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Preparing Teachers of Mathematics for Implementing the Concepts of Integrating Education in Modern School

The poster is to present results of research made among teachers studying at the Post-Graduate Study of mathematics on how they are prepared to implement the concept of integrating education at modern school.

Polish educational system has been going through numerous transformations in recent years. The changes include legal regulations, as well as structural adjustment of the system to changing social and economic environment. Expectations and requirements posed towards teachers have also changed, due to an increasing number of children which suffer from reduced efficiency of some organ or functionality who attend general education schools. The selective educational system, operating until the end of the 80ties, separated disabled students who (at least according to basic assumptions) were attending special schools and centres. However, according to Kosakowski, (Cz. Kosakowski, 2001), numerous children with various disabilities remained in general schools.

Present educational system has envisaged the following forms of education for children with non-standard abilities: segregating facilities, integrating facilities. The integrating system provides for partial and full integration. Partially integrated facilities provide school forms for disabled children located in general access schools and arrange individual instruction at home or at general access schools. Fully integrated facilities provide integration forms and/or integration groups, or the whole school may be fully integrated. Children with intellectual or physical disabilities or with intelligence below average, with defects or injuries of analysers (hearing and sight), speech defects or special learning problems (development dyslexia, dysgraphia, dispelling and dyscalculia) are called **children with special educational needs** (M. Bogdanowicz, A. Adryjanek, 2004)**.** In spite of individual diversity resulting from the type and scope of defects, all the children, due to their non-standard development, encounter more serious learning problems than their peers and they require stronger support of teachers, which may be provided at general access school and should embrace: development and implementation of an individual programme concerning the curriculum, individual system of grading and adjusting requirements to the student's capability, using special teaching methods which account for special needs of such children, specialised background for teachers, appropriate non-standard structural solutions.

Results of research concerning the efficiency of educational integration show that one of the main conditions of successful integration is the development of a new type of teacher, open to change, approving differences and equipped with additional, non-instrumental abilities. Therefore, the following solutions are suggested concerning the education of future teachers: background in non-verbal communications, training in the identification and expression of own emotions, avoiding of evaluating assessment in favour of diagnosing skills of a child, identification of special needs and assistance in satisfying them (M. Flanczewska,2003).

It is equally important that teachers should know methods and techniques for teaching and instructing with respect to individual subjects. With respect to mathematics, it is extremely important for teachers to be aware of psychical and social functional capacities of students with development defects. Almost every reduction in ability, fragmentary or global, results in problems concerning absorption and effective use of mathematical knowledge. Research shows that the main barrier is the lack of teachers' background, embracing both subject matter and methodology, enabling them to work with disabled children in integrated environment. Teachers lack knowledge in diagnosing disabled children and developing for them individual curricula and grading systems. The problem was therefore formulated as follows: **are teachers mathematics ready to work in integrated education system?**

The research embraced post-graduates students at the mathematics department of P. Włodkowic College in Płock, Poland (active teachers). It seemed conducive for the research to gather information concerning : the teachers' knowledge about the options for educating disabled children, their knowledge about diagnosing disabled children, whether teachers have knowledge of methodical basics for working with disabled children, what is their opinion about integrating education facilities, to what extent does the College prepare students of mathematics for working with disable children?

Conclusions resulting from reviewing the results shall be used to extend the knowledge on preparing teachers of mathematics to implement the concept of integrating education in modern school and to introduce possible alterations in college curriculum for post-graduate studies in mathematics.

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