the Ministry of Education, the last of which (Regulation of the Minister of National Education of 30 April 2013 on the principles of supply and organization of psycho-pedagogical assistance in public kindergartens, schools and institutions) provides that aid activities are addressed to pupils who are: disabled, socially maladjusted, in risk of social maladjustment, especially gifted, with specific learning difficulties, with language communication disorders, chronically ill, in a crisis/traumatic situation, with educational failures, neglected which is associated with the living conditions of a pupil and his/her family, a way of spending free time and environmental contacts , with adaptation difficulties associated with cultural differences or a change in the learning environment, including those related to early education abroad.

According to this regulation, the general assumptions of the inclusive education system for pupils with special educational needs include:

- equalisation of educational opportunities for all pupils;

- transparency and flexibility of the education system (enable to move a student from a public institution to a special institution and vice versa);
- adapting all schools to admit and effective functioning of children with special educational needs;
- matching requirements to the diverse educational needs and psycho-physical capabilities;
- identifying and using the potential of the child to overcome his/her deficits, using a variety of sources such as: information and recommendations from opinions and judgments submitted by professionals, parents and which are available in scientific publications;
- preparation of external conditions;
- creating conditions for education (methods and forms of work).

Many authors (Jas, Jarosińska 2010, Fairbairn 2000) underline that psycho-pedagogical assistance is both the recognition and satisfaction of individual development and educational needs of pupils, as well as recognition of the pupil's mental and physical capacity resulting from certain dysfunctions. So, diagnostics and therapy closely fit in educational activities. Teachers, parents, psychological-educational counselling centres (specialist), teacher training institutions, and non-governmental organisations take part in organising and providing the therapy.

The need for and scope of diagnosis and therapy of a pupil is often emphasised, on the contrary, the need to recognize the potential of the school as an environment which organise this help is rarely mentioned. Jarosz and Wysocka (2006), when talking about the areas of diagnosis, underline the necessity of their equitable treatment:

- psycho-pedagogical diagnosis of a child/pupil which covers, inter alia, his/her school readiness designated by the mental, emotional and social as well as physical development, the degree to adapt to the conditions of the school, diagnosis of achievements and failures and all forms of classroom, after-school and school activities;
- diagnosis of the socio-educational situation of a family consisting of assessing the formal structure of the family (set of roles, division of influences), social and emotional structure, as well as the style and organization of life (including living and material conditions), which affects the functioning of the family as an upbringing environment;
- diagnosis of school as a educational environment which takes into account formal factors, material conditions, the state of care for a pupil, cultural conditions, as well as the specificity of the social environment of teachers and socio-cultural environment of peers.

As emphasized by M. Łoskot (2013), M. Krawczonek (2011), M. Klaro-Celej (2012), forms of psychological and pedagogical assistance for pupils with special educational needs are organized at all levels of education and are as follows:

- Kindergarten and preschool department in primary school - classes which develop talents, specialized classes: correctional and compensational activities, speech therapy, socio-therapeutic classes, other therapeutic classes, advice and consultations;

- Generally accessible and integrated primary school - therapeutic classes, classes which develop talents, didactic-compensatory classes, specialized classes: correctional and compensational activities, speech therapy, socio-therapeutic classes, other therapeutic classes, workshops, advice and consultations;
- Special primary school – classes which develop talents, didactic-compensatory classes, specialized classes: correctional and compensational activities, speech therapy, socio-therapeutic classes, other therapeutic classes, workshops, advice and consultations;
- Generally accessible and integrated secondary school and upper-secondary school – therapeutic classes, classes which develop talents, didactic-compensatory classes, specialized classes: correctional and compensational activities, speech therapy, sociotherapeutic classes, other therapeutic classes, classes concerning selection of further education and occupation, workshops, advice and consultations;
- Special secondary school and upper-secondary school – classes which develop talents, didactic-compensatory classes, specialized classes: correctional and compensational activities, speech therapy, socio-therapeutic classes, other therapeutic classes, classes concerning selection of further education and occupation, workshops, advice and consultations;
- School for adults (youth educational and social therapy centre, special school and educational centre, further education and practical training organisation, vocational training and professional development centre) – activities related to selection of further education and occupation, workshops, advice and consultations;
- Psycho-pedagogical assistance is also provided for parents and teachers in all educational institutions in form of advice and consultations, workshops and trainings.

Inclusion processes in higher school are in accordance with procedures developed by the offices of persons with disabilities (concerning especially the physically disabled students with multiply disabilities, with sensory defects, and occasionally include dyslexic). As can be seen from studies conducted so far (Klapa, Łubiarz 2012), dyslexic students do not report their difficulties to the teachers. Little more than 1/3 of those surveyed decides to request for a change in the form of the exam. This concerns mainly the foreign language exams, often re-sit exams. Therefore, attempt to change the form is taken after failure on the primary date. University teachers are also willing to support dyslexic, stipulating that they will take only occasional actions. They point out deficiencies in their knowledge concerning the specifics of this disorder and the time constraints.

2. Psycho-pedagogical competence of teachers in their self-assessment

Both in the process of diagnosis, as well as in therapeutic activities, teachers have methodological workshop – methods, diagnostic tools and therapeutic agents. This workshop is not very extensive because not all methods and tools used in the diagnosis and therapy are available for teachers. Some of them function as a professional workshop of psychologist, pedagogue or speech therapist. Selection of

actions appropriate for student needs depends not only on teacher knowledge about the nature of the dysfunction, but also on the ability to create his/her own workshop. Therefore, it is worth to know self-assessment of teachers concerning these issues, assuming that those competences are a major factor for successful implementation of inclusive education.

A survey was used for this purpose. Results obtained by a seminar group led in 2013-2014 by J. Rybska were used in the empirical analysis. Teachers from primary and secondary schools from Lesser Poland voivodeship took part in the study – 213 persons.

Table 1.

Self-assessment of the level of competence of teachers in the diagnosis of SEN

Item	Group of pupils	Indications of teachers (in %)					
		difficult to assess	1 very low score	2	3	4	5 very high score
1.	With specific learning difficulties	5,8	2,2	7,2	9,1	**47,7**	28,0
2.	With language communication disorders	-	7,4	**30,1**	20,4	11,7	27,4
3.	Showing adaptation difficulties	3,4	4,9	**43,5**	26,8	11,4	10,0
4.	Highly gifted	7,1	12,8	6,3	**36,1**	22,9	14,8
5.	With behavioural problems (socially maladjusted, in risk of maladjustment)	2,8	4,4	26,8	**38,3**	20,6	7,1
6.	Neglected by the environment	7,0	-	10,0	21,1	**54,2**	7,7
7.	In a crisis or/and traumatic situation	36,1	24,8	**28,2**	5,1	5,8	-
8.	Chronically ill	8,9	13,9	28,6	**35,2**	7,0	6,4
9.	With sensory damages	1,9	6,7	**57,8**	16,5	5,9	11,3
10.	Mentally and/or physically disabled	1,2	1,5	11,9	12,1	**59,9**	13,4
11.	Showing educational failures of another type	4,2	4,6	13,1	**46,2**	22,7	9,2

Source: own study.

Table 2.

Self-assessment of the level of competence of teachers in the implementation of SEN

Item	Group of pupils	Indications of teachers (in %)					
		Difficult to assess	1 very low score	2	3	4	5 very high score
1.	With specific learning difficulties	-	-	-	4,7	47,2	**48,1**
2.	With language communication disorders	1,7	1,3	0,8	19,9	33,7	**42,6**
3.	Showing adaptation difficulties	2,7	-	-	39,5	**57,8**	-
4.	Highly gifted	1,8	3,2	2,7	18,5	**52,5**	21,3
5.	With behavioural problems (socially maladjusted, in risk of maladjustment)	3,7	5,2	6,3	**36,5**	29,9	18,4
6.	Neglected by the environment	5,2	0,9	4,3	17,3	**43,7**	28,6
7.	In a crisis or/and traumatic situation	9,9	9,5	**44,9**	21,6	11,3	2,8
8.	Chronically ill	7,0	-	8,2	36,7	**36,8**	11,3
9.	With sensory damages	3,3	2,6	5,0	**41,1**	39,2	8,8

10.	Mentally and/or physically disabled	1,7	-	3,0	30,6	**41,9**	22,8
11.	Showing educational failures of another type	0,6	2,4	0,8	23,7	**41,0**	31,5

Source: own study.

Table 3.

Self-assessment of the level of competence of teachers in the evaluation of the implementation of SEN

Item	Group of pupils	Indications of teachers (in %)					
		Difficult to assess	1 very low score	2	3	4	5 very high score
1.	With specific learning difficulties	1,5	0,6	5,9	11,7	**43,1**	37,2
2.	With language communication disorders	6,5	2,5	2,6	31,8	**32,6**	24,0
3.	Showing adaptation difficulties	3,1	9,0	2,9	**48,9**	28,8	7,3
4.	Highly gifted	1,4	-	8,8	18,7	**39,9**	31,2
5.	With behavioural problems (socially maladjusted, in risk of maladjustment)	13,1	9,2	9,6	**44,5**	12,8	10,8
6.	Neglected by the environment	-	10,1	-	41,1	**46,3**	2,5
7.	In a crisis or/and traumatic situation	12,2	27,0	**33,2**	21,4	6,2	-
8.	Chronically ill	1,5	2,1	4,6	**46,0**	45,8	20
9.	With sensory damages	3,6	3,1	**41,1**	33,7	12,6	5,9
10.	Mentally and/or physically disabled	1,7	11,1	10,9	**32,7**	30,8	12,8
11.	Showing educational failures of another type	-	1,4	16,9	13,0	**43,8**	24,9

Source: own study.

