

**THE SCHOOL OF TOMORROW
CENTRED ON PUPILS**

THE SCHOOL OF TOMORROW CENTRED ON PUPILS

Edited by Józef Kuźma & Jolanta Pułka

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INTRODUCTION

The monograph entitled *The School of Tomorrow Centred on Pupils* is a collective paper which, on the one hand, is based on the research conducted by and experience of many Polish and foreign theoreticians and practitioners of school education and, on the other, is the aftermath of an international academic Symposium “From the Traditional Towards the Future, Pupil-Oriented School” organised at Andrzej Frycz Modrzewski Krakow University on the 10th and 11th of June 2013, to which many highly-competent authors of this monograph contributed.

It should be noted that the Symposium was held on the 240th anniversary of the creation of the Commission of National Education (operating from 14th October 1773 until 31st May 1792), which was the first central national institution for education in the Polish Republic created in the civilised world.

It is therefore fully justified to adopt a many-sided approach to the past, present and future of the Polish school in a broader European and global context.

In the final section of my monographic study *Nauka o szkole* [*Science of School*] (Kuźma 2011) I concluded, among other things, that: School as socially-educational institution did not come into being accidentally. It served the very important needs connected mainly with the intellectual, religious and also physical, moral and aesthetic education of people. It was the way of using free time too.

For first millenia, and even majority of centuries of the latest millenium, school had elitary character. Education was available only for young people from privileged classes of society, that is aristocracy and clergymen (government officials and priests).

School transformations had their source in two mutually dependent processes: converting the individual pedagogical (educational) work into team work and passing from elitary to mass educating, what required modern forms of organization for education and new methods of school managing.

It is worth noticing that now we can perceive the opposite process – leaving mass school and education in favour of smaller school creating conditions for individual development of pupils. However, it is taking place in other reality different from the one, in which first schools came into being.

Looking at school development both from closer and further time perspective we come to some general conclusions. Analysing the development of school as social institution, from further time perspective (from the point of view so called „conception of long lasting” F. Braudel), we can see some logic which is compatible with the paradigm of continuance and change.

However, if we try to look at the development of school or school-system from closer perspective, we can see, that this development was not happening in evolving way or according to a plan as it seemed to, but mainly disaccording to a plan and in an inconsequent way. The periods of successful development of system of education were happening alternatively with crises of school, both on European, Northamerican or other continents.

In all formations, we can observe distinct dependence of school and process of education on socially-political system dominating in the country.

For many centuries the system of education was in the servance of privileged classes. However, when deprived classes of society were gradually gaining rights, education was becoming more and more democratic and common in national countries.

At the beginning, school was isolated from the surrounding but becoming more and more democratic, common and popular, it has changed into open institution.

For majority of epochs, the access to school education for women was impeded or even impossible. Contemporary school is becoming more and more available not only for children and the youth but also for adults and, at present, even for older generations.

Depending on political and ideological trends dominating in certain epoch or country, the character of schools was either religious or secular. These tendencies were taking place and are still going on rather changeably, without clear continuity.

School and system of education, in its long history, experienced longer or shorter crises many times. So the present crisis isn't probably the first or the last one.

The latest crisis of school, which started in the seventies of the last century, seems to be much longer and extensive. Crisis of school, just like the crisis of teachers' state is the crisis of civilization, of unequal economic growth, of unequal chances, moral crisis of a man and in consequence the crisis of religion, politics, science, education and culture. The confirmation of all, probably not quite realized sources of global crisis of education, from the turn of the millenium, we can find in many foreign and Polish reports and scientific works.

It results from these reports, that school and the whole sector of education, are still the most important in the modern civilisation based on science. School is still a living institution and contributes towards the development of society in many ways. School possesses the great capital of human knowledge and experience, that mustn't be wasted.

Analising the literature concerning the history of school and system of education, comprising the whole education, we find school as social and educational institution, meeting very important evolutionary needs of various generations, especially of children and youth.

The solutions to the challenges that the Polish school and education face should be sought both in the past and in the present.

Professor Czesław Kupisiewicz, the 'nestor' of Polish educationalists who devoted nearly all his writings to the school, has diagnosed the current state of our schools as follows:

"Educationalists also criticise the school because its **objectives and the tasks** it undertakes are too general and out of contemporary, and **teaching plans and programmes** are based on the principle "the same for everyone", and not, as it should be, "the optimal for each and every one", according to their abilities, needs and interests; because the **methods of teaching and upbringing** fail to develop the ability to think and act independently in children and young people and instead they favour verbalism and insufficiently link theory with practice; because the **organisation** of institutionalised education places too much importance on collective education, to the detriment of individual and group education, whose role has been growing recently owing to personal computers and the Internet; furthermore, because the school **practice** devotes less and less attention to the upbringing of children and young people and

cooperation with their parents, which results, among other things, in such negative phenomena as increasing drug abuse, antisocial and even criminal behaviour among pupils.”¹

In recent years there have been heated debates concerning school and teachers to which everyone has contributed: academics, theoreticians and practitioners, teachers and parents.

As in the United States of America, there is double rhetoric connected with the educational reform, where some suggest various reforms without realising the complexity of the reasons for the educational crisis and others come up with simplistic solutions.² In fact the situation of the school is much more complex, since we are dealing not with double, but with multiple, often controversial rhetoric and it is often forgotten that at school children are of primary importance and education should be pupil-oriented.

The current research and in-depth analyses indicate that at present the Polish school system and teacher training system are at the crossroads. On the one hand, there is stagnation and even regression and, on the other, badly planned and inconsistently conducted reforms, usually abandoned due to the change of authorities. Not only is there no long-term, but also no short-term educational policy.

The present teacher training system is criticised for the excess of theory and insufficient practical preparation as well as for the lack of the proper selection of candidates for the profession which requires professionalism and a considerable degree of competence.

The present monograph focuses on two ways of perceiving pedagogic reality: the theoretical and the practical one.

The theoretical part discusses the problems connected with the holistic perception of the functioning and role of the school in the educational system: the vision of the future school and the idea of teacher training (J. Kuźma), new technologies and media (J. Morbitzer), the place and timeless role of values in education (K. Chałas), the trends and challenges related to the functioning of educational systems in other countries: Ukraine (O. Boczarowa), Bulgaria (T. Giza),

¹ Professor Czesław Kupisiewicz, holder of an honorary doctoral degree from the Maria Grzegorzewska Academy of Special Education [Akademia Pedagogiki Specjalnej im. Marii Grzegorzewskiej], Warsaw, A.D. 2013; Lecture *O szkole* [On School], pp. 45–51.

² H. Gardner, *Inteligencje wielorakie. Teoria w praktyce*, Media Rodzina, Poznań, pp. 121–127 [*Multiple Intelligences: The Theory in Practice*, Basic Books, New York 1993].

and the style of teaching in which the process of the independent acquisition of knowledge plays an important role (K. Borawska-Kalbarczyk).

The reflections connected with the changes in teacher training system are empirically exemplified by the discussion of problems focussed around working with gifted pupils (J. Aksman), the multidimensional shaping of teachers' competence (J. Pułka), the teachers' attitude towards intercultural education (B. Dobrowolska), and the trends and challenges related to the functioning of educational systems in Sweden (E. Johnsson), and the mathematical literacy competencies (M. Cotič, D. Felda).

Theoreticians of education agree that the schools of tomorrow or future ought to be pupil – oriented.

In a pupil-oriented school the teacher works towards the all-round development of each individual's personality, treating them non-instrumentally. They try to get to know every pupil so that they can, as far as possible, adjust the didactic and educational process to the pupil's needs and current level of development. In educational practice the pupil-oriented school, based on differential didactics, will require a new organisation of classes, mainly conducted in small groups or individually.

For today's schools, compared to the traditional ones, it is far easier to concentrate the didactic and educational process on the pupils and adopt an individualised approach to children and young people. It is possible thanks to the rapid development of new Information and Communication Technologies, which allows teachers to organise classes in small groups and work individually with particular pupils, not only the gifted and retarded ones.

On the other hand, the rapid growth of developmental and cognitive psychology as well as neuropsychology creates greater possibilities of recognising the pupil's potential for development than before. It must be observed, however, that research into the brain's cognitive potential, the process of thinking, memorisation and motivation for learning, although advanced, is in practice difficult to apply in schools, mainly with regard to the description and interpretation of the complex phenomena taking place in the brain examined by means of positron emission tomography.

Thanks to the new ways of recognising developmental needs and new educational technologies, our children will learn quite differently than we did. They are a prefigurative culture generation (M. Mead), which is characteristic for new societies.

The modern pupil-oriented school can provide fully valuable education and upbringing of children and young people if it focuses on three areas: school education (core curriculum), extra-school (parallel) education and virtual education (Interactive Information and Communication Technologies). These three areas must be taken into consideration when developing the theory and vision of a good quality school.

As far as I am concerned, the new school should still be down-to-earth and allow the pupils to have a direct contact with nature (educational trails in the mountains, at the seaside, near lakes and in the forests) as well as organise outings to museums and theatres. At the same time it should be based on scientific research and new Information and Communication Technologies.

This vision and responsibilities of the future school should already be included in the teacher training programmes at tertiary level, while scholars representing various scientific disciplines should adopt a comprehensive (holistic), not a fragmentary or segmented approach to the school and education. Any proposed changes in the teacher training system ought to be considered inseparably from the reform of the whole educational system in a given country.

We are convinced that our Readers will broaden their idea of teacher training and pupil-oriented school in all possible areas, systems and aspects of the rich and complex process, since the mission of educating and upbringing the young generation can undoubtedly be described as such.

We hope that the effort will mainly be used for the benefit of our **children and young people** and will contribute to a significant improvement in the quality of tomorrow's education.

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Translated by mgr Renata Babińska

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FROM TRADITIONAL TO MORE STUDENT-CENTRED FUTURE SCHOOL

Abstract

Research and analyses conducted so far indicate that at present the Polish school system as well as teacher training system are at the crossroads. Following unsuccessful reforms the Polish education has entered a stage of stagnation. It is suffering from the lack of not only long-term, but also short-term educational policy.

The paper discusses the following issues, of crucial importance for the present and future educational policy:

1. Jubilee reflection on the role of the Commission of National Education;
2. Successes and failures of educational reforms during the post-war period;
3. The current state of school education in Poland, including the opportunities and dangers resulting from the demographic bulge and slump;
4. Assessment of the real costs of school education;
5. How to change Polish schools taking into consideration the school, extra-school and virtual area?
6. How to train teachers of a pupil-oriented school in order to shift from instrumental to non-instrumental treatment of pupils?
7. What is the real need and possibility of creating a theory of school, that is, scholiology?

Key words: education, school, teachers, students, theory of school, scholiology

Introduction

For over 50 years the school system has been subject to persistent criticism of education theoreticians and practitioners. The main trends in the criticism of school:

- first of all: traditional school, isolated from reality and modern life, does not keep up with the current requirements of the epoch in postindustrial or postmodern age, especially in the times of globalization within the scope of education, technological, informational and social progress, ecology, culture and morality.
- second of all: modern school has undertaken too many functions and tasks within the scope of general and vocational training, upbringing and socialization, cultural education and recently also integrated teaching and diagnosis as well as therapy of socially maladjusted children and development of creative attitudes, although it does not have sufficient resources or properly educated and motivated staff to carry out these functions and tasks.

In the book entitled *The School and Society* John Dewey already in 1927 wrote:

The obvious fact is that our social life has undergone a thorough and radical change. If our education is to have any meaning for life, it must pass through an equally complete transformation. This transformation is not something to appear suddenly, to be executed in a day by conscious purpose.¹

Without generalization, many analogies with the present times may be observed. In those days school faced similar challenges as presently.

Efficient realization of various steps and levels of tasks schools are faced with does no longer only require completing and modifying programs, improving teaching and training methods, lengthening education periods, purchasing new generation computers and equipping labs with audiovisual aids, new information and communication technologies and e-learning programs or improving architecture and furnishing school interiors. Increasing discrepancy between school education and education indispensable in adult life may be observed. This discrepancy refers both to general education as well as vocational.

An alternative to the present survival school, average because poor, may only be formed by a qualitatively new school – open to changes, more pupil – *student-centred*, supporting children's development but definitely more expensive. It will be an institution

¹ Prof. zw. dr hab. Józef Kuźma – Andrzej Frycz Modrzewski Krakow University; ul. Gustawa Herlinga-Grudzińskiego 1, 30-705 Kraków.
J. Dewey, *Szkoła a społeczeństwo* [*The School and Society*], tłum. R. Czaplińska-Muternich, „Żak”, Warszawa 2005, p. 26

offering better conditions, imposing greater requirements but also a child-friendly school.

1. Polish School at a Crossroads

Achievements and failures of Poland's education reforms in post-war period

Over recent years heated discussions about school and teachers have been commenced. Everybody is involved – scientists, theoreticians and practitioners, teachers, parents and rather rarely students.

Are schools still necessary, will they survive the current crisis? It is even being suggested that they are abolished since the Internet will take care of everything or the problem will solve itself. However, the problem is much more complex. Answers to the challenges faced by the contemporary Polish school and education system should be searched for in history as well as the present time. I devoted one chapter of the monographic study entitled *Nauka o szkole*² [School Science] to the history of school and education.

In the period following the Second World War, i.e. from 1945, out of numerous education system reforms only two were fully implemented, namely:

The first structural reform resulting from *The Act on Education System and Education Development* of 15th July 1961 (8-year primary school and 4-year high school or 5-year secondary technical school was then introduced).

The education system reformed at that time survived until the next reform in 1973/1974.

On the one hand, the system of education in schools of various levels and types guaranteed stable and rather high, at the time, standard of general and vocational education. However, on the other hand, instead of socialistic secular school education assumed in the Act, it indirectly contributed to Catholic upbringing and greater religiosity of the Polish people. In this case, in a way, we may speak about “concealed”, however not fully conscious, program of education in the spirit of Catholic faith.

² J. Kuźma, *Nauka o szkole. Studium monograficzne. Zarys koncepcji* [School Science. Monographic Study. Concept Outline], Of. Wyd. Impuls, Kraków 2005 – ed. I, 2011 – ed. IV, pp. 33–109.

The second structural reform resulting from *The Act on Education System* of 7th September 1991, assumed **democratization, demopolization, decentralization and socialization** of primary and secondary education.

In principle, all assumed objectives were successfully achieved. However, they brought both positive and negative results. The scholarization rate increased both on the secondary school final examination level as well as on the higher levels – bachelor's and master's. However, decentralization of the managing system and financing preschool and school (primary and secondary) education instead of contributing to equalization of educational opportunities and multilateral development of students caused deepening of social differences, i.e. chances of educational advancement, while structural transformation excluded many social groups within working class environments and former state agricultural farms, and currently also secondary school and higher education graduates who being unable to find work in the country, go to western European countries and also, but not as frequently, to the USA.

Decentralization, conducted at the time in accordance with the administrative procedure, contributed to the fact that currently in our country we have a vastly diverse picture and standard of education.

Together with decentralization, **commercialization** of preschools, primary and secondary schools proceeded. Ministerial subsidies following the student are insufficient. The largest schools benefit from this, however, they do not guarantee higher level of training and education. Many mistakes have been made and many things have been neglected.

In 1999 next reform of the education system was carried out which, among others, introduced 6-year primary school followed by 3-year lower secondary school-*gimnazjum* a new type of primary school. After 14 years from lower secondary school introduction it arouses more and more controversies. The main objects of the education reform of 1999/2000 were:

- raising the education level of the society by popularization of secondary and higher education;
- equalization of educational opportunities of children and young people;
- promoting improvement of education quality, perceived as an integral process of upbringing and education.

Research conducted recently by IQS group revealed that 56% of Polish people would opt for the return of 8-year primary schools and 4-year high schools and only 28% is against such a decision.

In spite of many critical opinions, my objective assessment of education system changes, which have occurred in Poland within the last 20 years, is not unequivocally negative.

As a result of decentralization, depending on the level of prosperity of a given commune and involvement of the local government as well as quality of management a rather diverse picture of primary, lower secondary and high schools has come into being. Currently in various voivodeships we have relatively few **very good schools**, they are outnumbered by **good** or **average** ones, definitely rarely by **unsatisfactory** ones. This is verified by internal and external examinations.

The last PISA report on the success of Polish students in the test math examination is worth emphasizing. PISA research verifying skills of 15-year-old students in three fields: reading comprehension, solving mathematical problems and science comprehension, which was carried out on 13th December 2013, revealed that among 64 examined countries Polish lower secondary school students occupied the 13th place, together with Canada.³ I suppose repeating this success in the subsequent PISA research could reflect the actual level of education in Polish schools.

Current state of school education system in Poland

Relatively the most objective picture of the current state of school education in Poland may be found in the successive GUS [Central Statistical Office] edition entitled *Education in School Year 2010/2011*. The presented information refers to the activity of schools and other educational institutions teaching at preschool, primary, lower secondary and high school levels and also covering special, vocational and artistic education (Fig. 1). New areas of analysis additionally cover international comparisons concerning the state of Polish education against European Union countries.⁴

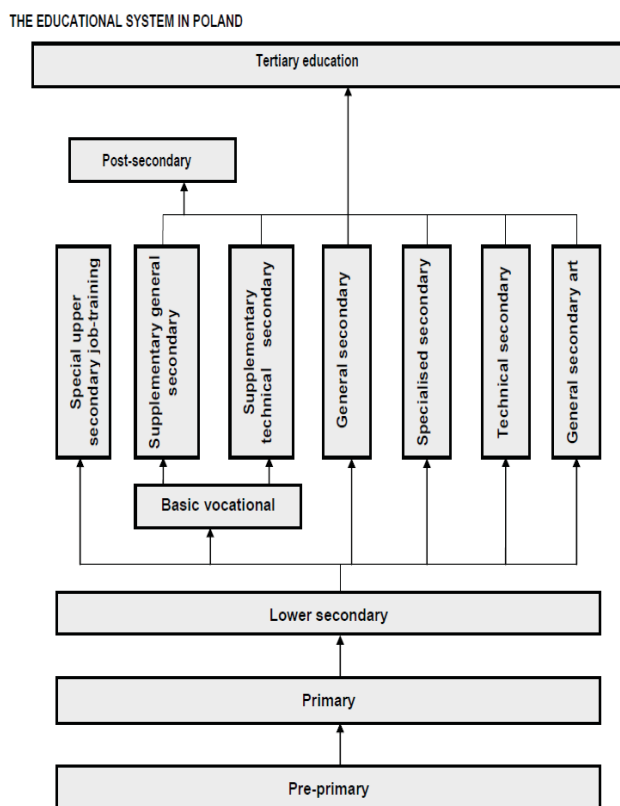
Deepened analysis of present-day education systems in European countries may be found in collective works edited by E. Potulicka and co-authors⁵.

³ PISA research. Sukces polskiej edukacji [Success of Polish Education]. <http://serwis.gazetaprawna.pl/edukacja/artykuly>.

⁴ GUS: „Oświata i wychowanie w roku szkolnym 2010/2011” [„Education in the year 2010/2011”]. Warszawa, grudzień 2011.

⁵ E. Potulicka, D. Hildebrandt-Wypych, C. Czech-Włodarczyk (eds.), *System edukacji w krajach europejskich* [Education System in European Countries], Implus, Kraków 2012; E. Potulicka (ed.), *Szkice z teorii i praktyki zmiany oświatowej* [Sketches from Theory and Practice of Education Changes], Eruditus, Poznań 2001.

Figure 1. The educational system in Poland



Demographic growth or demographic low?

A lot of simplified data and disinformation is presented on the subject of successive periods of demographic low or growth referring to preschool and school children.

The answer to the question about the genuine demographic situation of the young generation may be found in GUS statistical study referring to year 2010/2011.

The demographic situation of the young generation of Polish people aged 3–15 is dynamic (cyclical). Starting with the year 2000 a gradual increase of the number of children aged 3–5 commenced and in the year 2010 their number reached 725.1 thousand, i.e. 33.3 thousand more in comparison with the previous year, whereas the number of children in this age group increased by over 75.1 thousand in preschool institutions.

After several years of successive decline in the number of 6-year-old children a demographic growth of this cohort could be observed in the year 2010 reaching up to 353.4 thousand (increase of 5.3 thousand, i.e. 1.5% in comparison with the previous year).

In the year 2010/2011 however, the number of children aged 7–12, i.e. the nominal age of a 6-year primary school, decreased in comparison with the previous year by 58.5 thousand, i.e. by 2.6% and the number of children aged 13–15, i.e. lower secondary age, decreased by 57.1 thousand, i.e. 4.3%. Moreover, the number of school children aged 16–18, a typical age for secondary school education, was 71.5 thousand, i.e. 4.7%, lower in 2010 in comparison with the previous year⁶.

These tendencies are confirmed by GUS data within the scope of population structure of school-aged children referring to the year 2012/2013.

From the year 1995 the number of school-aged children at respective levels of education gradually decreases, in connection with the decrease of school-aged population. In the year 2012 the number of children of nearly all age groups included in the education system was lower than in the year 2000. In the years 1995–2008 the number of children in particular “preschool” age groups decreased with each year, whereas in the year 2009 gradual increase of the number of children aged 3–5 commenced, in the year 2010 – also the number of 6-year-olds. In the year 2012 there were 1654.5 thousand children aged 3–6, i.e. 63.9 thousand (4.0%) more than in the previous year. The number of 6-year-old children in the year 2012 reached 384.0 thousand (14.4 thousand more, i.e. 3.8% more, in comparison with the previous year). As a result of changes in the education system and the fact that 6-year-old children were sent to first grade of primary school depending on the decision of their parents or legal guardians in the school year 2012/2013 the number of 6-year-old first graders slightly decreased, reaching the rate of 17.2% in relation to all children of this age.⁷

⁶ GUS [Central Statistical Office]: *Oświata i wychowanie w roku 2010/2011* [Education in the year 2010/2011], Warszawa, grudzień 2011, pp. 56–57.

⁷ GUS: *Oświata i wychowanie w roku 2012/2013* [Education in the year 2012/2013], p. 58.

Can demographic low constitute an opportunity to raise the quality of school education or a reason to close down smaller schools?

Long-term social and educational policy should take an objective regularity, i.e. demographic cycles, into account. Every few years demographic low is observed followed in turn after a couple of years by demographic growth. Permanent demographic low may only occur in long-term perspective and only in countries without purposeful social pro-family policy.

In the period of demographic low there are two ways out:

The first, demographic low may be treated as an opportunity of education process intensification, whereas in the case of **the second**, as a threat to the commune's budget meant for education and an increase of education costs at a given school.

To begin with let us analyze **the first case**:

The number of pupils-*students* per teacher may be reduced to 15 (the optimum number of students in modern school should not exceed 20 students, not to mention 30 or even 35 per class). In this case the period of demographic low may be, and should be, used as an opportunity of education intensification and modernization of a given school. This will be possible if the teachers staying at a given school focus on the development of students, both collective and individual. This will of course require improvement of their skills and qualifications. On the other hand it is a suitable period for modernizing school buildings and furnishing classes and labs with new equipment and new technologies. This refers to primary schools as well as secondary schools – high schools and secondary technical (vocational) schools. What is important here is the social and financial support of the parents as well as the local government.

Schools which take advantage of the opportunity currently created by demographic low will in a couple of years outrun the remaining larger schools and may become examples to follow.