The analysis of the data from above statements shows that teachers rate their competence concerning the implementation of special educational needs and evaluate the effectiveness of their actions much higher. They have difficulty in recognizing the specificity of needs which have their source in bio-psychological disorders in pupils' development. Competencies which were rated above are practical skills, closely related to the teaching practise and are verified in everyday school situations – in the classroom and therapeutic activities. Abilities to recognize the SEN were rated much lower than the other two areas, they have their source in the long tradition of diagnosing pupils outside school, that is mainly in psychological-educational counselling centres. Participation of teachers in this process is quite marginal, often limited to drawing up an information about a pupil.

It should also be noted that teachers rate their skills in areas directly concerning school achievements relatively higher. These are: specific and non-specific learning difficulties, intellectual disability, outstanding talents and language communication disorders. Assessments associated with behavioural disorders, trauma and functioning in crisis situation, chronic illness, sensory damage are rated lower.

Teachers are aware of their ignorance but they also see other difficulties. Among many reasons indicated as an obstacle in the implementation of special educational needs by surveyed teachers are lack of knowledge and practical skills, which concern almost 60% of respondents. The reasons for this should be sought in many areas, but the essence of the problem lies in the system and content of pedagogical training of teachers and forms of their professional improvement. When

assessing the implementation of special educational needs, teachers also point to a limited ability to individualize the teaching process (66%) and insufficient support from the school, parents and professionals (23%).

3. Modification of teacher training programs as an important way to the acquisition of competences necessary for the implementation of inclusive education

Information presented in this publication are of great relevance for employees of universities which teach future teachers. They show that the training program should include contents related to issues of special educational needs and students' iternships concerning work with this group of pupils. Due to the advanced and specialized nature of the content of education, they should be included in the last year in the program of studies. The basis for their introduction is implementation of such education areas as developmental psychology, clinical psychology, general didactics, detailed methodology, theory and practice of education, school theory, pedagogical diagnosis, basis for educational therapy, interpersonal communication.

A teacher who has theoretical and practical competence to carry out various forms of psychological and pedagogical assistance is an important partner in a team of specialists forming a support system in education and pursuing its goals.

The following statement presents the list of essential contents of modern education which prepares a teacher to initiate and take psycho-pedagogical care. It should be noted that some of these areas are in the plans and programs of studies, especially in the field of pedagogy of various specialties. However, there is a need for consistent implementation of these contents in the teachers training.

Table 4.

Framework teacher training contents – proposals for implementation

Item	Training contents/thematic blocks	Skills
1.	Explanation of categories enabling efficient use of the knowledge concerning developmental and social dysfunction: developmental disorders, special educational needs, psycho-pedagogical care.	Proper identification of areas of concepts and their use in teaching practise.
2.	Exo - endogenous causes of developmental disorders and dysfunctions.	Understanding of bio-psychical and environmental determinants of difficulties and limitations in education and supporting dysfunctional pupils.
3.	Groups of pupils with special educational needs - characteristics and description of their situation in education.	Differentiation between symptoms of disorders and developmental dysfunction, characterizing the situation of dysfunctional school pupils.
4.	Type and scope of support. Areas of implementation of special educational needs.	Categorization of tasks aiming to fulfil special educational needs and their delegation to a person responsible for a child.
5.	Legal and organisational backgrounds for implementation of special educational needs.	Taking into account the diagnostic, educational and therapeutic activities which are acceptable by the law. Analysing school conditions for corrective and compensatory work.

6.	Forms and methods of psychological and pedagogical assistance for children with special needs.	The use of a variety of therapeutic methods. The choice of methodology workshop appropriate to the nature of the dysfunction and a child's resources.
7.	Principles of designing a supporting actions plan and an individual educational and therapeutic program.	Construction of the framework programs of teaching, educational and therapeutic work with students with special needs and their parents.
8.	The specific nature of working with children with special needs at the diagnostic, program and practical level. The tasks of teachers, parents, a psychologist, a tutor, a speech therapist.	Analysis and selection of diagnostically relevant information. Implementation of school scope of diagnosis (concerning a pupil, his/her school situation and partially his/her family). Designing a system of integrated multifaceted actions, with particular emphasis on the role of teachers and school resources. The implementation of psycho-educational and psycho-social forms of assistance. Cooperation with specialists and parents. Self-assessment of implemented actions, their continuation in the current or a modified form.
9.	Integration processes in the peer group and in broader social environment (in school)	Ability to organize educational processes in a peer group – preparation of a group and a dysfunctional pupil on mutual presence and respect of their needs.

Source: Rybska-Klapa, 2014.

The thematic block which were proposed above, implemented (preferably in the form of lectures, conversational exercises and practical classes in establishments) in 60-75 teaching hours, will guarantee acquisition of knowledge and skills necessary for the implementation of new tasks for students - future teachers. They are also the basis for development of social competences marked by readiness to accept a pupil (of all ages) who functions outside the standard of education, empathic understanding of his/her problems, openness and communicative relationships with a child, his/her parents and other teachers. Implementation of these contents should also be considered as a base for forms of self-study which will be taken up in the future, due to which a teacher updates his/her knowledge and enriches the workshop.

To sum up, we can conclude that schools which provide education at all levels are obliged to use various forms of support. Here prevail: technical support (understood mainly as the abolition of architectural barriers), psychosocial support (taking place on the basis of friendly social environment), and educational support (appropriate organization of the educational process and adapting forms and working methods to the needs and abilities of the student). Psycho-pedagogical competences of a contemporary teacher is a prerequisite for the implementation of educational and social support.

Bibliography

Bogdanowicz, M. (1995). Uczeń o specjalnych potrzebach edukacyjnych. *Psychologia Wychowawcza,* nr 3.

Ainscow, M. (2000). Robić właściwe rzeczy. Potrzeby specjalne z perspektywy doskonalenia pracy szkoły W: G. Fairbairn, S. Fairbairn, (Red.), *Integracja dzieci o specjalnych potrzebach*, Warszawa: Wydawnictwo CM PPP.

Elliot, J., Place, M. (2000). *Dzieci i młodzież w kłopocie. Poradnik nie tylko dla psychologów.* Warszawa: WSiP.

Guzy, A., Krzyżak, D. (2012). *Praca z uczniem o specjalnych potrzebach edukacyjnych*. Tom I, Kielce: ZNP.

Jarosz, E., Wysocka, E. (2006). *Diagnostyka psychopedagogiczna*, Warszawa: Wydawnictwo Akademicki „Żak".

Jas, M., Jarosińska, M. (2010). *Specjalne potrzeby edukacyjne dzieci i młodzieży*, Warszawa: Wydawnictwo MEN.

Klapa, J., Łubiarz, M. (2013). *Dyslektyczny uczeń, dyslektyczny student – specyficzne trudności w nauce języków obcych*. W: E. Murawska (Red.), *Szkoła w dyskursie teorii i praktyki*, Słupsk-Poznań: W. N. Contact.

Klaro-Celej, L. (2012). Uczeń ze SPE może się znaleźć w każdej szkole. *Dyrektor Szkoły,* nr 4.

Krawczonek, M. (2011). Dziecko o specjalnych potrzebach edukacyjnych w szkole. *Dyrektor Szkoły,* nr 4.

Łoskot, M. (2013). System pomocy psychologiczno-pedagogicznej po zmianach. *Głos Pedagogiczny,* nr 9.

Olechowska, A. (2001). *Wspieranie uczniów ze specjalnymi potrzebami edukacyjnymi. Wskazówki dla nauczycieli.* Warszawa: Wydawnictwo MEN.

O'Regan, F.J. (2005). *Jak pracować z dziećmi o specjalnych potrzebach edukacyjnych*, Warszawa: Wydawnictwo LIBER.

Rybska-Klapa, J. (2010). Realizacja specjalnych potrzeb edukacyjnych w szkołach ogólnodostępnych – rzeczywistość i postulaty. W: A. Karpińska (Red.), *Edukacja w okresie przemian.* Białystok: Trans Humana.

Рыбска-Клапа, И. (2014). Реализация специальных образовательных потребностей и психолого-педагогическая компетентость учителей государственных школ. W: *Актуальні проблеми в закладах освіти: збірник наукових прась*. Кривий Ріг: Изд-во ТОВ, «НВП «Інтерсервіс», Ukraina.

Skorek, E. (2004). *Terapia pedagogiczna.* Kraków: Oficyna Wydawnicza „Impuls".

Thompson, J. (2013). *Specjalne potrzeby edukacyjne. Wskazówki dla nauczycieli*. Warszawa: PWN.

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CHALLENGES OF INCLUSION IN REALISTIC MATHEMATICS EDUCATION

Summary: *This paper is devoted to realistic mathematics education (RME), conceptually based on Freudenthal's vision of teaching mathematics, which is widely applied in modern teaching of mathematics (Gravemeijer, Van Den Heuvel-Panhuizen). We examine conditions for implementation of the RME in general and in specific conditions, focusing on issues related to inclusion. In the first part of the paper we deal with the basic principles of the RME: a realistic context, modeling, progressive schematisation, integrative approach. Special attention is paid to basic RME postulates. The first is that mathematics lessons need to be associated with reality. The second is that mathematics must be relevant to the students. In the second part, we bring up the critical issues that are considered as challenges of applying RME practice starting from the role of teachers in the educational process to considering the place of textbooks, teaching methods and evaluation in realistic mathematics education, as well as students with special needs. The conclusions of the study suggest the need for comprehensive studies of benefits and drawbacks of the RME approach for children in an inclusive classroom.*

Key words*: inclusive education, realistic mathematics education, mathematics classroom.*

Introduction

"The inevitable presence of difference among students means that schools need to become more comfortable with building inclusive communities that value diversity" (Gillies, and Carrington, p.117). Realistic mathematics education is based on social constructivist theory of education. This approach fits in society calls for education of individuals with an emphasis on training for solving the "ill" defined problems in a professional and daily life and self-education. It can be seen as an alternative to mechanical and structuralistic approach to teaching. According to the first, mathematics is a set of rules and algorithms. These rules and algorithms must be adopted in intensive school math drill. The emphasis is on the math, automation techniques, application of rules and procedures in a series of similar problems. On the other hand, in the French school Diodenea and others, mathematics is seen as an organised deductive system. For them, learning mathematics is primarily a cognitive challenge for understanding the structure of the system of mathematics. In contrast to these directions in philosophy of mathematics, basically realistic mathematics education (RME) has the perspective that Mathematics as a school subject must be connected with reality, relevant for students. The central activity of mathematics education is the process of mathematisation in an educational context. Instead of

finishing the procedures, students are encouraged in the first stage of learning to invent them. Later gradually follows the delayed introduction to formalised approach.