The second case:

In the period of demographic low local authorities in order to lower the costs of education take a decision, in accordance with administrative procedures, on consolidation or closing of a given school. Such decisions usually concern primary, lower secondary and secondary technical schools, less frequently high schools. The school building, together with expensive and usually modern equipment, is leased or sold by tender. Authorities responsible for local

and central education policy do not care that in a couple of years demographic growth will occur and it will be necessary to invest in new school buildings, not to mention labs and their equipment.

For central authorities represented by the education resort as well as the voivodeship and local government what matter the most is the economic factor, whereas the quality of education of the future generation is far behind.

Education expenses

The general opinion is that education in Polish schools is underfinanced. However, what appears from GUS report is that in the years 2003–2010 a systematic increase of public expenses and subsidies for education could be observed, at a relatively stable contribution of these expenses to GDP, at the level of 4%. This rate is however significantly below the European level, particularly if we take into account that GDP indicator per capita in most European Union countries is relatively higher than in Poland. According to UNESCO every country in the world should devote to the education system not less than 5% of its GDP.⁸

The state of being permanently underfinanced is deepened in the case of Polish education by territorial governments, especially communes, out of which many underestimate the particularly important social role of education for the future of our country and individual regions and local communities, devoting less and less financial resources for the needs of preschools, primary and lower secondary schools.

By comparison the indicator of education expenses within these years in chosen countries of the European Union amounted to:

- In France – 6.6% (2008), over 7% (2010);
- Switzerland – 6%, out of which 84% is covered by communes and cantons;
- Great Britain – 5%;
- Italy – around 5.7% (in past 30 years); however currently in the period of crisis dropped to 3.7%
- Germany – 4.4% GDP.⁹

⁸ K. Mazurek, M.A. Winzer, C. Majorek (eds.), *Education in Global Society. A Comparative Perspective*, Prestice Hall, U.K. London 2000, p. 139.

⁹ E. Potulicka, D. Hildebrandt-Wypych, C. Czech-Włodarczyk (eds.), *System edukacji w krajach europejskich [Education System in European Countries]* op. cit., pp. 93, 153, 166, 250, 347.

The problem of optimal management and school education system evaluation

Conducting optimal educational policy and skilful management of the complex education system or particular schools, requires comparative analysis of the same type of schools, both on a country scale and on an international scale, on the basis of comparable criteria and indicators.

Education policy and management of school, in order to be efficient, should be based on the analysis of actual, direct and indirect expenses of education in schools of various levels. This is however not so, particularly when schools conducted by local and district governments are concerned.

More effective or qualitative management of individual schools to a large degree depends on the system, i.e. the current system of entire education.

Thus, answering the following strategic question is a priority:

What model will be currently optimal for Polish education?

The model introduced as a result of the education system reform in the year 1999, i.e. 6-year primary school, 3-year lower secondary school and 3-year high school or the previous model which functioned in our country until this reform, of course after necessary corrections, based on the changed core curriculums as well as new information and communication technologies, i.e. 8–9-year primary school, 4-year high school, 5-year secondary technical schools and other vocational schools.

For efficient management of education system and conducting complex, objective evaluation, both in macroscale and microscale, competent staff is indispensable. Training staff for effective management of education and evaluation of the whole education system and each school, constitutes a priority for higher education institutions training teachers of future student-centered schools.

From the above analysis following conclusions are drawn:

Both parents and students are not satisfied with current state of education in schools with worse results. Hence, the trend of **home schooling** and paying for private tuition.

The current system of training teachers is assessed negatively, surplus theory, not enough practice. This system does not keep up with current scientific research and new information and communi-

cation technologies. So far no efficient mechanisms of selection have been developed in this profession requiring high levels of competence and professionalism, which was already compared by Andrzej Frycz Modrzewski to the profession of doctor or lawyer¹⁰.

Teachers' bane on every level of education is bureaucracy, which among others involves remote control of quality of education via the Internet and unnecessarily overdeveloped reporting, both in electronic and printed versions. This does not find any sensible justification, does not raise but lowers the quality of education, takes a lot of time which the teachers-educators should devote directly to student-centred education and improvement of their qualifications.

Conclusion: What may be irrefutably concluded from studies and analysis is that currently the Polish system of **education and teacher training is at a crossroads** between regress, stagnation and qualitative changes. There is no long-term and no temporary educational policy. Our education paces from reform to reform!

2. How to change Polish schools and teacher education system?

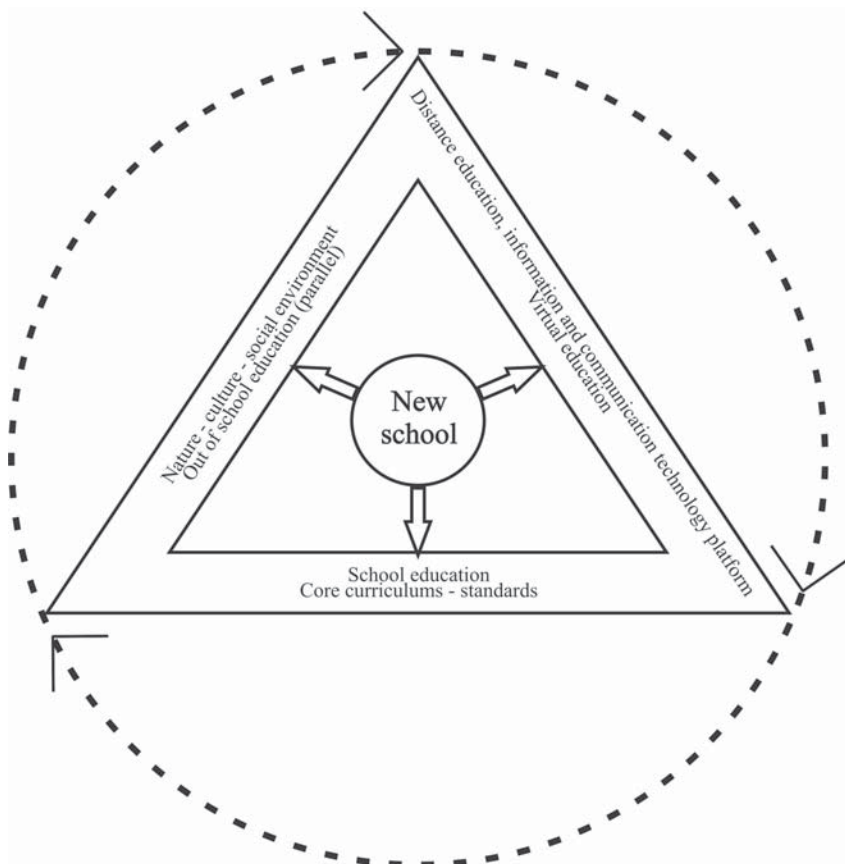
The school of tomorrow or future should involve changes within the **system (space) of school, out-of-school and virtual education**, (fig. 2) It should be more student-centered than it has been up to now.

Among the school's three educational areas: inside school, extra-school (out of school) and virtual education, a very significant process of convergence is taking place. From a general point of view, the process of convergence in education consists in the mutual penetration, integration, reinforcement and complementary character of elementary ideas, values and information, which is conducive to an in-depth analysis and the creation of synthetic process. Owing to this, a synergy effect becomes possible, which in turn contributes to the increase of quantitative effects of the holistically perceived process of education.

It is worth mentioning that the process of convergence is also taking place among the various school subjects, both at the primary, secondary and tertiary level.

¹⁰ A. Frycz Modrzewski, *De Republika emendenda*, MCMLIII. Kraków, p. 604.

Fig. 2. Three education spaces of modern school



Student-centred school may be a classical or traditional school as well as neo-modernistic or modern. As far as student-centred schools are concerned what is important is that students are treated by teachers-educators subjectively not objectively, amicably not instrumentally. It is the student who, as the subject, is the very important in such a school. The school should above all be for the student, not the student for the school. This does not mean paidocentrism but respecting the identity and dignity of each student.

In monograph entitled *Multiple Intelligences* (1993)¹¹ Howard Gardner writes:

¹¹ Howard Gardner (1993), *Multiple Intelligences. The Theory in practice*. Published by Basic Books, a Subsidiary of Perseus Books L.L.C Copyright by Polish edition by Media Rodzina, Poznań 2002, pp. 118–119.

In my opinion, the real impediment of introducing individual-centred education does not constitute financial limitations or knowledge insufficiencies but the lack of intention to carry out this idea. As long as we prefer to consider that individual-centred education is irrelevant, and even if relevant, impossible to introduce into practice, we will perceive it as a utopian concept. However, when we decide to accept the goals and methods of such education, then I have no doubt, we will be able to achieve significant progress in this direction.

Currently schools have incomparably greater chances of focusing the didactic and educational process on students and an individual approach to children and young people in comparison with classical or traditional schools. This is due to new achievements of developmental and cognitive psychology or neuropsychology. However, on the other hand, as a result of rapid development of new information and communication technologies organization of activities in small groups is becoming easier and easier and more and more effective.

Changes of traditional school into modern school should be based on recognition of the intellectual, emotional potential of each student desirably multidimensional (H.Gardner)¹² and emotional intelligence as well as motivation to acquire knowledge and master specific information and abilities. For as D. Goleman, the author of *Emotional Intelligence*, claimed "Success in life depends not only on one's intellect, but also on the ability to control emotions". (title page of quoted Monograph).¹³

To recognize pupil's potential besides traditional methods (intuition and observation, tests or surveys) new achievements of neurophysiology and neurodidactics (e.g. positron imaging) can and should be used. Research concerning cognitive abilities of brain, thinking process, remembering or motivation to learn, although advanced, still generates many problems connected with application in school education practice.

Our children, thanks to new interactive communication technologies, will learn in a completely different way than we did. This is a prefigurative culture generation (M. Mead)¹⁴, characteristic for modern societies in which, due to rapid technological and cultural

¹² *Ibid.*

¹³ D. Goleman, *Inteligencja emocjonalna (Emotional Intelligence 1995)*, Polish edition Media Rodzina, Poznań 1997, title page.

¹⁴ M. Mead, *Kultura i tożsamość. Typy kultury [Culture and Identity. Types of Culture]*, PWN, Warszawa 2000.

progress, the older generation should adapt to models created by younger generations, less conservative. The direction of transmission of norms and values changes. Knowledge is passed on by the younger generation to the older one.

Similarly as previously Tadeusz Lewowicki¹⁵ (*Indywidualizacja kształcenia: dydaktyka różnicowa [Individualization of Education: Differential Didactics]*) also Howard Gardner presents a vision of school focused on an individual (*Inteligencje wielorakie [Multiple Intelligences]*, 1993)¹⁶, a school organized in a way to enable teachers, as much as it is possible, to understand and help develop cognitive abilities of each student. In practice this task is extremely difficult to carry out. It can be figuratively called another Copernican revolution (see John Dewey).¹⁷ Therefore, it can be introduced into schools practice gradually.

In my opinion new school should still remain down to earth ("in Terra"), it should enable its students direct contact with natural environment, i.e. nature (educational paths to the mountains, sea, lakes, forests), as well as trips to museum, theatres, but at the same time supported by science (e.g. Copernicus Science Centre and similar) and new information and communication technologies. Such a vision and tasks of the future school should already be included in the programs of higher education institutions educating teachers.

Modern school will constitute an organizational center coordinating student-centred education within three education spaces: **in-school, out-of-school and virtual**, presented in fig. 2.

These three spaces are dependent on each other because it is among them that the circulation of knowledge and experience deriving from various sources occurs.

It is an important role of the programmers and teachers to cover all these dynamically changing conditionings of functioning of the present-day and future school in core curriculums and proprietary programs.

Only such a school may provide harmonious development of all children, meeting their intellectual and emotional requirements and high moral standards.

¹⁵ T. Lewowicki, *Indywidualizacja kształcenia: dydaktyka różnicowa [Individualization of Education: Differential Didactics]*, PWN, Warszawa 1997.

¹⁶ H. Gardner, *Inteligencje wielorakie [Multiple Intelligences]*..., *op. cit.*, pp. 104–120.

¹⁷ J. Dewey, *Wybór pism pedagogicznych [Chosen pedagogical works]*, oprac. J. Pieter, Biblioteka Klasyków Pedagogiki, Wrocław–Warszawa 1967, pp. 94, 95.

Sine qua non condition of shaping a multidimensional human being, i.e. complete, is creating opportunities for children and young people to immerse into all three natural social and educational environments: domestic, national and common to all mankind (universal community).

3. How to educate teachers of student-centred schools?

So far many doctrines, concepts and models concerning teacher education have been

compiled. Most of these concepts assume education (or theoretical and practical training) for traditional or classical school. Not many theoreticians of education or pedeutology specialists assume that above all it is school and its environment that should change. The teachers will not do this on their own. Also quarreling politicians of ruling and opposition parties, dependent on one option only, are unimaginative about the vision of the future school.

In connection with the foregoing, a new concept of teacher education studies should be elaborated, corresponding with current challenges which the future school is to face in the perspective of at least 10–15 years. A teacher of the future school should:

- competently organize activities in three educational spaces: in-school, out-of-school and virtual;
- recognize interests, abilities and needs of every student individually;
- master the art (ability) of organizing activities not only in class-lesson system, in the case when the number of students reaches 30 and even more persons, but above all conducting activities in groups of 3–15 students as well as with each student individually (not meaning private tuition);
- master the art of conducting individual and group activities and particularly the ability to use e-learning programs, including laptops and interactive whiteboards, smartphones etc.

In present-day teacher education system theoretical training prevails over practical training.

I agree with Kazimierz Denek that: “Piętą achillesową przygotowania do zawodu nauczycielskiego są praktyki”¹⁸ [Achilles’ heel of preparation for the profession of a teacher are internships]. This

¹⁸ K. Denek, *Ku dobrej edukacji [Towards Good Education]*, Akapit, Toruń-Leszcno 2005, p. 222.

problem has been noticed for years. Internships constitute the weakest aspect of the whole teacher education system and as a “minimum” factor decide about the effectiveness of the whole prevailing system of preparing teachers for this complex profession, requiring continual self-improvement.

In connection with the aforementioned the following question arises:

Are five year Bachelor and Master studies, based mainly on theory with a small dose of internship, justified from the point of view of quality and effectiveness of teacher education?

To raise the quality of the whole system of teacher education it would be advisable to devote one out of five years of studies to training at a chosen school or educational institution consistent with the future workplace.

After completing the training, favorably after the third year of Bachelor studies, each student should take an exam before the State Examination Board. Passing the qualification exam would entitle to work in given teaching professions or continue Master studies of given teaching specializations. In this case it would be needless to write and defend the Bachelor’s thesis.

Similarly to other professions of highest social importance, training completed with state examination could constitute an indispensable selective condition entitling to work in the teaching profession and gaining successive professional ranks and promotions.

School science as an opportunity to create theories and visions of the student-centred school of the future

A monographic study entitled *School Science* grasps the outline of the concept of scholiology. This term represents a new field of science and also knowledge about theoretical and practical aspects of the activity of school.

The term “scholiology” was created by combining two Greek words scholijo – school and logos – reasoning, word. According to the preliminary assumption the subject of scholiology shall constitute: (...) ¹⁹ [research concerning the activity of school as a social institution, its organizational system, functions as well as educational (didactic and upbringing) and cultural programs, within three time dimensions: future, present and past].

¹⁹ J. Kuźma, *Nauczyciele przyszłej szkoły* [*Teachers of Future School*], Wyd. Nauk. AP, Kraków 2001, p. 244.

It is a complex field of knowledge and science, interdisciplinary, multifunctional and polymethodological. It is characterized by school and student-centred approach²⁰.

Creating general school science will allow scientists as well as practitioners to focus on the analysis and synthesis of all these elements or entanglement of factors which determine fairly optimal and effective functioning of school and creation of conditions for the development of children and young people. An important role of school science will constitute conducting comparative analysis of school systems currently functioning in various countries, on various continents within the frames of comparatistic education for the purpose of exchange of experience and creation of a possibly universal theory and vision of future school.

Scholiology, as an interdisciplinary field of studies and scientific reflections, should derive its knowledge and experience from many scientific disciplines, among which particular role should still be played by:

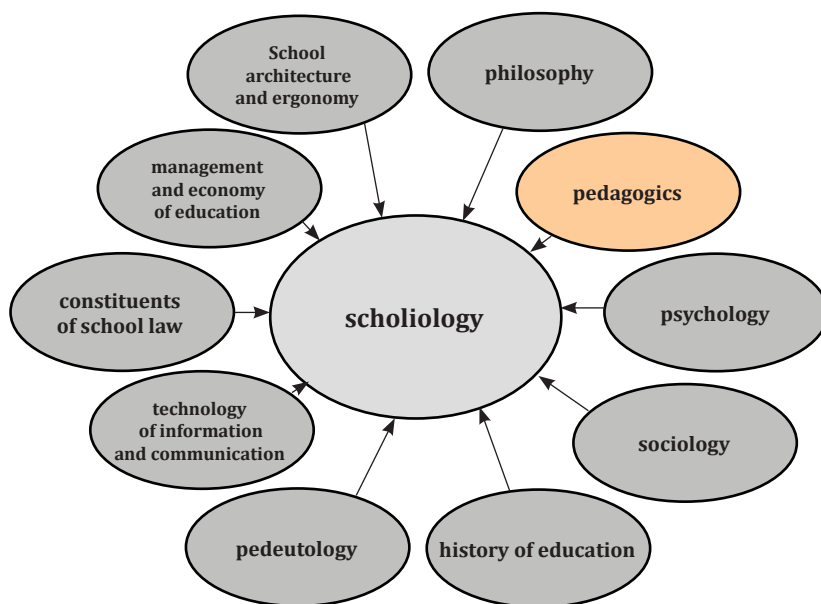
- philosophy, pedagogy, psychology and sociology, and particularly school pedagogy, theory of teaching (didactics), theory of education, developmental and cognitive psychology and sociology of education;
- theory of management and organization, media education, school architecture and other scientific disciplines and subdisciplines presented in figure 3.

In school science – due to its interdisciplinary and systemic character – we are dealing with a different way of searching for relationships and a slightly different role of fields of knowledge in school and education. This allows to shape a new vision of school and creates opportunities of a new perception of present and future functions of school. New spheres and common areas and subjects of study can be noticed. In further perspective this may lead to a new perception of school, raising effectiveness of its work, taking into account the effect resulting from the systemic approach, maybe even a synergistic effect. It is a far reaching goal and probably too ambitious.

On each continent the education system followed its own paths and was shaped under the influence of various philosophical and ideological streams as well as social and economic changes.

²⁰ J. Kuźma, *Nauka o szkole. Studium monograficzne. Zarys koncepcji* [School Science. Monographic Study. Concept Outline], Of. Wyd. Impuls, Kraków, ed. I – 2005; ed. II i III – 2008; ed. IV – 2011.

Fig. 3. Different fields of sciences in relation to scholiology



However, it is possible to identify many universal paradigms of school development, as an institution fulfilling similar or the same functions and tasks which may constitute the starting point for the creation of new theory of school.²¹

School comprises of great capital of human knowledge and experience which cannot be wasted. Scholiology can and should multiply this capital within all possible spheres of activity. In my opinion creation of a new vision of modern school, more student-centred than it was up to now, will be a priority mission of scientists willing to co-create **school science**.

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²¹ J. Kuźma, *Nauka o szkole. Teorie i wizje przyszłej szkoły* [School Science. Theories and Visions of Future School], „Roczniki Pedagogiczne”. T.N. KUL, No. 5 (41), Lublin 2013, pp. 74–81.

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THE NET GENERATION – TOWARDS A NEW EDUCATION

Abstract

The contemporary young generation is digital natives, also called generation of the Children of the Net. A characteristics of the notion was introduced, among others, by Marc Prensky and by a Polish journalist, poet and musician – Piotr Czerski, the author of “Children of the Net Manifesto”.

The aim of the article is to show changes, which are evoked among the representatives of the Net Generation in their cognitive field of functioning by new media and technologies.

A contemporary young human is born and grows up in the media world – built by contribution of new technologies and new media – the Internet, a computer, a mobile phone, an ipad, a tablet and others – the list is still open. The impact of television on young generation needs to be considered – it demonstrates a particularly destructive influence upon children and the youths.

An American neurologist Gary Small in his research and the works of Nicholas Carr’s reveal, that a contact with the Internet triggers changes in neuronal brain structure. In consequence it means a different way of thinking, which entails a necessity of a new approach to education and to new functions of a teacher. In the article a new vision of school will be sketched – a school which rationally combines three elements: traditional school, the public sphere and the virtual space. There will also be shown an influence of the new architecture of the brain on a learner functioning in the culture’s sphere. New technologies contributed to an emergence of new educational concepts, and it is connectivism – proposed by George Siemens – that gained the greatest popularity. This concept was built upon two false premises: 1. knowledge can exist in the Internet; 2. creating connections between nodes is a metaphor of learning. The article reveals that both premises are groundless. In the context of an education mission some new threats will be characterized – these of being brought by un-

reflexive and irresponsible use of new Information and Communication Technologies, including the problem of plagiarism, which became a social plague. There will be shown axiological aspects of usage of these tools, too.

Key words: digital natives, new technologies, new media, connectivism, liquid modernity, social media, flipped classroom, knowledge, brain

Introduction

Nowadays, education is a very important factor, which decides upon the level and development of societies. In the conditions of economic crisis in many countries, it is often an underfunded field, because most politicians treat it as a redundant expense, and not as a necessary investment for the future – with the effects being comparatively remote in time.

Presently, we can observe a very worrying phenomenon: an increased level of saturation of education with the tools of new technologies (computers, laptops, mobile phones, smartphones, e-books, the Internet etc.), along with an increased level of submersion of many representatives of the young generation in the digital world – not accompanied by an increase in the quality of education. Thus, it is possible to say, that new technologies appeared to be the tools of unfulfilled hopes. A natural question arises, of how to improve the quality of education.

It seems, that to reach this aim it is crucial – at first – to diagnose rightly the existing situation, which means – to get to know the wide context of social-cultural conditions in which contemporary human lives and functions. Secondly, it seems to be necessary to take into consideration the changes, which are being accomplished in cognitive processes, that are connected with processing of information amongst the young generation. Thirdly, it is important to comprehend, that the way to a better quality of education leads most of all through reaching to resources that are allocated in the human – in the aspects of motivation, awareness of the aim and of the sense of someone's existence. However, it is not the issue of constant trials of finding the solutions in the field of new technologies. It is worth returning to the – slightly forgotten, yet significant – holistic concept of the human. This concept calls for a harmonious development of three spheres of our life – physical, intellectual and spiritual.

Providing human existence with the right balance between technology and culture should be of great significance, too. We often experience a very negative phenomenon of technopolisation of life,

which was described by Neil Postman – “the surrender of culture to technology”¹, or even to the human brain. Seeking the education panacea in technology, with the simultaneous neglect of the human potential, leads us to the realization of a dangerous vision, which Albert Einstein formed in the sentence: “I fear the day that technology will surpass our human interaction. The world will have a generation of idiots”.

The article is a trial of solutions presenting of the outlined issues and of sketching of desirable directions of the development of school and of the optimisation of a student profile.

1. A short characteristics of the contemporary world – liquid modernity

The contemporary world is the world of constant change, which can be observed in almost all fields. These changes are the most spectacular in the field of technology, especially electronics and development of the Internet. Based upon the idea of connected vessels, these changes are carried also to the field of culture, education, medicine, everyday entertainment and many more. They are also connected with the human behavior and way of thinking. Thus, they change our life in all its aspects.