This paper discusses the theoretical basis of the RME, as well as practical issues in the implementation of realistic mathematics education, with special focus on inclusion. When discussing inclusion in RME classroom we take into consideration: those who need additional support in mathematics, those who have difficulties with reading and writing, and those who are more able at mathematics. In Serbia, however, when speaking about inclusion, we often limit our interest to the first two mentioned categories of children.

On the part of the teacher, pupils who require additional support in mathematics provide an intellectual challenge for teachers who need to realise that a learning objective needs to be presented in different contexts. The challenges of inclusion can broaden the teacher's understanding of the different learning styles in mathematics, require higher teacher's communication skills and search for additional resources that can be used by all. Often, it calls for provision of opportunities for other pupils to consolidate and deepen their understanding by peer tutoring (Gatrell, 2003).

The state law in Serbia supports inclusive education. However there is a limited understanding of what the consequences of such an approach are. The same applies to other countries. Lindsay, for example, reviewed a set of papers dealing with the effects of inclusion. He remarked that "inclusive education/mainstreaming has been promoted on two bases: the rights of children to be included in mainstream education and the proposition that inclusive education is more effective" (Lindsay, 2007). He stressed the lack of research supporting the effectiveness of this approach.

> *"The evidence from this review does not provide a clear endorsement for the positive effects of inclusion. There is a lack of evidence from appropriate studies and, where evidence does exist, the balance was only marginally positive. It is argued that the policy has been driven by a concern for children's rights" (Lindsay, p. 2).*

Here, we will consider appropriateness of the RME approach for children with special needs.

Basic principles of the RME

Basic ideas of realistic mathematics education stem from Freudenthal and Treffers. Thus, they are considered to be the founders of the RME. Treffers (1987) describes that the following characteristics determine a realistic approach to the teaching of mathematics: 1) the use of context; 2) models, 3) the use of student design, 4) an interactive learning process, and 5) integration of teaching content. Hans Freudenthal believes that children should discover math, and that the process of learning mathematics is based on the mathematisation. In a number of papers, analyzing the aspects of realistic mathematical approaches, Van den-Huvel Panhuizen (2000, 2003) indicates that these principles of Freudenthal and Treffers are rooted in the RME approach. In the following sections, we shall have a detailed insight into the key characteristics of the RME.

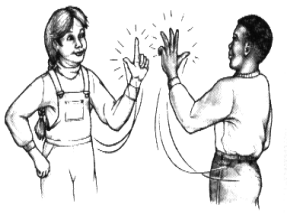
Original realistic context

The term “real” in the RME does not refer exclusively to what we call the „real situation” and learning from the environment. “The real context” can be any situation that is familiar to students that is „conceivable”. Context can indeed be from the real world or the environment, but can also be the context of the fictitious world of fairy tales, novels, etc. Sometimes even a “formal world of mathematics” may be “imaginable” for children. Mićić (2005) exemplifies this approach when considering possible ways of exploring the properties of a triangle through playing activities with the didactic resource named “gigglers”. However, the context that is used must be non-trivial and relevant to students.

In realistic mathematics education contexts the real problems are: the source of learning, complex and multifaceted. The situation is placed in the context of the real source of learning not only because new concepts and procedures are introduced through problem solving. These situations provide motivation for learning by opening new areas or revealing insufficiency already known in problem solving. Traditionally, teaching math in elementary school relies on intuition. The teacher begins with simple tasks, so that the solution is “obvious”. Such trivial problem situations often represent images, and solutions are “visually obvious”. For example, students can count the number of birds sitting on an electric wire, and then calculate how this number changes when an additional number of birds land on the wire. Such problems, although contextual, do not fall into the category of problems that can be found in the RME didactic materials. The real situations in the RME may vary in their complexity, but the context has to be multifaceted and should arouse contemplation. Realistic contexts provide an opportunity for extended learning experience and for seeing connections and the transfer. Contextual problems function as a source for the learning process. Thus, the role of problems in the real context is dual. First, they are used to induce the need for introducing and unveiling of a new idea. Second, the problem is used to show how mathematical knowledge can be applied and used for solving realistic problems.

For example, students can consider the problem of fairness in games like „odd-couple” (Fig. 1). This simple game is played by two people. The players agree to who will be the “couple” and who is “odd”. They both show an arbitrary number of fingers of one hand. Then they add the total number of fingers shown. If the sum is even the so-called “even person” wins the turn. Otherwise the point goes to the rival. The seemingly obvious conclusion that it doesn’t matter who is the “even” and who is the “odd” person in this problem turns out to be incorrect. By translating the game problem into a new form, surprisingly, students come to the discovery that there are more even than odd cases of combined totals.

Picture 1.
„Realistic" context and the mathematical model, adapted from Mathematics in context (Romberg, 1998).



Nina (odd sum): Peter (even sum)

Sum	1	2	3	4	5
1	P	N	P	N	P
2	N	P	N	P	N
3	P	N	P	N	P
4	N	P	N	P	P
5	P	N	P	N	P

P – even sum, Peter wins, N – odd sum, Nina wins

Children learn that in this game players are not really completely equal because the player who chooses to be the „couple" has a better chance to win.

Problem situations in realistic mathematics education are used to: 1) raise the need for introducing new mathematical concepts; 2) demonstrate the application of mathematical knowledge; 3) solve a real problem situation.

A typical example of a realistic context is the problem of monitoring current changes in the number of passengers on the bus (Gravemeijer, 1994). Discussion about events in a given context, such as what is happening at each stop, can be a basis for the development of the informal strategies for solving this type of problem.

To understand which problems can be regarded as typical for the RME, the following examples given in Table 1 can serve us well. Realistic problem should be distinguished from contextual problems that can often be seen in the classic approach. What determines a realistic problem is the form of an "open" problem, which calls for the creation or use of the model, as well as the need for the passage of the entire cycle of modelling. A model created on one occasion can be used for other tasks of a similar type. It serves as an "anchor". For example a model of fraction in the form of "strips divided in equal parts" may be used in a variety of contexts where fractions appear.

Table 1.

Contextual and Realistic modelling tasks

Problem type	**Example**	**Characteristics**
Contextual problem	A ticket for an intercity bus ride has a fixed starting price of 120 kuna and the price for every subsequent kilometer drive is 100 kuna. How much does it cost to drive to 300 kilometers distant places?	➢ Textual problem
Realistic problem	Make the structure of prices for a long-distance bus ride.	➢ "Open" ➢ "Ill defined" ➢ Passed the whole cycle of modelling ➢ Creates a model

Modelling

The process of modelling conveys the problems mentioned in the real context in the domain of mathematics. Students develop a model that can become instrumental in the conclusion. In other words, the model serves as a tool for mediation between the real world and the abstract mathematical world. Models help students in solving problems at different levels of abstraction. Modelling of the situation is a component of the problem solving process in the real context. It can be concluded that the result of the process of mathematisation is a mathematical model. The solution to a problem is found in the domain of mathematics with the use of the model, and then translated into the original context. The models serve as a didactic means of bridging the gap between informal and formal mathematics system (Van den Hovel-Panhuizen, 2000).

As a rule, mathematical modelling of the RME includes switching from one representation of the problem situation to another. Meyer (2001) describes typical examples of thematic modelling of the RME, which is based on translating the problem from one theme (context) to another.

> *Problem.* There were three pieces of cake on a plate. Each of the three friends, Jana, Sara and Catherine, have eaten ¾ of their piece of cake. How much in total have they eaten? You can take advantage of Cuisenaire rods to come to a decision. Express it in the following ways: using 1) own model, 2) numerical law and 3) response (description in words).

Milinković (2014) explains the examples of process modelling in realistic mathematics education in selected examples from the textbooks *Mathematics in Context* (Romberg, 1998). One of them relates to the determination of the number of vehicles required for the trip depending on the number of students and the number of seats in vehicles. The classic way of solving such tasks is through a system of equations. In the RME classroom, students start from description of the situation, coming up with the table which helps them to find a solution to the problem. Both representations, graphic and tabular, are showing the same information and relationships, and so, they are comparable. The ultimate goal is to grasp a symbolic representation by a system of equations that represents the mathematical model of the

initial problem situation. But this should not be expected to happen at the beginning, and certainly it should not be imposed.

This way of arriving at a mathematical model is repeated with more or less intermediate steps in a number of other tasks. Students study the initial information, grouped; they establish relationships that exist between them. The observed facts are presented visually (schemas, tables, graphics), and then students come up with a mathematical model in the form of (in)equality, formula, etc. As students advance in knowledge in the relevant fields of mathematics, tasks become more complex.