Worldwide known Polish sociologist Zygmunt Bauman described the contemporary world as liquid modernity. This name is at the same time the shortest, and at the same time accurate characteristics of this world.

One of his latest books – “44 Letters From the Liquid Modern World” – he devoted to a description of the present world, which is characterized by the already mentioned constant changeability, inability to a longer lasting in a condition of preservation of a stable shape, so the title liquid-like state. As the author states, “everything keeps changing – the fashions we follow, the events that intermittently catch our attention (as labile as everything else: today we lose interest in what was attracting for us yesterday, yet we become indifferent tomorrow to what we seem to be excited today), the things we dream of and things we hope and fear. We want to know what is

¹ N. Postman, *Technopol. Triumf techniki nad kulturą*, Warszawskie Wydaw. Literackie Muza, Warszawa 2004.

going on and what is likely to happen, but what we get is an avalanche of information that threatens to overwhelm us [...]”.²

The situation of constant changes is a new and vast challenge for the contemporary education. Firstly, it demands subject matter preparation of students to life in the conditions of changeability and an acceptance of it in their psyche. Secondly, it also implies a necessity of introducing the changes in the scope of didactic methods that are used, especially the switch in accents – from teaching (which is obviously connected with the adaptation to the existing situation) to learning, which in the changeable conditions becomes a necessity and one of the ways of keeping pace with changing reality, constant need of updating someone’s competences. This is one of the conditions of a proper functioning in the present labour market.

2. The generation of the children of the Net

The contemporary young generation is completely different from its counterparts from the past. It is a generation which was brought up in the condition of peace, relative wealth and in the culture of immediacy. Representatives of this generation did not have to struggle for anything or to rebel – they treat the unrestricted access to consumption goods and services as something utterly natural and obvious. The consequence of the easiness of fulfillment of their needs is the lack amongst the youths of the resistance to adversities, fortitude and the sense of responsibility. Relatively high technological competence is accompanied by the lack of social competences development. They have difficulty in empathy, comprehension of emotional states of other people and in conflicts solving.³

Marc Prensky – the American media specialist, computer games designer and an educator – called the young generation “digital natives”, to contrast with the older generation, from the pre-Internet age – “digital immigrants”. This new social stratification is of behavioral character – the criterion of division deals with media behavior and the way of the use of new electronic media. For digital natives, the world of computers, the Internet, computer games, mobile phones and other modern electronic appliances is a natural envi-

² Z. Bauman, *44 listy ze świata płynnej nowoczesności*, Wydaw. Literackie, Kraków 2011, p. 5–7.

³ A. Brzosko, *Pokolenie Y w szkole*, „Oświata Mazowiecka” 2011, No. 04 (09), p. 10.

ronment of functioning, that is why we often call them “born with a mouse in the hand”.

It is tough to characterize the young generation explicitly. It is two natured – by some it is regarded as the most intelligent, by others, as the dullest one in history.⁴ For sure it is appropriate to agree, that it is the generation of the greatest chances – mainly in the scope of easy and fast access to information – these are the chances that the previous generations did not have, as they lived in the conditions of information deficit. The significant issue is, if the generation of the children of the Net is able to and is willing to make use of these chances. The education challenge is the preparation of the generation to a rational and responsible realization of this task.

The generation of digital natives is also called generation C, although the most properly it would be to call them as 7C – originated from words that describe their behavior: **C**onected, **C**ommunicating, **C**ontent-centric, **C**omputerized, **C**elebritized, **C**ommunity-oriented, always **C**licking.⁵ Scientists notice that this generation poorly communicates with the previous generations, loves social media and is interested neither in politics nor religion, this generation does not perceive work as a special value. It is a narcissist generation,⁶ and these tendencies are made stronger by social media, where the users create the so called profiles, which usually put a favourable gloss on them.

Civilisation changes experts agree, that the generation of digital natives differs considerably from their counterparts from the past. E. Bendyk in his work “The Rebellion of the Net”, which in its title refers to the ACTA protest, accurately notices, that “[...] the young, our children live in another anthropological space than most of us – their parents and tutors. Thus, they are naturally close to us and at the same time as alien as the tribes, that live in still undiscovered territories”.⁷

⁴ D. Tapscott, *Cyfrowa dorosłość. Jak pokolenie sieci zmienia nasz świat*, Wydaw. Akademickie i Profesjonalne, Warszawa 2010, p. 217–219.

⁵ R. Friedrich, M. Peterson, A. Koster, *The Rise of Generation C*, <http://www.strategy-business.com/article/11110?pg=all#authors> (access 31.01.2014).

⁶ See W. Łukaszewski, *Epidemia narcyzmu*, „Charaktery” 2013, No. 2; narcissism issue is described in the work J.M. Twenge, W. Keith, *The Narcissism Epidemic: Living in the Age of Entitlement*, Free Press, 2009.

⁷ E. Bendyk, *Bunt sieci*, Polityka Spółdzielnia Pracy, Warszawa 2012, p. 163.

3. The Internet and human brain

The most significant consequence of immersing of the young generation in the media world, and especially in the Internet, is the fact of – as states Gary Small, who is a professor of psychiatry and director of the UCLA Longevity Center at the Semel Institute for Neuroscience & Human Behavior, in his book, which was written together with his wife, Gigi Vorgan, and which was published in November 2008, titled “iBrain: Surviving the Technological Alteration of the Modern Mind” – a persistent contact with the Internet caused changes in the neuronal structure of brains of the notorious Internet users.⁸ These changes amongst young people are negative, they are connected with creation of the so called hypertext brains, which means a change in the way of thinking – from the former linear to multi-leveled. They are not able to evoke a deeper reflection, to draw general conclusions, or to accept a wider point of view⁹. They remember vast amount of information, yet they cannot interpret and make a good use of it – as a result fewer and fewer people are capable of creativity, which is so much valued these days. Among the children of the Net, the brain “disconnects cortex prefrontalis – the part, which is responsible for empathy, altruism and tolerance. In the effect a human becomes indifferent to what is not directly connected with himself or herself”.¹⁰ There appear problems with communicating of someone’s feelings, with understanding somebody else’s view point, as well as with keeping right social relations.

Young people, who are immersed in the Internet world from their childhood, become more and more similar to people, who suffer from autism.

For the first time in human history, there live two generations, which differ one from another according to a neuronal structure of the brain and the way of information processing. There is a tremendous “brain gap” between the generation of digital natives and the generation of digital immigrants.

Results of Gary Small’s research are fully confirmed by an American writer and publicist Nicholas Carr, who works upon the influence

⁸ G. Small, G. Vorgan, *iMózg. Jak przetrwać technologiczną przemianę współczesnej umysłowości*, Wydaw. Vesper, Poznań 2011.

⁹ *Internet zmienia mózg*, <http://www.rynekzdrowia.pl/Po-godzinach/Internet-zmienia-mozg,3319,10.html> (access 31.01.2014).

¹⁰ J. Nikodemka, *Jak nas psuje Facebook*, „Focus” 2011, No. 2/185 (February), p. 34.

of technology on business, society and culture, in his book “The Shallows: What the Internet Is Doing to Our Brains”.¹¹ The main message of this book is the emphasis of the titled intellectual shallows, which are connected with the fact, that the contemporary young users of the Internet, who have an unrestricted access to information, understand and know less and less, their knowledge becomes fragmentary and touches the surface only, it is deprived of brilliance, and of the awareness of a broader context. N. Carr states, that the neuroplastic human brain splendidly adjusts to the reality that surrounds it – new media and new tasks. Representatives of the young generation have a serious problem with focusing on their attention on the traditional, linear books or university lectures. Yet, they easily know how to understand short texts and one-sentence messages.

The latest book that shows negative consequences of the influence of the Internet on the human brain, is the work of a worldwide known German psychiatrist, psychologist and neuro specialist – Manfred Spitzer’s, titled “Digital Dementia”.¹² The author shows the results of his research, that reveal the fact, that an extensive way of using of digital media, and especially of the Internet, leads to lowering of brain efficiency and gives identical symptoms, as those of dementia. It is so, because the human brain “grows with tasks”, whereas digital technologies release the human from intellectual effort. M. Spitzer emphasizes, that digital media make shallow the fact of getting to know, and there is a lack of scientific proof if digital technologies are in favour of the process of learning. He proposes a really controversial thesis, that by means of a computer we learn worse and not better.

4. New media – new ideas for education

New media, strongly noticeable in the contemporary human’s life and in a natural way present also in the field of education, implicate appearance of new usage concepts. Such a concept – proposed by two Canadian scientists, Georg Siemens and Stephen Downes – was called connectivism.¹³

¹¹ N. Carr, *Płytki umysł. Jak Internet wpływa na nasz mózg*, Wydaw. Helion, Gliwice 2013.

¹² M. Spitzer, *Cyfrowa demencja. W jaki sposób pozbawiamy rozumu siebie i swoje dzieci*, Dobra Literatura, Słupsk 2013.

¹³ G. Siemens, *Connectivism: A Learning Theory for the Digital Age*. <http://www.elearnspace.org/Articles/connectivism.htm> (access 31.01.2014).

I intentionally do not use here a name, which the authors use with reference to their proposal – “*a new learning theory for the digital age*” – because this concept, as I will try to demonstrate, has been build upon two false premises: knowledge exists in the Internet, the metaphor of learning is generating of connections between hubs and nods in the Internet, and thus it cannot be regarded as a “learning theory”.

Connectivism – in the name of words “connect to learn” – merely describes one of the usage of the Internet in the process of learning. It pulls down the so far opinion promoting – generally speaking – the views that knowledge resides in the human brain. The main category becomes “know where” – it replaces the previous formulas: “know that”, “know how”, “know why”, which describe both a wider context of information and a necessity of understanding it.

Since the dawn of time, knowledge has been a highly demanded value, especially – which is obvious – in the field of education. It lets the human explain and interpret the surrounding reality and solve significant problems. Psychology describes knowledge as a system of content that is reflected in the human long-term (nonvolatile) memory. Thus, knowledge is an individual interpretation, that has been remembered in the human brain. Such meaning was emphasized among others by one of the greatest authority in the field of changes of civilization, an American economist P.F. Drucker (1909–2005), who stated distinctly, that wisdom and knowledge do not reside in books, computer programs and the Internet. There is only information there. Wisdom and knowledge are always embodied in a person, they are acquired and used by the learner. The negation of the existing and well established views is unjustified.¹⁴ So, there is only information in the Internet – tiny bricks, which in the course of the learner’s own cognitive activity build up the edifice of knowledge in the brain. Yet, it is not in the ability of everybody’s to use rationally and with responsibility the possibilities that information technologies tools offer. And the influence of knowledge on intellectual functioning of the human depends on the rationality of the way of usage of these tools.

The other assumption of connectivism seems to be false, as well. It suggests that the metaphor of learning is generating of connections between hubs and nods – they can be different Internet users

¹⁴ P.F. Drucker: *Spółczeństwo pokapitalistyczne*, Wydaw. Naukowe PWN S.A., Warszawa 1999, p. 171.

or information resources – in the Internet. It silently refers to the former assumption, that situates knowledge outside of the human brain. The process of learning relies on the creation of neuronal network with a higher conduction, which means generating connections between nerve cells with the help of synapses. This mistake – of assuming full analogies between the Internet and the neuronal network – has been pointed out by the already mentioned N. Carr: “connections of the Net are not connection of ours and will never be, regardless of how much time we spend surfing in the Internet, finding new information. [...] Hyperlinks, which connect data online are not similar to synapses in our brain, whatsoever”.¹⁵

Uncritically accepting the connectivist approach, we tend to agree to the migration of knowledge from the human brain to the resources of the Internet. Often, we treat the Net as a substitute, and not as a supplement of our memory. Clive Thompson – a co-worker of a magazine “Wired” – calls the Internet “a tagged on brain”, which “takes up the role, which in the past was played by our memory”.¹⁶ N. Carr notices the danger that exists in such an approach: when we give our memory to a machine, we give to it a very important part of our intellect, or even of our identity.¹⁷

5. To the direction of a new school and a new culture of learning

Internet media, in the function of social media, such as Facebook, Nasza Klasa, Tweeter, Second Life, Wikipedia or You Tube has been named by the continuator of M. McLuhan professor Paul Levinson “new new media”.¹⁸ This kind of media mainly contributed to the creation of a new student, who demands another type of school and who – what is more – forces some changes. J. Kuźma – an expert in school organizations and the author of science about school, scholiology – aptly notices, that “school as a universal social and educational institution will either change rapidly or it will become useless”.¹⁹

¹⁵ N. Carr, *Płytki umysł...*, p. 240.

¹⁶ *Ibid.*, p. 222.

¹⁷ *Ibid.*, p. 240.

¹⁸ P. Levinson, *Nowe, nowe media*, Wydaw. WAM, Kraków 2010.

¹⁹ J. Kuźma, *Ku przyszłej szkole skoncentrowanej na uczniach*, „Edukacja i Dialog” 2013, No. 9/10, p. 74.

The main direction of contemporary education is about a transition of school from an institution, which still is an institution of teaching and is assessed by the effects of teaching, to a school which becomes a place of creating favorable conditions of learning, independent discovery and gain of knowledge. Such a model intends partnering between teachers and students, a significant role of human capital, inspiration and creativity and focus on the preparation of students to learning. It is worth mentioning, that an initiative intending a work out of a framework, which was symbolically called School Promoting Development of Children and was based on similar assumptions, was created in 2004, at the Faculty of Pedagogy of the then Pedagogical Academy in Cracow.²⁰

The priority of education is to help students find and uncover their implicit talents, and is not a fight for an average mark or a place in rankings. A new model of school establishes an opportunity of students decision sharing upon the shape of education, but at the same time it means taking responsibility for their education. Nevertheless, it seems that the contemporary generation of children of the Net is not prepared well enough to take such responsibility – the present system of schooling rather gives up such responsibility and does not work upon shaping it.

It is necessary to remind, that a model of which the aim was to create conditions and not just to teach, was realized by such great scientists as Albert Einstein (1879–1955), or the co-originator of humanistic psychology Carl Ransom Rogers (1902–1987). They characterized briefly their didactic activity and their teachers *credo* by a statement: “I have never taught my students anything. I only created conditions in which they could learn”.²¹ An agreement to such a model of education demands most of all a change in the mentality of teachers.

In school of the Net age, there is a need of a different teacher. Most of authors state that a teacher should be a guide and a partner, who supports students in their development.

This is, in principle, a characteristics of a teacher also from the past – with the reservation that a teacher should be a guide not in

²⁰ J. Kuźma, *Nauka o szkole. Studium monograficzne. Zarys koncepcji*, Oficyna Wydawnicza „Impuls”, Kraków 2011, p. 91.

²¹ J. Morbitzer, *O medialnym uczniu i nowej szkole – refleksje pedagogiczne*, [in:] *Kapitał ludzki w edukacji*. Monografia nr 9 Polskiego Stowarzyszenia Nauczycieli Twórczych, ed. L. Pawelski, Polskie Stowarzyszenie Nauczycieli Twórczych, Szczecinek 2012, p. 82.

the world of technology, but in the education surroundings. The contemporary teacher ceases being “the sage on the stage” and becomes “the guide from the side”.

A certain form of school as an institution, which creates conditions for learning is the conception of the so called flipped classroom. This method – as its name suggests – means a change in the roles in education. It assumes that most of work is done by students themselves outside the classroom, whereas in the classroom the attention is focused on solving the problems, which were the most difficult for them. In this method it is the students who have the main decision voice and the task of teachers is to co-operate with students and to build a contextual support system – constantly improving teaching skills and abilities.²²

Social relation will constitute a very significant pillar of a new school, including partner relations between teachers and students. This kind of relations were described by M. Prensky in the title of his book, as “partnering for real learning”.²³ The nature of new school is a releasing model, a model that prepares students to being explorers capable of asking questions, independent creators of knowledge, who know how to learn. This is a model, which utterly breaks off with the present dominating model (fortunately – not the only one), which is of indoctrinating nature and shapes conformist students, who obediently accept the existing order, do not take up new challenges, lack imagination and who are afraid of taking up responsibility.

This is a significant step towards the latest educational concept, which uses modern tools of information technology in order to provide for the access of information, which at the same time is strongly based on culture, as its name suggests – “a new culture of learning”.

Limited form of the article allows to indicate the most important elements of this conception.

New culture of learning is the education of the 21st century. It introduces a radical change in the interpretation and practical realization of education processes, it is students-centric. It departs from the existing model of education – transmission and test-centric kind of education, which worked properly in the industrial age, when the

²² M. Polak, *Filozofia odwracania klasy*, <http://www.edunews.pl/badania-i-debaty/opinie/1988-filozofia-odwracania-klasy> (access 31.01.2014); see also S. Khan, *Akademia Khana. Szkoła bez granic*. Media Rodzina, Poznań 2013.

²³ M. Prensky, *Teaching Digital Natives: Partnering for Real Learning*, Corwin 2010.

aim of education was a preparation of people to routine jobs, which most often were unchanged during life.

However, in the conditions which feature liquid modernity and a constant change, what really counts is not what we know, but rather how we go forward in the digital world and what we are able to do with information, that we find. In the thought of this new concept, students are not conformist “reproducers” of the knowledge which they get, but they undergo a change towards independent explorers and experimenters.

New culture of learning assumes – most of all – a maximum possible activity of learners. That is why “learning” and not “teaching” – which has been reduced to a necessary minimum. Secondly, learning is a style of life, an inner imperative arising from passions, cognitive interests of learners. Thus, it gives a new sense to the process of development of learning – it gives the responsibility for the process also to the learner. From this perspective a new culture of learning is close to logodidactics, which was built under the influence of logotherapy, according to an Austrian psychiatrist, psychotherapist and a psychologist Victor Frankl. Logodidactics is an author’s concept of a psychologist Iwona Majewska-Opiełka. It supports individual development of a person, it has been designed for people who find *logos* – a sense of life and activity, for those who feel the necessity of a rise, an intellectual development and co-operation with others.²⁴

New culture of learning can be treated as the broadest and a positive education context and at the same time especially significant component of education environments – created with learners and teachers contributing to such environments by means of an adequate content and infrastructure.

It is necessary to emphasize, that presently the paths of education quality improvement cannot be searched in a constant saturation with the tools of new technologies – the greatest reserves are in humans, in their motivation, in the process of shaping of responsibility and in finding passion, which is the driving force behind all activities.

The subject of a new culture of learning has partially been introduced in a book, which is not so much familiar to the Polish reader, titled „A New Culture of Learning: Cultivating the Imagination for a World of Constant Change”,²⁵ and it is presently being developed by

²⁴ See I. Majewska-Opiełka, *Logodydaktyka*, Gdańskie Wydawnictwo Psychologiczne, Gdańsk 2013.

²⁵ D. Thomas, J.S. Brown, *A New Culture of Learning: Cultivating the Imagination for a World of Constant Change*, Lexington 2011.

the author of the article, with a co-operation of a Ph.D. student Rafał Głębocki.²⁶

Conclusion

In the debate upon the shape and the model of the future education, the decision voice still belongs to the representatives of the elder generation, who often do not understand changes and the media world of digital natives. Can a school, which has been designed by the elder generation be good enough regarding needs, expectations and dreams, and most of all changeable intellectual possibilities of the young generation?

As a conclusion, it is also worth quoting a very apt reflection of a Canadian Internet expert, Don Tapscott: “many students would do better at school, if the education system changed in a way that takes into consideration of how the young generation learns and gets information”.²⁷ A significant and at the same time simple issue arises here: to what degree the generation of teachers and parents should adjust education to needs, abilities and expectations of the young generation, and to what degree it is worth convincing the young generation to old patterns and values. For sure, however, it is a real need to take into consideration in educational practice the latest achievements of neurodidactics,²⁸ cognitive sciences²⁹ and other sciences, which let us become more aware of how human brain works – for the sake of optimisation of modern education in the 21st century.

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²⁶ Zob. J. Morbitzer, *Nowa kultura uczenia się – ku lepszemu edukacji w cyfrowym świecie*, [in:] *Edukacja Jutra*, Oficyna Wydawnicza Humanitas, Sosnowiec 2014 [in print].

²⁷ D. Tapscott, *Cyfrowa dorosłość...*, p. 211.

²⁸ M. Żylińska, *Neurodydaktyka. Nauczanie i uczenie się przyjazne mózgowi*, Wydaw. Naukowe Uniwersytetu Mikołaja Kopernika, Toruń 2013.

²⁹ B. Siemieniecki, *Pedagogika kognitywistyczna*, Oficyna Wydaw. Impuls, Kraków 2013.

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GIFT – THE CULTURE OF GIVING – PROFESSIONAL ACTING – EDUCATION

Abstract

The aim of the following paper is to analyse the concepts of the culture of giving as a professional acting and the objective of educational-didactic work.

The particular interest is drawn on three dimensions of the culture of giving: handing the gift, coming as a gift, the provision of assistance. The culture of giving is integrated with professionalism and constitutes its essential element. A person coming as a gift should own lots of characteristics which constitute such culture. In the process of building the culture of giving it is important to set the limits of the gift. The culture of giving can be considered as a component of teacher's activity and as the goal in pedagogical work.

Key words: Gift, the culture of giving, professional activity

Undertaking the analysis of the subject calls for the formulation of two concepts:

- the culture of giving;
- gift as an integral help.

Through the culture of giving, we mean the knowledge, abilities and behaviour in reference to the service to another person, but also the good which it does.

Gift as an integral help is a set of actions and attitudes in favor of a man in need.. This supports his personal development and is based on integration and realizing the values which define human being: dignity, wisdom, freedom, responsibility, love and transcendence.

The essence of those two issues breeds lots of questions, but at the same time tips which constitute the integral aid.

The first area of interest concerns the culture of giving. Theoretical basis here represents the altruism and related questions of altruistic personality, but also the culture of pedagogue's professional actions.

The second area of the discussed issues has its position in anthropology, Christian personalism, personalistic pedagogy, theories of integral development and education.

In the following material the author presents the selected aspects of the culture of giving as a professional activity and the aim of educational-didactic work.

As it has been already pointed above, it is the altruism which constitutes the theoretical basis of the culture of giving.

Altruism is situated in pro-social activities which bring the welfare to others. Altruism focuses its direct aim towards the welfare of others, the behaviours, which aim at concern for others, the readiness to sacrifice the personal interests, common good, pro-social behaviours which are actively incorporated in helping others. Another characteristic feature is also empathy. Helping behaviour is the aim itself.

J. Śliwak on the basis of psychologists' analysis of definition describing altruism indicates the conditions of altruistic behaviour, which are as follows:

- voluntary taking action;
- benefiting others;
- lack of awards expectation;
- treating it as an aim itself.¹

The same author defines the altruistic behaviour in the following way: „altruistic behaviour is a conscious and voluntary action for the benefit of other people. Such activity brings also benefits to others and the person who acts does not expect any extrinsic rewards in return, since the helping action is of a value in itself.”²

The essence of altruism is shown in different theoretical approaches: behavioral, psychoanalytic, socio-biological, and humanistic.

Particular interest in terms of education deserves the humanistic psychology perspective. As Śliwak rightly observes „in the concept of humanistic psychology a man <himself> is capable of pro-social activity. The representatives spelling of this trend are convinced that the willingness to altruistic behaviour develops, at least for most people, in a natural way.”³

¹ *Ibid.*, p. 14.

² *Ibid.*, p. 15.