Mathematisation

Similarly to Freudenthal, Treffers considers mathematisation to be one of the key issues in the mathematics classroom. Treffers (1978, 1987) distinguishes two types of mathematisation in an educational context – horizontal and vertical. Horizontal mathematisation involves a shift from the real world into the world of mathematical symbols. Students will solve the problem of crossing over from the real world into the world of symbols and then, in the final stage of solving the problem, return to the real situation with mathematical tools. Vertical mathematisation is the process of building up and reorganisation within the mathematical structure that can be accomplished by establishing connections between mathematical concepts.

Schematisation is a process of gradual construction of mental schemes of the formal schemes in mathematical sciences. Schematisation in math is a result of mathematisation. During the learning of mathematics students go through different levels of understanding. At the beginning of learning, they are focused on solving problems. Then develop the ability to find informal solutions in given contexts. Students gradually build diagrams of basic mathematical principles and the wider network of relationships that build up the mathematical structure.

At the beginning of the process, knowledge is in the form of mental schemes based on perception. This phase can be called sensory knowledge base. Solving real world problems based on intuition often includes sensory experience. This practice leads to spontaneous formation of mathematical concepts. Identification of characteristics of common or/and unusual relationships leads to identifying the difference between objects that fit into the existing scheme or not. Mathematical symbols are introduced instead of words for naming objects. Mathematical symbols stand for things, beings and situations.

The ability to retrospectively reflect on the previous activities indicates the next level in the learning process. Progressive schematisation is a product of horizontal and vertical mathematisation. So, a formal scheme can be reached in several successive phases of the horizontal to vertical mathematisation.

Integration

When considering the issue of integration in mathematics, it can be considered at the level of integration of a specific problem, lesson, teaching topics, areas, objects or curriculum. In the domain of mathematics, as House (2003, p. 5) explains it, it requires a complete syllabus of mathematics whereby: 1) the themes from various mathematical fields are used to highlight the link, and / or 2) the relationships are made among the topics within mathematics itself and between mathematics and other

disciplines. When speaking about the integration of mathematical topics we can further distinguish between (a) learning of math concepts as a result of an integrative processes, such as mathematical modelling, and (b) the integration of merging fields of mathematics.

The perception of reality as a complex system is the result of our recognition of details and how these data are linked and intertwined with each other (either obviously or not). This is reflected in the way we acquire new knowledge in school or in life in general. Recognising relationships is the basis for the development of understanding both within school subjects and in teaching in general (Milinković et al.). One of the important objectives of the integrative approach is to enable children to develop the perception of adjacent issues. Analysing a complex "ill" defined problem situation leads students to the need to first identify the problem and then to make a plan for solving the task that involves spotting connections and knowledge transfer (Milinković et al., 2012). The process of problem solving involves the use of mathematical modelling. The main objective of the RME approach to teaching mathematics is to facilitate the development of a holistic approach to problems and coherent, interrelated functional knowledge (Milinković, 2010). For example, in *Mathematics in context,* the middle school curriculum which follows the RME ideas, although many units are devoted to strictly mathematical domain, many others emphasise connections between mathematical concepts, and almost invariably point to the connections between mathematical concepts and realistic situations or other scientific areas. Thus, for example, in a unit called "Ups and Downs", pupils are dealing with functions, charts, diagrams, graphs, formulas and multiple representations. This chapter is focused on the achievement of outcomes in the field of Algebra, Statistics, and Patterns and Functions.

Challenges to the implementation of inclusion in the RME classroom

One of the big problems of innovative research education programmes is implementation of the programmes in schools. In addition to the willingness of state officials to adopt changes in the school curriculum, teachers are a critical factor. The success of reforms depends not only on the intrinsic motivation of teachers, but also on the willingness to invest additional effort and time, on attending preparatory seminars, reading, writing new lesson plans and preparation of teaching materials for students. Therefore, the success of the application of the RME in school depends largely, though not exclusively, on the teacher. The other factors include the school principal, textbook publishers, institutes for the development of education and similar institutions that can be supportive and are involved in education, and finally the Ministry of Education.

In the beginning, i.e. in the last decades of the 20th century, the realistic mathematical approach was implemented primarily in the Netherlands, but the basic ideas were eventually accepted worldwide. Large-scale international tests such as PISA, and to some extent TIMSS, promote the RME approach, because the tasks applied in them include the idea of integration, modelling, etc. which highlights their importance. We believe that RME is a prominent theoretical assumptions, which speaks in favour of realistic mathematics education. Also, reactions of the professional community indicate that these ideas are based on a solid foundation. Despite the power of the RME ideas, the implementation of this approach has pointed to some of its

potentially weak aspects. The final judgment on the value of RME approach can be formed only by taking into account the critical factors of implementation.

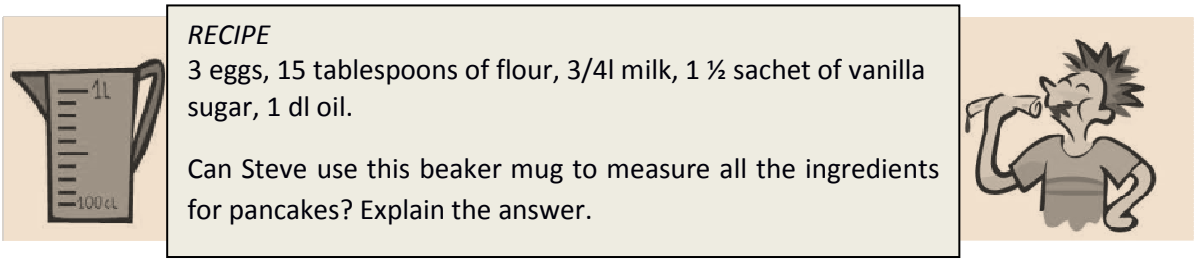
Textbook

One of the critical issues for a successful implementation of the RME is the production of teaching resources, above all, textbooks to support the RME. *Mathematics in Context* (Romberg et al, 1998), as a middle school curriculum, is the fruit of a many-year research project. The authors tried to consistently follow the principles of the RME. The authors faced a continuous challenge of limiting information which students were going to receive.

Regarding the textbooks used in Serbia, we make a note about the examples that indicate the intention of the author to link mathematics with realistic environment and to help students to actively "discover" mathematics through problem solving activities. For example, in the problem presented in Picture 2, at the beginning of a lesson, students contemplate about a situation which they initially do not know how to approach. After several days of learning about fractions in the form a / b, at the end of the chapter, the authors ask pupils to return to the starting problem situation. Then they find out that now they know how to solve the initial problem.

Picture 2.

Realistic task, adapted from Dejić and others, 2012.



Educational materials are actually the most important tool in the planning process of learning. Marja van den Heuvel-Panhuizen noted the importance of educational materials for the implementation of the RME. Thus, we should determine suitable contents of textbooks, methods of presentation and appropriate teaching approaches. Van den Heuvel-Panhuizen considers facilities an RME tutorial should have if students need to preserve the space to build their own math concepts and develop mathematical procedures" (Van den Heuvel-Panhuizen, 2000, p. 9). If a student is expected to (re-)invent mathematical concepts and procedures then they should not be prevented to do so in the process of discovery. According to the RME approach, teacher as well as the textbook should only provide guidance in the process of discovery. It is not surprising that this fact has not met with unconditional support. What if students do not succeed in discovering anything or rediscover only some elements or go astray? Should they leave pupils alone to wander endlessly unsuccessful?

Teaching methods

Methodological approach to the RME relies on the "social constructivism" as a philosophy of learning. It is based on the idea that each person brings personal experience of the world and builds their own understanding of the subject on the basis of interaction in the classroom and social environment. The construction of knowledge is a result of the development of common meanings, interpretations and justifications of speculation agreed in the classroom. The treatment begins with experience; mediated information is organised and stored in memory. Mind organises a repeated experience "scheme" - a complex network of related facts (concepts, rules, procedures, strategies) and relations (Greeno, 1991; Romberg, 1991).

Math lessons in the RME classroom begins with a specific problem situation. Students seek solution to the problem through a process of mathematical modelling. The problem itself is the context for learning. A more or less complex problem should lead to discovery of one or more important mathematical ideas (e.g. the sum of angles of a triangle is 180 degrees). The teacher should plan a series of activities based on the initial problem situation, as well as research activities in different contexts, games, etc.

In Serbia math classes are composed similarly to the RME. At the beginning of a lesson, after a quick revision phase, reminding pupils of the concepts relevant for that day's unit, the class moves on to the consideration of an initial problem situation (not so complex as in the RME) and a relatively quick ending phase of discovery. Then the rest of the lesson is spent in practice. The classic phase of establishing knowledge by solving a series of tasks of similar type with a gradual increase in difficulty requires almost no time in the RME. It certainly cannot be considered an advantage for the RME. On the contrary, one of the main objections to this approach is the lack of space for practicing procedures and consolidation of the new contents.

How does the RME approach fit into the teaching method suitable for inclusion? We should discuss learning objectives, teaching styles and the ways to overcome potential barriers. First, an RME teacher does have the space to pose suitable individual learning challenges and then to provide opportunities for enrichment. As it is recommended, the RME teacher supports different modes of learning, from visual and aural to kinesthetic. It also stresses the importance of differentiated questioning. The RME approach allows scaffolding with shorter tasks in order to make open-ended tasks more manageable. Finally, the RME approach calls for different resources as a support in the learning process (such as visual prompts and cues and the opportunity to manipulate physical resources when responding to mathematical questions, variety of recording methods etc.).

Regarding the creation of anchor models, the degree of utilisation of the selected models in the teaching process with children with special needs may be a challenge. Students in the RME are supposed to recognise which model situation looks like the new one, and to recognise the model they can rely upon. Models are therefore those anchors that are related to new situations. The problem occurs when students are too attached to the context in which they have dealt for a long time. They could have difficulties making a shift to a different context, and they stay tied, or "anchored" in the given context. These potential difficulties can be overcome by introducing more "models for the situation". This problem could be even more prominent in children with special needs.