³ *Ibid.*, p. 25.

Important conditions of altruism are:

- „– the authenticity, which means demonstrating feelings and attitudes openly;
- unconditional acceptance-accepting a man not only when he or she acts in an appropriate way but also when he or she does something contrary;
- empathy – the ability to put yourself in someone else's "shoes".⁴

There can be distinguished: endocentric and egzocentric mechanisms of altruistic behaviours' regulation. According to J. Śliwak „in the structure <me> there are functioning norms which encourage the altruistic actions. Accomplishing those norms the subject aims at increasing self-acceptance.”⁵

Among the egzocentric mechanisms of altruistic behaviours regulation there can be distinguished:

- emotional mechanisms (empathy, emotional arousal);
- cognitive mechanisms (noticing the specifics of the situation, positive response, the concept of a just world).⁶

The research literature indicates the set of altruist's characteristics, which are as follows:

- lower need for social approval;
- high position of social responsibility standards;
- great confidence in others;
- high interest in social values;
- placed on a high position in hierarchy-help and equality;
- no tendency to manipulate others;
- high level of moral development;
- clear life goals and aspirations;
- the feeling of being in control in life;
- religiosity-kindness, sensibility, trust, openness, good contact with people, pro-social attitude;
- internal sense of control location;
- a moderate level of self-acceptance;
- no excessive focus on oneself;
- low level of anxiety;
- experiencing oneself as a person similar to the surrounding.⁷

⁴ *Ibid.*

⁵ *Ibid.*, p. 52.

⁶ *Ibid.*, p. 52–55.

⁷ *Ibid.*, p. 64–76.

The culture of giving refers to:

- the culture of passing the gift to other man. In the culture of giving there is assigned a gift, understood as „something which is donated on some special occasion or with a special intention, usually it is something of a great material or emotional value.” Such gift has, therefore, two forms: tangible and immaterial.⁸
- the culture to coming to another man as a gift of person. Intangible form of gift „lives” in a person. That can be described as a gift of person expressed through the gestures, behaviours, and attitudes;
- the culture of providing the assistance to another man. In the culture of giving there is also assigned a gift as „particular ability, innate capacity, talent”. The culture of giving comes down to this great endowment of the other person in a way which does not hurts dignity, but rather wakes the internal powers, which enable the internal integration, liberation to self-organisation, self-determination, the need to ‘wandering upward’, toward higher qualities.

Those three categories combines „the common denominator”, namely the meeting of two people and establishing interpersonal relations. This implies certain obligations. First of all, the personal approach to other human being – a person. This means adopting it as a value itself, which entails the respect for dignity, freedom; taking responsibility for it and for ourselves; looking at the other man with love and faith in his or her ability of transcendence.⁹ It is necessary to realize that on the level of the culture of giving there meet two people. That means there meet two dwelling in them: dignity, wisdom, freedom, responsibility, love, and transcendence. Thus, it commits to sensitivity, respect, gentleness, desire for goodness. It also involves the basic understanding of other man and taking into account his or her different way of thinking, reacting, or acting.¹⁰

The culture of giving, so the culture of service, must be integrated with professionalism, as and poses the attribute of professionalism. As emphasized by M. Granosik, the activity upon which is built

⁸ A. Sikorska-Michalak, O. Wojniłko (eds.), *Słownik współczesnego języka polskiego*, Vol. 1, Warszawa 1988, p. 155.

⁹ See M. Śniadkowski, *Działalność animacyjna młodzieży z Ruchu Światło-Życie w środowisku szkolnym*, Lublin 2008, p. 121–124.

¹⁰ See A. Łuczyński, *Spółeczne uwarunkowania rozwoju religijnego współczesnej młodzieży*, [in:] J. Bagrowicz, J. Horowski (eds.), *Edukacyjny potencjał religii*, Toruń 2012, p. 226–229.

the culture of giving, is understood as an attribute of action, which is characterized by: – undertaking the activity in a sustainable and harmonic way – the rational elements and the conviction of possessing one's own knowledge, balance the affective and intuitive components.¹¹

According to M. Ganosik the professional activity – “is an action directed towards including and balancing the imaginary (and desired) with real; what has been already made with what is still in the process of creation; what is asymmetric with the symmetrical, monolithic with what is unity in diversity (...) The most important is to balance the three elements of each single act: emotional, imaginative (rational) and operational (proceeding)”.¹²

The same author, in a more operational way, defines the professional operation as a „form of activity, which in a conscious way in action, especially in decision making, would utilize its knowledge about the individual and environment, and the relations between them. It is being done in a balanced and harmonic way, which considers emotional sensitivity. An important attribute of professional acting (...) is also preparing to express one's own point of view, description and evaluation of events, situations, design, etc. the elements of process in a structured way and, using the scientific language, appropriate for the adopted theoretical orientation”.¹³

The culture of giving is an important element of professionalism. Here appears the question: whether the professional action is given a priori?

According to M. Granosik „there is not so much talking about professional acting, in advance, but about the process of becoming the person acting professionally”.¹⁴ The author emphasizes that „in the process the particular place is given to shaping a person and education, also while facing the practice and experiencing oneself in the role of acting entity, which as a result, can make the undertaken by the subject activity to take the professional dimension.”¹⁵ The process of professional acting is created by the personal development of a person (teacher), research, acting and improvement.

¹¹ See M. Granosik, *Kultura profesjonalnego działania pedagoga społecznego*, [in:] E. Marynowicz-Hetka (ed.), *Pedagogika społeczna*, Vol. 1, Warszawa 2007, s. 473–489.

¹² *Ibid.*, p. 482.

¹³ *Ibid.*, p. 483.

¹⁴ *Ibid.*, p. 474.

¹⁵ *Ibid.*

Research, performance, improvement – are the elements which constitute the action research. In that way, it can be specified that the process of professional activities is shaped by personal development of the entity acting and action research for people who need help, with them and through them.

The acting entity – the person who is in relation with life environment, who possesses the ability of social reality analysis, who wants to undertake the service to another man, should have lots of characteristics which constitute the culture of giving – those should include: understanding of sense and importance of a gift, perseverance, courage, interpersonal skills, commitment to the realization of spiritual values and the ability to take from them the strength to one's own actions, the art of controlling impulses, the resistance to anxiety and stress, clarity, consciousness, clarity in speech and writing, perceptiveness, divisibility of attention, memory, spatial imagination, research attitude, involvement to self-education. The important skills include the multidimensional approach, which combines different attitudes and positions as well as the ability to create unity in variety.¹⁶

In the preparation of young people to serve the other people, to perform acts of gift for others, facilitating pupils with the activity framework is really important, such favourable factors that the gift dedicated to the person in need will „bear fruit” inside him and in the other man, and as a result the good connecting those two entities. These key factors are:

- commitment, indicated by values which are visible in act;
- imagination of the aim of action, the direction of changes' modification in which the entity is engaged;
- finalizing ideas-images of what the acting entity considers as desirable for him, his activities and his environment;

In finalizing ideas there are included the „values” which motivate to action and make sense to the action.

The interpretation of the above triad determines the evaluation of the action by acting entity. As E. Marynowicz-Hetka points out „only compatibility (consistency) between those three elements, joined by the act of action, can allow the entity to assess the operation as successful”.¹⁷

¹⁶ H. Radlińska, *Przygotowanie do zawodowej pracy społecznej i badań społecznych*, [in:] J. Lepalczyk (ed.), *Źródła do pedagogiki opiekuńczej*, Warszawa 1988.

¹⁷ E. Marynowicz-Hetka (ed.), *Pedagogika społeczna*, Vol. 1, Warszawa 2007, p. 242.

The culture of giving involves the limits of gift: in a single act, as well as in a process of coming to other person as a gift and with a gift. There are many factors which constitute the limits of the gift, which are namely the limits in the scope and quality of the process of bestowing. There can be distinguished two categories of limits:

- subjective,
- objective, formal and legal.

The limits are subjective for both: the recipient as well as the person who brings the gift.

The boundaries on the recipient's side are:

- taking the passive role, which is expressed by silence, „hiding”, wearing mask;
- resistance or lack of agreement to receive gift;
- low level of self-knowledge;
- low ability to use one's own language;
- asymmetric relationship between the one who comes as a gift and the recipient;
- wrong (blind) sense of one's own dignity.

On the side of a person coming as a gift there may appear the following barriers :

- sloping relations with the bestowed person;
- different kinds of pre-understanding;
- lack of holistic view on bestowed person;
- treating subjectively the bestowed person;
- acting accordingly to clichéd schemata;
- belief in the necessity of a gift without finding this necessity inside oneself.¹⁸

To sum up, in the culture of giving there must be „inscribed” the professional action. Taking into consideration the above context, it gains a significant meaning to possess the competences :

- allowing to find the answer to the question about the substance of a gift, its essence, sense and meaning, and involved processes ;
- the ability to clarify the context of the gift, the analysis of the conditions of its modifications, the analysis of predispositions, factors which have the influence on the course of events and optimization of the way of coming as a gift;
- the competence of recognising the value, assessing the importance of the gift and the situation according to the axiological criterion;

¹⁸ Por. A. Walczak, *Dylematy w tworzeniu ram działania: granice pomocy i ich ustanawianie*, [in:] E. Marynowicz-Hetka (ed.), *Pedagogika społeczna...*, pp. 259–263.

- operational competences which allow to answer the questions about the way of coming as a gift, which actions to take, which methods to use, which agents use to achieve the aim of the gift.
- the competence which allow for the analysis and assessment of relations and mechanisms, which take place between the giver and receiver, as well as the assessment of gift's implications and effects.¹⁹

The culture of giving should be the goal of educational-didactic work. It can be considered, from the part of a teacher, as a significant element of his or her pedagogical activities, but it is also important to make it an aim in educational-didactic work.²⁰ This is the task which is substantial because of the two reasons. Firstly, the phenomenon of growing among young people (and adults too) the indifference to a person who needs help, is threatened, or excluded, but also increasing self-centredness, selfishness. In fact, many people today promote superficial and selfish lifestyle attributing the rightness only of one's own judgements, not caring at the same time about others and not taking into account their needs and expectations, which inclines them toward cognitive and moral relativism.²¹

The second reason is the development of different forms of voluntary service and involvement of bigger and bigger group of young people. The point is to equip those people with specific knowledge, skills, closely interwoven attitudes, which constitute the culture of giving, in a way which makes them treat this gift as a value itself.

In that way, arises the task of building educational-didactic programme which develops on young people the culture of giving. An important question is: how should the different structural elements of the programme look like-its objectives, issues, the procedures for achieving the goals. Below there is presented the outline of the above described triad which is included in prepared by me programme „Towards the culture of giving”.²²

Considering the educational-didactic goals in the category of achievements their range shall be presented as follows:

¹⁹ Por. E. Marynowicz-Hetka (ed.), *Pedagogika społeczna...*, pp. 483–484.

²⁰ See M. Śniadkowski, *Animacja kulturalna ogniwem kreowania tożsamości szkoły*, [in:] K. Chałas, B. Komorowska (eds.), *Kreowanie tożsamości szkoły*, Vol. 2, Lublin 2009, pp. 339–345.

²¹ Zob. A. Łuczyński, *Przestrzeń społeczna współczesnych młodych*, [in:] K. Stępień, B. Kiereś (eds.), *Nauczyciel wobec problemów globalnego nastolatka*, Lublin 2012, pp. 56–57.

²² See K. Chałas, *W stronę kultury dawania. Program wychowania dla klas gimnazjalnych z obudową metodyczną*, Kielce 2001, pp. 13–39.