Evaluation

How do teachers know what students have learned in the RME, in order to evaluate their progress, especially with children with special needs? It is expected that the teacher should use multiple sources of information, in order to get an impression of the student's understanding and performance. The purpose of the assessment of the RME is to gain information about the structure of the development of mathematical knowledge. Important elements of this process are planning and gathering evidence about pupils' mathematical competences and multiple continuous verification of the student's progress in relation to himself, as profiled goals and standards of achievement. Formative assessment provides the basis of the evaluation process. Student's profile should include information on the following: competences in solving mathematical problems, communication skills (including using mathematical language), ability to make connections between mathematics and other domains and everyday life, understanding mathematical concepts and procedures, and disposition towards mathematics, creativity problem solving, etc. The question is to what extent students can develop numerous competences if they are not even aware of the expectations.

An example of assessment is the following non-standard investigation problem that can help a teacher to gain insight into the progress of pupils (Dejić and others, 2012) (Pic.3).

Picture 3.

A research task

Create a survey among 10 classmates about something that interests you. Write a report in the notebook in the form of a table where you will show how your pupils responded and what part of the total number of respondents gave it. The results can be presented using a circle, rectangle and other pictorial representations.

Textbooks, such as *Mathematics in Context*, direct teachers to use individual tasks for evaluation. For example, if two contextual tasks are set in the same class and can be solved by similar procedures, the difference in the context should not be essential, and one of the two tasks can be used for formative assessment.

A special problem, however, can be the experience of students with standardised tests in which tasks do not reflect the philosophy which is grounded in the RME philosophy. Students may face a serious problem meeting the requirement to use specific standard procedures for solving tasks presented in a symbolic form, without being confined to a realistic context. On the other hand, it can be expected that students who work in an RME classroom can be successful in test items focusing on the ability to apply mathematical knowledge in different contexts (e.g. PISA).

For children in inclusion, Gatrell and other designers of resource materials (Gatrell et al, 2003) propose some teaching strategies which fit well with children with special needs. We quote only those which correspond to the RME philosophy: considering the types of assessment opportunities that will enable all pupils to demonstrate what they can do, what they know and what they understand; emphasising

the links between various mathematical areas to help them use the existing knowledge more readily. Regarding the timing for assessment, it may take place within the main part of the mathematics lesson. The aforementioned specialists in inclusive education stress that "it is important to ensure that pupils are clear about the learning goals within the main activity, in terms of what they are expected to achieve, so that they can make a full contribution" (p. 34). An example of this may be to remind pupils during the main activity that they need to consider a challenging question. Finally, different communication styles that pupils will use should also be taken into account, e.g. pictorial responses, practical application, and the use of resources including ICT.

Concluding remarks

Realistic mathematics education is still considered to be an innovative approach in the experimental stage, regardless of the fact that many elements of this approach are widely used in the world. There are no clear answers about whether and how to apply the RME. A particularly important issue is whether this approach is appropriate for all ages and all children. If so, do we need to modify the approach in some way, adapting it to the cognitive performance of children at different levels of education? It is still not known whether the RME is suitable for all types of students (those not interested in mathematics as well as prospective mathematicians). Certainly the idea of RME is inspirational and worth thinking about. The final judgment can be formed on the basis of results of future research. The issue of inclusion should be a part of research effort. As Lindsay noticed: "The important task now is to research more thoroughly the mediators and moderators that support the optimal education for children with SEN and disabilities and, as a consequence, develop an evidence-based approach to these children's education" (Lindsay, p. 2).

Addressing innovative curriculum changes and adopting a variety of pedagogical practices to accommodate to the different learning abilities of students sometimes takes one in antagonistic directions. Schools are required to provide curricula and pedagogy accessible to all learners and reduce barriers for learning, resulting in an intellectual and practical foundation for a more inclusive practice in educational organisations. Perhaps it is not an impossible task, though it is not yet achieved.

Bibliography

Barber, P., Gatrell, M., Hamilton, C., Mulholland, H., Murray, J., O'Mahony, C. (2003). *Mathematics and Inclusion Materials for providers of Initial Teacher Training*. United Kingdom: Crown.

De Lange, J. (1987). Mathematics, Insights and Meaning. Utrecht, OW&OC, Utrecht University.

Freudenthal, H. (1991). Revisiting mathematics educations. China lectures. Dordrecht: Kluwer Academic Publishers.

Gillies, Robyn M., Carrington, Suzanne (2004). Inclusion: Culture, Policy and Practice: A Queensland Perspective. *Asia Pacific Journal of Education* 24(2), p.117-128.

Gravemeijer, K.P.E. (1994). Developing Realistic Mathematics Education. Utrecht: CD-b press/ Freudenthal Institute.

Greeno, J. (1991). Number sense as a situated knowing in a conceptual domain. *Journal for research in mathematics education*, 22(3), p. 170-213.

House, P.A., Coxford, A. F. (1995). *Connecting Mathematics across the Curriculum*, 1995 Yearbook. NCTM.

Lindsay, G. (2007). Educational psychology and the effectiveness of inclusive education/mainstreaming: annual review. *British Journal of Educational Psychology* (2007), 77, 1–24. The British Psychological Society.

Romberg, T.A., Burrill, G., Milinkovic, J., et al. (1998). *Mathematics in Context: A middle school curriculum for grades 5–8, developed by the Mathematics in Context (MiC) project*, Encyclopedia Britannica, Educational Corporation.

Mićić, V. (2005). Učenje otkrivanjem – možda novi pristup. *Nastava matematike*, L, 4, 13-21. Društvo matematičara Srbije.

Milinković, J. (2012). Problem solving in integrated research: the results of an action research project. In Feyza Doyran (Ed). *Research on Teacher Education and Training*, p.165-176. Athens Institute for Education and Research.

Milinković, J. (2010). Pupils' active learning in integrated mathematics and technical education class: case study. In *Student in contemporary learning and teaching*, p 97-109. Učiteljski fakultet.

Miliinković, J (2007). Realno okruženje kao izvor matematičkih pojmova *Didaktičko metodički aspekti promena u osnovnoskolskom vaspitanju.*

Romberg, T. (1991). *How one comes to know*. Paper presented as the ICMI Study conference on Assessment in mathematics and its effects, April, 1991,Calonge, Spain.

Treffers, A. (1987). Three dimensions. A Model of Goal and Theory Description in Mathematics Instruction – the Wiskobas Project Dordrecht: Reidel Publishing Company.

Van den Heuvel-Panhuizen, M. (2001). Realistic Mathematics Education as work in progress", *Proceedings of 2001 The Netherlands and Taiwan Conference on Mathematics Education*.

Van den Heuvel-Panhuizen, M. (2000). *Mathematics education in the Netherlands: A guided tour*. Freudenthal Institute Cd-rom for ICME9, Utrecht, Utrecht University.

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DIGITAL INCLUSION IN BASIC EDUCATION[6]

Summary: *Creating inclusive educational systems brings new roles to employees in education and above all to teachers, who are recognised as key actors in inclusive educational practices. For this reason, the focal point of this paper is the willingness of teachers in Serbia for the development of inclusive education and digital inclusion. The paper gives an overview of research on the preparation of future teachers for inclusive education as well as research results relating to how the relevant actors in the educational system perceive the capacities for the initial education of primary school teachers. We have noticed that the teacher education faculties at universities devote a lot of attention to the use of ICT in teaching; however, the analysis of curricular contents for undergraduate studies indicate that future teachers do not receive as part of their initial education the necessary competencies for the digital inclusion of children with special needs. Faculties need constant social support and cooperation because systematic teacher training, i.e. the development of their competences, means a necessity to establish an overall well-coordinated system of professional teacher development - from their initial education during the study, through the introduction into the job, to continuous professional development at work.*

Key words: *information and communication technologies, special education, initial education of teachers, digital inclusion.*

The inclusive process is composed of numerous, small and large steps and requires time, graduality and above all good forethought, and is based on beliefs, attitudes and values, interdisciplinary knowledge and skills. Inclusion creates a new attitude towards diversity and a variety of possibilities. The benefits of inclusion are numerous: children with special needs have the opportunity to make contact with other children and to socialise; children without special needs will thus learn to respect diversity, to develop humanity and tolerance; schools and the education system gain in humanity, becoming more open and accessible to all.

Inclusion does not in itself imply equalisation of all people, but respecting the differences of each individual. That is precisely its value, because it is through the development of a general tolerance towards individual differences and needs that it contributes to the enrichment of knowledge and experiences and the development of humanity. In this complex and long process the first step is acceptance of the disabled child within the family itself. The other one is the adequate position of the family in

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society, and then comes education and the training for independent living and working in the community. It is exactly the social and professional affirmation of disabled people that is the ultimate goal of inclusion.

According to the definition of UNESCO (Salamanca Conference, 1994), inclusion is a movement that is directly related to the improvement of the education system as a whole: “Inclusion is the process of resolving and responding to the diverse needs of all learners through increasing participation in learning, cultures and communities, and less and less exclusion within and from education. It includes changes and modifications to the content, approaches, structures and strategies, with a common vision which covers all children of the appropriate age and with the conviction that the regular education system is responsible for the education of all children”.

The guiding principle of the Inclusive Education Strategy is based on the respect for the rights and characteristics of children with special educational needs, whose developmental and educational opportunities need to be fulfilled and satisfied through high quality education in order for them to be prepared for independent living.

Key concepts

The aim of the strategy of inclusive education in the European context is reflected in the tendency to make the education system just and accessible through customised, high-quality and comprehensive services for the development of children’s potential to the maximum extent possible. Parents/guardians are supported for responsible parenthood, and educational staff for the development of a stimulating environment in which children will acquire competencies for professional life and efficient functioning.

The aim of education is, in cooperation with the system of health and social care, local community and the civil sector, to provide services for healthy, safe and high-quality children's lives. The policy of inclusive education applies the principles of a number of international documents such as the World Fit for Children; Millennium Development Goals; The Dakar Declaration (Dakar Framework for Action, UNESCO, 2000); Document Salamanca (Salamanca Statement and Framework for Action[7], UNESCO, 1994); Declaration Education for All[8] and the Convention on the Rights of the Child.[9]

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[7] This report from the UN’s education agency calls on the international community to endorse the approach of inclusive schools by implementing practical and strategic changes. In June 1994 representatives of 92 governments and 25 international organisations formed the World Conference on Special Needs Education, held in Salamanca, Spain. They agreed a dynamic new Statement on the education of all disabled children, which called for inclusion to be the norm. In addition, the Conference adopted a new Framework for Action, the guiding principle of which is that ordinary schools should accommodate all children, regardless of their physical, intellectual, social, emotional, linguistic or other conditions. All educational policies, says the Framework, should stipulate that disabled children attend the neighbourhood school 'that would be attended if the child did not have a disability’.

[8] The Statement begins with a commitment to Education for All, recognising the necessity and urgency of providing education for all children, young people and adults 'within the regular education system.' It says those children with special educational needs 'must have access to regular schools' and adds: Regular schools with this inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all; moreover, they provide an effective

The basic principles of inclusive education deriving from these documents are: 1) all children can learn and have the right to education; 2) children learn best in a natural peer group; 3) teachers and schools should adapt the mode of work so as to meet the educational needs of children 4) some children (due to disability or impairments, specific learning difficulties, or living in socially unstimulating environment) need additional support in education.

Organisations in developing countries which are providing education to disabled persons use different models. The three main models are: special education, integrated education and inclusive education (Ras, S., T Dark & Light Blind Care, 2008).

Special Education evolved as a separate system of education for disabled children outside the 'mainstream', based on the assumption that disabled children had needs which could not be addressed within mainstream schools. Special education exists all over the world in the form of day, or boarding schools, and small units attached to mainstream schools.

Integrated Education is the 'integration' of children with disabilities in regular schools. It implies that the child has to change to be able to participate in the existing school system. This educational system is under severe criticism, because of the inability of the child to adapt to the school and make a progression in his own educational development.

Inclusive education is a process of increasing the participation of all students in schools, including those with disabilities. It is about restructuring the cultures, policies and practices in schools so that they respond to the diversity of students in their locality. It has the following characteristics: Acknowledges that all children can learn; Acknowledges and respects differences in children: age, gender, ethnicity, language, disability, etc.; Enables education structures, systems and methodologies to meet the needs of all children; Is part of a wider strategy to promote an inclusive society; Is a dynamic process that is constantly evolving.

From the above we conclude that inclusive education means that the regular educational institution is empowered to receive and educate every child, including children from vulnerable groups of any origin with any impediment to the development or learning disabilities. This one-path approach has been developed in Spain, Greece, Italy, Portugal, Sweden, Norway, Iceland and Cyprus. As the introduction of inclusive education requires profound changes and restructuring of the education system, other European countries (Denmark, France, Ireland, Luxembourg, Austria, Finland, Great Britain, Latvia, Liechtenstein, Czech Republic, Estonia, Lithuania, Poland, Slovakia and Slovenia) apply a multiple access path, i.e. parallel work on changing the mainstream and special education and linking them into one system (Brusling & Pepin, 2003). According to the existing legal framework and practice, Serbia applies the *multiple-path approach*, which involves changing and restructuring of mainstream and special schools.

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education to the majority of children and improve the efficiency and ultimately the cost-effectiveness of the entire education system.

[9] For details see: http://www.unicef.rs/files/Publikacije/PDFPrava_detet_u_medjunarodnim_dokumentimaF.pdf

Inclusive education is a theme much explored in the literature although highly demanding due to its complexity. This paper relies on a broader definition of inclusive education that focuses on *diversity* and the way in which schools respond to the diversity of all students, and not the promotion of inclusion of specific groups of students, particularly students with disabilities in the regular education system (Ainscow et al. , 2006).

Creating inclusive educational systems, guided by the mentioned documents, brings new roles for teachers who are recognized as key actors in inclusive educational practices.

Teacher's competences as an integrated set of knowledge, skills and attitudes (Pantić & Wubbels, 2010) are an integral part of some of the key European documents for teachers (EC, 2005), European projects of reform of higher education curricula (Gonzales and Wagenaar, 2005.) and recent studies in the Western Balkans (Rajović & Radulović, 2007, the Center for Education Policy, 2008).

Competency standards for the teachers' profession and their professional development[10], adopted in 2011 in Serbia, contribute to the development of teacher education faculties' syllabuses providing them with clear standards and learning outcomes expected of teachers. This kind of development should also influence a stronger alignment of syllabuses between different faculties. In accordance with the Standards, teaching competences are divided into four categories: 1) teaching subjects and respective teaching methodologies, subject area didactics; 2) learning and teaching; 3) support to the individual (social, emotional and personal development of students), and 4) communication and cooperation.

The term adaptive or assistive technology (AT) refers to a wide range of technological tools or systems that are designed to improve the functional capabilities of persons with developmental difficulties and improve the quality of their life as much as possible. Shortly, AT is one of the most relevant elements in making education more inclusive. The term *technology* indicates not just physical objects – devices or equipment; more generally it refers to products, organisational set-ups or 'ways of doing things' that encapsulate a number of technical principles and components. The adjective *assistive* is applied to a technology when used to compensate for functional limitations, to facilitate independent living, to enable the elderly and people with disabilities to realise their potential to the full. The abbreviation AT that will be used hereafter, must therefore be read as *assistive technology products or services*. Being a wide field, AT includes very simple and well-known products, such as white canes for blind people or manual wheelchairs as well as sophisticated high-tech products, i.e. computers and powered wheelchairs with voice control.

In education, the technology supporting and helping students with disabilities increasingly implies computer-related applications.

Information and communication technologies (ICT) have expanded the AT field to new dimensions, opening new doors, broadening horizons and enabling autonomy for many individuals with special needs. Over the last few years, the computer has turned into a valuable resource for teaching students with an ample

[10] http://www.nps.gov.rs/wp-content/uploads/2011/04/standardi-nastavnika_cir.pdf

range of learning difficulties. Rapidly grown processing power has let manufacturers provide sophisticated hardware and software to get the access and meet the learning needs.

Using high-tech AT devices in educational activities allows students with SEN to be indispensable in the group of their peers, to participate in the learning process as protagonists, and to gain self-confidence, social and communication skills.

The AT applied in education enables students with disabilities to exploit their cognitive potential, to interact with others, and to control certain aspects of their environment. AT gives the opportunities to access the curriculum at the adequate level, providing facilities as well as incentives for learning. Using the right AT device, suitable software, and appropriate educational methodology, children who cannott hold a pencil can nevertheless draw and write, for example. Similarly, children unable to speak can use the computer as a communication tool (UNESCO, 2006).

Information and communication technologies (ICT) have the potential of providing assistance to persons with developmental disabilities by a facilitated access to a variety of professional, educational, social and economic resources. Information technologies thus become a key means of participation in social life (Lewin, Maver, Somekh, 2003). Over time, ICTs can improve cognitive functioning, speed up the development of mental functions and consequently the creativity which also represents a mental process (Medenica et al., 2011).

The goal of digital inclusion is overcoming barriers of access to ICT and its adequate application, which can support and encourage independent living and learning for children with developmental disabilities. The handbook *ICT's in education for people with special needs* (UNESCO, 2006: 28) lists the three main categories of ICT application for: compensation, didactic and communication uses.

ICTs for Compensation Uses **-** That is the use of new technologies as a technical assistance that allows students with special needs to take active part in the process of interaction and communication: if a person has motor disability he may be helped to write, or to read if a person is with a visual deficiency (among many other possible examples). From this point of view ICTs develop the students' ability to control their environment, make choices about their experiences, support problem-solving, give access to information, thereby enhance communication with others both in the immediate environment and around the world. In other words, technology can recoup or substitute the lack of natural functions.

ICTs for Didactic Uses **-** ICTs used as a learning tool have prompted a new dimension of education and launched the transformation of the educational approaches. ICT application brings a variety of new teaching and assessment strategies for students with different educational needs.

Here we must note that information technologies as a didactic tool are suitable for implementing the inclusive education. In order to enhance personal development, educational initiatives within the inclusive curriculum must aim at meeting unique needs, differences, and abilities of an individual; hence they must be fully supported to achieve these goals at an appropriate pace. Information technologies, thereupon, will become a valuable resource for inclusion.

ICTs for Communication Uses **-** Technologies can mediate communication with people having disabilities (often referred to as *Alternative and Augmentative*

Communication). Assistive devices and software to meet the needs of students with definite communication difficulties are specific to every disability. We talk about the computer as a resource that facilitates and makes communication possible, allowing a person with communicative disorders to exhibit his/her abilities in a more convenient way, or people with motor and communicative disorders to start communication, show the needs and make the demands. Furthermore, where teachers are in short supply (as in special education), distance teaching methods can help provide special services between geographically dispersed students and teachers.

The Role of ICTs in SNE

As information technology becomes increasingly more accessible in daily life, we become more aware of its potential for learners who are at risk of being excluded. For the successful implementation of an ICT solution, we need more than the right equipment matched to the needs of the individual pupil. At the heart of all debate must be the learners themselves but the demands of the school and home contexts will also need to be considered.

ICT can support the learning of children with special educational needs. It enables children with SEN to overcome barriers to learning by providing alternative or additional methods of communicating within the learning process. Moreover, it also helps teachers to create a supportive framework, which can enable autonomous learning. When used creatively, ICT can enrich and enhance teaching, motivating pupils and engaging them in active learning.

According to the research of British Educational Communications and Technology Agency (BECTA, 2003), ICT usage in schools to support students with SEN can enable learners to communicate, participate in lessons, and learn more effectively. Key evidence is outlined below.

Benefits of ICT use in education of people with special needs

General ICT benefits:

1. Enables greater learner autosomy;
2. Unlocks hidden potential for those with communication difficulties;
3. Enables students to demonstrate achievement in ways which might not be possible with traditional methods;
4. Enables tasks to be tailored to suit individual skills and abilities.

ICT benefits for students:

1. Computers can improve independent access for students to education (Moore and Taylor, 2000; Waddell, 2000);
2. Students with special educational needs are able to accomplish tasks working at their own pace (ACE Centre Advisory Trust, 1999);
3. Visually impaired students using the internet can access information alongside their sighted peers (Waddell, 2000);
4. Students with profound and multiple learning difficulties can communicate more easily (Detheridge, 1997);
5. Students using voice communication aids gain confidence and social credibility at school and in their communities (Worth, 2001);

6. Increased ICT confidence amongst students motivates them to use the Internet at home for schoolwork and leisure interests (Waddell, 2000).

ICT benefits for teachers, non-teaching staff:

1. Reduces isolation for teachers working in special educational needs by enabling them to communicate electronically with colleagues (Abbott and Cribb, 2001; Lewis and Ogilvie, 2002);
2. Supports reflection on professional practice via online communication (Perceval-Price, 2002);
3. Improved skills for staff and a greater understanding of access technology used by students (Waddell, 2000);
4. Enhances professional development and the effectiveness of the use of ICTs with students through collaboration with peers (Detheridge, 1997; Lewis and Ogilvie, 2002);
5. Materials already in electronic form (for example, from the Internet) are more easily adapted into accessible resources such as large print or Braille (Waddell, 2000).

ICT benefits for parents and carers:

Use of voice communication aids encourages parents and carers to have higher expectations of children's sociability and potential level of participation (Worth, 2001).

With the learner participating in the learning process, ICTs can help learners take control of constructing their understanding, acquiring new skills and allowing them to respond to their own learning styles. ICTs allow for better communication, collaboration, information access and creative expression of ideas. To ensure the productive use of ICT in the classroom – there needs to be regular assessment of needs, training and support for both the students, teachers and helpers and constant evaluation to ensure that the technology is appropriate for the specific needs of the student.

Inclusive education in Serbia

Inclusive education is realised through various projects in Serbia and has become one of the main priorities in the development of educational policies. The Law on Primary Education of the Republic of Serbia (LOPERS) from 2009 defines and requires:

1. **The right to education and equality** (Article 6): *"All citizens of the RS are equal in exercising their rights to education and pedagogical upbringing, regardless of gender, race, nationality, religion or language, social and cultural background, economic status, age, physical and mental constitution, developmental disabilities, impairments, political affiliation or other personal property."*
2. **The prohibition of discrimination** (Article 44): *"The institution prohibits activities which threaten, disparage, discriminate or segregate persons or groups of persons on the basis of: race, nationality, ethnicity, language,*

religion or gender, physical and mental properties, disability and impairments, health status, age, social and cultural background, economic status, or political affiliation, and encouraging or failing to prevent such activities on these or any other grounds stipulated by the law on prohibition of discrimination."

3. **Access to education by the Individualized Education Programme (IEP)[11] in regular schools** (Article 68): "*In addition to the school syllabuses, primary and secondary schools may also implement: IEP for students and adults with disabilities, individual Serbian language syllabus, or national minority language syllabus for students who do not know the language of instruction ..."*
4. **The use of individual mode of interaction and IEP** (Article 77): "*For a child and student who, due to social deprivation, disability, impairment or other reasons, needs additional support in education and upbringing, the institution ensures the elimination of physical and communication barriers and adopts an IEP".*

The European Union has recognised the importance of the issue of inclusion in Serbia through the support of projects such as:

1) *Strengthening the capacity of local governments and educational institutions to implement the laws and policies of inclusive education in local communities in Serbia*[12] (conducted by the Association of Students with Disabilities in cooperation with the Initiative for inclusion VelikiMali and Initiative for the rights of persons with disabilities in mental development in Serbia and funded by EU) or

2) *Delivery of Improved Local Services* (DILS - Delivery of Improved Local Services)[13] (implemented by the Ministry of Health, Ministry of Education, Science and Technological Development and the Ministry of Labour and Social Policy with the financial support of the World Bank and the International Bank for Reconstruction and Development). Through the DILS project, a national training on "Inclusive Education and Individual Education Curricula" was organised for approximately 7,500 employees in schools, for at least 5 staff members from each school, including school principals. A network of support for inclusive education was established, which includes 75 professionals and 10 schools, which is always available for questions and problem solving, peer learning, study visits, presentation of inclusive education, the development of internal networks, development of teaching resources, collaboration with parents and teamwork improvement.

A large number of respondents consider inclusive education one of the highest priorities in educational reforms in recent years in Serbia. In the last three years, about 23,000 teachers have attended various programmes on inclusive education, usually through trainings for continuing professional development of teachers or lectures.

Special attention is devoted to improving access to education for Roma children, through the implementation of measures from the Integrated Action Plan for

[11] IEP is a special document used for planning additional support in education for a certain child or student, according to his specific abilities and possibilities. For students with exceptional abilities the institution adopts IEP which determines an adapted and enriched way of education.

[12] For details see: http://inkluzivno-obrazovanje.rs/o-nama

[13] Videti detaljnije na : http://www.dils.gov.rs/mp/

the Improvement of Education of Roma in Serbia, which was adopted in 2005. An important project in inclusive education is “Education for All – improving access to and quality of education for children from marginalised groups”, which is financed from EU IPA 08 funds with the support of the OSCE, whose implementation started in 2010. The project trains and employs 178 assistants in preschool institutions and primary schools and provides training for school principals and other staff.

The introduction of compulsory and free one-year preschool education is one of the results of activities aimed at increasing access to education for all. The Ministry also provides free textbooks for all children in primary schools from the first to the fourth grade (Popović M., 2013).

Laws and strategies for inclusive education have been adopted. Many countries have well designed implementation mechanisms and new curricula are adopted and adjusted to preschool, primary and secondary education. The focus of reforms is gradually shifted towards the interaction between teachers and students in individual classrooms and schools. Experience shows that the much-desired change to a more inclusive education will simply not happen if the key actors in this process, teachers, are not equipped with the necessary attitudes, skills, knowledge and motivation within an environment that provides them with support.

Teachers’ readiness for the development of inclusive education and digital inclusion

In inclusive education, the syllabus and teaching methods are adapted to the possibilities of the child, teaching materials are also adapted depending on the type and severity of developmental difficulties, architectural and other barriers are removed, all of which requires adequate preparation and constant support. So, it is not the child who is adapted, but the environment, which endeavours to meet children's needs. This idea fundamentally means changing the education system with the aim to improve the educational process.

The implementation of the principle or commitment to act in a certain way when it comes to inclusive education is very complex because the principles of inclusive education are in specific relation to all the other pedagogical principles. It should be borne in mind that in addition to the principles that will be listed, all the known pedagogical principles are aplicable, too, but to the extent that corresponds to children with special needs as well as other children in an educational group. For example, the principle of obviousness will have great significance for deaf children, but not for the visually impaired. By essence and priority Suzić identifies five key principles for inclusion: 1) The principle of social acceptance and support; 2) The principle of early prevention and rehabilitation; 3) The principle of individualisation; 4) The principle of developing functional capacity and 5) The principle of stimulation and compensation (Suzić, 2008, p. 45).

Apart from respecting the key principles of inclusion, it is necessary to emphasise the vital precondition for the success of inclusive education and that is the willingness of teachers, which is directly related to the quality of their initial education and vocational training during work.

In the part that follows we shall reinterpret the results of research on the preparedness of future teachers for inclusive education, and the research results related

to how relevant actors in the educational system perceive the capacities for initial teacher education in preparation for inclusive practices.

The main finding on the preparedness of future teachers for inclusive education (Macura Milovanović et al., 2011), is that the current state of initial teacher education does not contribute to adequate preparedness of teachers for inclusive education. The analysis of curricular contents for initial teacher education in Serbia shows that the dominating approach to inclusive education is the special education approach, with an evident absence of the cross-curricular approach and subjects that would enable the development of competences for inclusive education in a broad sense. Additionally, the realisation of professional practice does not include tasks that would involve direct work and activities with students who need additional support (lack of opportunity to observe and participate in inclusive practice). Knowledge of working with children with disabilities, through a special course (module, exam) was acquired by 52.22% of the teachers, but only 16.75% thought that they had acquired adequate knowledge for quality work with pupils with disabilities (ZUOV, SURS 2010).

According to the results of the previously mentioned empirical research *Assessment of the capacities and needs of teachers for inclusive education research development* (ZUOV, SURS 2010), which included 811 primary class teachers, positive orientation towards inclusive education is expressed by 52.52% of the surveyed teachers. The readiness of respondents for inclusive education is indirectly reflected in the fact that 80.67% of teachers reported that teacher education faculties should have compulsory subjects/modules to train future teachers to work with children with special needs, 81.03% believe that teachers – trainees should be required to attend professional development programmes that will prepare them for inclusive practice, while 65.39% of them believe that this knowledge should also be part of the competences of the mentoring teachers.

Certain shifts in the orientation towards inclusive education within individual study programmes are insufficient to ensure the development of competences for inclusive education. The preparation of future teachers is not harmonised with the modified educational policy. Initial teacher education and the development of inclusive education show that teachers believe that initial education should provide them with a more solid basis for working with students with special needs.

The goal of digital inclusion is overcoming barriers in access to ICT and its adequate application that can support and encourage independent living and learning for children with developmental disabilities. Proper use of ICT in teaching enables the child with special needs to independently control the environment, establish communication and cooperation, encourages motivation, development of a positive self-image, participation in educational activities that are fun.

Digital inclusion in basic education implies careful planning in accordance with the child's interests, abilities and skills, in order for him to achieve the maximum level of functioning by combining different curricular contents.

Undergraduate studies at universities in Serbia which educate future teachers last four years and end with a final exam, followed by one-year graduate studies and the preparation of a master’s thesis in accordance with the ECTS scoring system. The analysis of contents of undergraduate syllabuses for future teachers indicates that the preparation of students at the basic level of teacher education for ICT implementation

is carried out through the subject of *Educational Technology*. At some faculties, in addition to educational technology as a compulsory subject, there is one more subject – *Educational Informatics*.

Educational informatics as a subject should enable students to master basic concepts such as the application of information technology in teaching and learning, the use of computers in teaching, learning and school administration. Special attention is paid to practical training of students to use educational and user software. The subject *Educational Technology* allows students to gain theoretical and practical knowledge of teaching technology, teaching innovations, application of didactic media in teaching, especially information and communication and electronic media. In this way, students will learn how to effectively prepare teaching materials by applying them in certain types of teaching and to use didactic and electronic media in monitoring and evaluating the work of students in the classroom (Ristić, Radovanović, 2013). In addition to these compulsory subjects in which future teachers acquire competences for the use of modern ICT in teaching, some faculties also offer elective courses such as: Informatics Teaching Methodology, Distant Learning, etc.

Teacher education faculties at universities devote considerable attention to the use of ICT in teaching. However, problems such as lack of technical equipment in schools, lack of technical support (schools do not have the staff responsible for ICT support), the lack of relevant educational portals, software and other teaching materials, remain open. On the other hand, it has been noticed that teachers do not make good use of the equipment for teaching purposes, even when it does exist in schools.

Based on the analysis of the curricular contents for basic studies, we have concluded that future teachers do not acquire competences for digital inclusion of children with special needs as part of their initial education. Support for the involvement of faculties in the changes implied by inclusive education requires a committed social action and cooperation with teacher education faculties in the world, which already have sufficient elements in their practice to adequately prepare students for inclusive education and digital inclusion.

Options for improving teachers' basic education in terms of their preparation for digital inclusion can be classified into several categories: 1) introduction of contents for the work with pupils with disabilities that will enable future teachers to acquire theoretical and practical knowledge for the work with children with special needs in a digital environment (creating a stimulating learning environment for children with special needs, analysis of examples of good digital inclusive practice, showing digital video recordings of inclusive practices; 2) the introduction of a cross-curricular approach of inclusive education (e.g, introducing contents into respective subject teaching methodologies); 3) introduction of optional modules that focus on developing competences for digital inclusion of children with special needs; 4) improving the system of vocational training (acquisition of practical skills in inclusive classes and establishing cooperation between the university teaching staff and class teachers from schools with good results in the implementation of inclusion); 5) creating projects that will support and enable digital inclusion in basic education.

Conclusion

Successful implementation of technology in the classroom is often dependent on the skill, knowledge and commitment of the classroom teacher. Not only do teachers need to have the appropriate training and support to include students with disabilities – they also have certain responsibilities in preparing student teachers to deal with technology in the classroom.

Technology does have the advantage of giving students with disabilities more independence and control of their learning; however, the teachers must have the skill in being able to assist in using the technology and be able to give the support if there is failure for it to be used properly.

It is necessary to say that digital inclusion requires constant system support as well as systematic teacher training, i.e. development of their competences, which means it is necessary to establish the overall well-coordinated system of professional teacher development – from their initial education during the study, through the introduction into the job to continuous professional development at work.

Bibliography

Ainscow, M., Booth, T., Dyson, A., Farrell, P., Frankham, J., Gallannaugh, F., Howes, A., Smith, R. (2006). *Improving schools, developing inclusion.* London: Routledge.

BECTA (2003): What the research says about ICT supporting SEN and inclusion. Online: http://webarchive.nationalarchives.gov.uk/20130401151715/http://www.education.gov.uk/publications/eOrderingDownload/15009MIG2791.pdf

Brusling, C., Pepin, B. (2003). Introduction: Inclusion in Schools: Who is in need of what?, *European Educational Research Journal*, 2(2), p. 197-202.

Centar za obrazovne politike (2008). Usaglašavanje programa obrazovanja prosvetnih radnika u zemljama zapadnog balkana, Dosije, Beograd.

Eminović, F., Denić, S. (2013). *Obrazovanjem do digitalne inkluzije dece sa višestrukom ometenošću*, Univerzitet u Beogradu, Fakultet za specijalnu edukaciju i rehabilitaciju, CIDD.

Empirijsko istraživanje (2010). Procena kapaciteta i potreba učitelja za razvoj inkluzivnog obrazovanja, Zavod za vrednovanje kvaliteta obrazovanja i vaspitanja, Savez učitelja RS, Fond za otvoreno društvo-Srbija, Beograd, Retrieved August 30, 2014 from the http: //www.dils.gov.rs/documents/filesEducation/maj2011/literatura/Empirijsko%20istrazivanje.pdf

European Commission (2005). Common European Principles for Teacher Competences and Qualifications.

González, J., Wagenaar, R. (2003). Tuning Educational Structures in Europe, retrieved June, 2008 from http://www.relint.deusto.es/TUNINGProject/spanish/doc2_fase1.asp

Jaślan, B., Kovačević, J. (2008). Obrazovanje u redovnim školama i školama za decu ometenu u razvoju: zajedno ili paralelno, Nastava i vaspitanje, Godina LVII, Broj 1, p. 43-55.

Kidd, J., Sanchez, S., Torp, E. (2008). Defining moments: developing culturally responsive dispositions and teaching practices in early childhood pre-service teachers, *Teaching and Teacher Education*, Vol. 24, p. 316-29.

Kovačević J., Radovanović, I. (2005). Pripremljenost redovnih škola za inkluzivno obrazovanje, Zbornik rezimea sa Međunarodnog naucnog skupa *Specijalna edukacija i rehabilitacija – koraci i iskoraci*, Defektološki fakultet, Beograd, p. 23-24.

Lewin, C., Mavers, D., Somekh, B. (2003). Broadening Access to the Curriculum Through Using Technology to Link Home and School: a critical analysis of of reforms to improve ducational atainment for al K-12 students.

Macura Milovanović, S, Gera, I., Kovačević, M. (2011). Priprema budućih učitelja za inkluzivno obrazovanje u Srbiji: trenutno stanje i potrebe, *Zbornik Instituta za pedagoška istraživanja*, Godina 43, Broj 2, p. 208-222.

Medenica, M., Medenica, V. I., Ivanović L. (2011). IKT kao podrška u razvoju kreativnosti osoba sa lakom intelektualnom ometenošću,, Učiteljski fakultet, Beograd, 2011., Vol. 24, Br. 1, p. 103-108.

Pantic, N., Wubbels, T. (2010). Teacher competencies as a basis for teacher education: views of Serbian teachers and teacher educators, *Teaching and Teacher Education*, Vol. 26, p. 694-703.
Pantić, N. (Ed.). (2008). Podešavanje nastavnickog obrazovanja na Zapadnom Balkanu. Beograd: Centar za obrazovnu politiku.
Popoić, M. (2013). Obrazovanje i obuke nastavnika na Zapadnom Balkanu, Fondacija Tempus, Retrieved August 30, 2014 from the http:// www.tempus.ac.rs/uploads/Obrazovanje_i_obuke_nastavnika_na_zapadnom_balkanu.pdf
Radović, V., Radulović, L. (2007). Kako nastavnici opažaju svoje inicijalno obrazovanje: na koji način su sticali znanja i razvijali kompetencije, Nastava i vaspitanje , Godina LVI, Broj 4, p. 413-435.
Ras, S., Dark, T., Light Blind Care (2008). Inclusive Education An overview of international experiences and approaches, Dark and Light Blind Care, Veenendaal, Netherlands
Ristić, M., Radovanović, I. (2013). *Internet u obrazovanju*, Učiteljski fakultet, Beograd.
Suzić, N. (2008). Uvod u inkluziju, XBS, Banja Luka.
UNESCO Institute for Information technoogies in Education (2006). ICT′s in education for people with special needs.
Zakon o osnovama sistema obrazovanja i vaspitanja Republike Srbije (2009) Ministarstvo prosvete i nauke, Beograd, Službeni glasnik RS, broj 72/09 i 52/11 i Zakon o izmenama i dopunama Zakona o osnovama sistema obrazovanja i vaspitanja, Službeni glasnik RS, broj 55/13.
Zakon o osnovama sistema obrazovanja i vaspitanja, Službeni glasnik RS, 72/09, 53/11 i 55/13, član 101.
Zakon o osnovama sistema obrazovanja i vaspitanja, Službeni glasnik RS, 72/09, 53/11 i 55/13, član 24.
Zakon o visokom obrazovanju, Službeni glasnik 76/05 RS, član 17.
ZUOV, SURS (2010). Empirijsko istraživanje: Procena kapaciteta i potreba učitelja za razvoj inkluzivnog obrazovanja, Beograd

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