- Student should represent the attitudes and behaviours which prove:
 - committed and selfless service to those in need, understanding that service to others is the source and the factor for social development, the path which leads to the highest values;
 - reflective valuation of the degree of subjective conditions of service to other person;
 - self-development;
 - responsibility for performing the undertaken tasks ;
 - personal aspects of serving others.
- Demonstrate the abilities which allow to:
 - make contact with people in need;
 - estimate the subjective conditions of a gift;
 - plan and realize the assistance activities;
 - animate the environment to social activities;
- Demonstrate the knowledge of:
 - the meaning of concepts: ability, interests, values, life style, altruism. Christian love, morality, moral attitude, life orientation, creative lifestyle, 'me' real, 'me' perfect;
 - the characteristics of more important styles of life;
 - the meaning of the subjective conditions of service to another person;
 - multidimensional aspects of serving the others;
 - sources and factors of serving others;
 - rules and ways of serving others;
 - rules of organising the relief actions;

The structure of the issues was grouped in four thematic blocks, which include leading and detailed issues, which can be presented as follows:

I. Who am I?

- My system of values;
- My talents, interests, skills;
- Moral attitudes;
- Aims and life plans;
- Orientation „to have” and orientation „to be”;
- Creative lifestyle;
- The world of my actions, life's passions;
- Who am I and who is another man-searching of the ultimate answer.²³

²³ See M. Śniadkowski, *W trosce o człowieka. Wychowanie do życia w rodzinie*, Kielce 2000.

II. Personal excellence as a gift's condition

- Who am I, and who I would like to be?;
- Short-term and long-term goals-can I achieve them?
- Self-development as a task;
- Realizing values as a basis for personal excellence work;
- The programme for self-improvement work:
 - creative;
 - optimizing;
 - minimizing;
 - corrective.
- The results of self-development work and their self-assessment.

III. The subject and the content of my gift

- Service to others as the outlook on life;
- Motivations of the service to others;
- Energy sources of giving;
- The content of a gift;
- The subject of a gift.

IV. The gift of oneself

- The culture of giving;
- Forms of giving help;
- Building the action programmes for the matters and other people;
- The actions in favour of people in need and their limits;
- Animation of social environment to serve others.

The basic methods and form of pedagogical work to programme realization should include: discussion, metaplan-graphic discussion, brainstorm, work with book, exercises, educational games, drama, stimulation, pro-social activities, animation tasks, a method of projects. As a basic educational strategy should be also considered the strategy of testimony.

A very important issue of teacher's work is to realize that in the culture of giving there „fit” the requirements towards helping person *in concreto*. A. Walczak ranks there:

- “treating ourselves and a person to whom the assistance is addressed, as the partners capable to talk to each other and hearing each other(...);
- acknowledge that both the helper and the recipient of help are able to communicate to each other specified messages. Each of them has something to „say” (...);
- recognising the importance of adjourn one's own judgement, especially when it is followed by the conviction that it is the only right one. That includes also the moment of humility and respect

toward another man. Such situation not only allows for the mentioned adjourn, but sometimes even to retreat our position and accept the position of our partner (...);

- recognising the validity of the dialectic character of the meeting, which takes place between the helper and the receiver of the help and consists of the constant abrasion or rather the confrontations which are one-sided: on the one hand it is the intention, or some kind of vision, e.g. of giving aid and its expected effects, and on the other hand the real intention of help which emerges in a consequence, and which can be considered as work (...).
- recognition of the basic facts which stems from the „historicity” (or temporality) of meeting, which can be articulated as follows: the sense of the idea of aid, no matter whether at the time of its commencement it is ready or not, it collides with the sense of shaping the help as some kind of creation and with the sense of how such support is shaped in a specific reality – at the level of aid as a value itself (...).

These two senses are supposed to correct one another reciprocally while giving aid, in order to optimally embody the value of help”.²⁴

Education through the committed action becomes a key methodical issue.

In the face of indifference and cruelty globalization arise questions like:

1. Is contemporary youth focused on the needs of other person both in immediate surrounding as well as in the country and the world?
2. Are young people ready to come as a gift to other man?
3. Do they care for and protect what God created for us all?
4. Do they have a brotherly responsibility?
5. Does their responsibility consider the welfare of other person?
6. What is their attitude toward the globalization of indifference and cruelty in the world?

Regardless of the content of response the following tasks will still be up-to-date:

- sensitizing youth to needs of other person in the immediate and wider-national and worldwide – surrounding;
- teaching concern for other people and everything what was created by God for everybody;
- shaping the attitude of responsibility, in the centre of which, there is welfare of other man;

²⁴ A. Walczak, *Dylematy w tworzeniu ram działania...*, pp. 263–264.

- shaping the attitude of disapproval of indifference and cruelty globalization in the world.

Facing global indifference towards the acts of cruelty we witness, arises the need to shape the culture of giving. In that way, necessary becomes also:

- shaping in young people the orientation in the world of people's poverty and misery;
- shaping the sensitive conscience;
- developing a sense of the idea of common good;
- developing the ability to share possessions.

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THE ORGANIZATION OF GIFTED CHILDREN'S EDUCATION IN COMPREHENSIVE SCHOOLS

Abstract

The author of the article considers one of the most important for gifted education problem – the creation of educational programs, which would be able to develop completely the abilities of gifted students. The researcher brings to the discussion three options for the organization of gifted students' education: separated (special schools), jointly-separated (classes with different types of education) and mixed (education in the same class with their peers).

Besides, the author of the article reveals three basic approaches to education: acceleration, enrichment, evaluation and changing educational objectives.

The article stresses the importance of properly selected methods and forms of education for educational process, which aimed at the system acquisition of knowledge, scientific information and combination of this knowledge in theory and practice.

Getting an effective result in education depends on subjective (high level of intelligence, special abilities, desire to acquire knowledge) and objective (material situation of the family, appropriate organization of school classes) factors.

Key words: gifted pupil, abilities, curriculum, educational strategies, individualization

Each country takes care of increasing the intellectual and creative potential of the nation, and, thus, creates necessary conditions for full development and realization of the mental potential of its citizens, and has hundreds of such programs.

Widespread usage of individualized and differentiated training of students according to their abilities and interests is an important task for modern Ukrainian school. European education includes systems of training that best meet the needs of different population groups, and their socio-cultural foundations define their specificity.

The formation of science-based programs for gifted children, which provide the creative development, is impossible without including general psychological preconditions of the creative development of a personality, and disregarding the specific needs and capabilities of gifted children. If a teacher can help each gifted person to put a task corresponding to his/her interests, learning techniques, research skills in order to solve such problems, the goal of education will be reached.

Properly drawn up training programs have an important role in education. The program for gifted students is a scientifically proven strategy of providing additional educational services of the mentioned categories of students and the calculated deliberate tactics of achieving outcomes (academic, educational or of developmental nature).

One or another program for gifted students is a clearly defined goal to work with such students, recommended organizational forms of its implementation and training methods, the list of effective means of the teacher's impact on students, valid and reliable methods of their psycho-diagnostics, the forms of control of intermediate and final results, phased planning of realizations of marked activities, requirements for teachers. Practice shows that the effectiveness of the program for gifted students' realization depends on how it was thoroughly elaborated and properly prepared.

A. Dorovsky identifies the following aims of programs for gifted children:

- educational programs should include the degree and the measure of self-opening of gifted students. The degrees of success and achievements of each student change in definite intervals. Self-opening should include mental, emotional and social development and take into account individual differences of children;
- an important goal is to meet the needs for new information. Gifted children should be well-informed because they differ by their independence in search for knowledge, creative activity and the thirst for everything new;
- another goals of the program is the communicative adaptation. Gifted children are oversaturated by verbal symbols, concepts,

projects, generalizations, hypotheses, have an ability for manipulating with them. A school has to nurture verbal interaction. Students should improve their communication skills, expressing their ideas in different forms, one of which is writing of creative works, debates, discussions, etc.;

- an important goal is to help gifted students with self-expression. The issue concerns primarily their creative focus, not the disclosure of theoretical points, but the expression of feelings, emotions, attitudes that is achieved by their participation in various artistic activities (clubs, ensembles).¹

Thus, the programs for gifted children should:

- provide an opportunity for advanced study of topics chosen by students;
- ensure the independence in learning, the learning that is guided by the child;
- develop methods and research skills;
- develop creative, critical and abstract-logical thinking;
- stimulate and encourage the nomination of new ideas that break the usual stereotypes and universally accepted views;
- promote self-studying and self-understanding, awareness of the originality of their own abilities and understanding of the individual characteristics of others;
- teach children how to evaluate the results of the work using various criteria, encourage the evaluation of the work themselves.²

So, the educational program for gifted children has to meet their specific needs, abilities, and goals, which are required for teaching this category of students. This determines the list of requirements for building educational programs for gifted children.

There are three options in teaching of gifted students:

1. Separate education – special schools for gifted students;
2. Joint and separate education – the presence of classes with different levels and nature of study in comprehensive schools.
3. Joint („mixed”) education – gifted children study in regular classrooms of comprehensive school together with their peers.

¹ А.И. Доровский, *Сто советов по развитию одаренности детей. Родителям, воспитателям, учителям*, Российское педагогическое агентство, Москва 1997, р. 271.

² Л. Ю.Сошникова, *Индивидуализация и дифференциация учебной деятельности в современной зарубежной педагогической практике*, Ярославский педагогический вестник 2009 (59), No. 2, pp. 78–82.

All three options have both advantages and disadvantages. However, as the Russian researcher A. Savenkov rightly noted: "No matter how many special schools and classes for gifted we create, many of these children study and will study at "common", "normal", "mass" schools. Therefore, according to experts, mixed implementation of differentiated and individualized approaches to gifted children is the most promising and effective."³

There are three basic approaches to solving the problem of education and development of gifted children in modern world practice:

1. The easiest way that does not require additional expenses and effort for the development and implementation of programs is **acceleration**. Students with developed skills and a significant advance of intellectual abilities study according to common programs, but can move at a pace that meets their individual capabilities. Such students often do several academic years in one year and graduate educational establishments earlier than their peers. Acceleration includes only one feature of gifted children – fast intellectual development, and solves one problem: it allows to avoid monotony and lack of interest to knowledge in children. However, this approach does not demand any correction and changes in the educational programs and creates problems with the withdrawal of such students from the environment of their peers and their entry into adulthood, which may be accompanied by stress and depression, etc. Thus, acceleration is not efficient because it does not promote social adaptation of children to society.
2. Another approach involves changes and **enrichment**. This is the way of advanced education in individual subjects and research areas, allowing children with high abilities to advance in learning of a definite range of issues and subjects that interest them. The approach suggests broad, though not fully achieved potential opportunities, and has its drawbacks. The main of them is the focus on the development of intelligence and competence in one or more fields of scientific knowledge. In this case, special attention is not paid to the development a harmonious person in general and the realization of creative abilities. In addition, there is danger of imposing on a child an early specialization and one-sided development in a definite area of activity;

³ А.И Савенков, *Одаренные дети: методики диагностики и стратегии обучения*, Директор школы 1999, No. 5, pp. 55–63.

3. The third way of solving the problem deals with the **review and change of the most educational purposes**, the dominant of which is the development of a creative personality and the way of his/her thinking.

Therefore, the content of education and the range of skills, which are to be taught to children, are rebuilt. This approach rests on J. Gilford's model "The structure of intellect", which is considered to be the most promising in pedagogics and psychology. Such programs allow to consider both social demands of society and the specific needs and abilities of children.⁴

It should be noted that the basis of work with gifted students in Ukrainian schools is laid by the methods and forms of education, aimed at the independent systematic way of obtaining knowledge, scientific information and the combination of theoretical knowledge and practice.

The use of different methods and forms of work with gifted children sets the objectives:

- the acceleration of the development of abilities and talents of students;
- the enrichment of their knowledge, the exchange of information about means of learning and the improvement of teachers' knowledge;
- the cooperation with students' family environment and academic institutions.

Both subjective factors that depend on the students themselves, and objective factors, which are independent of them, evidence about school careers of gifted children.

The subjective factors include: high intelligence, special abilities, hard work, enthusiasm; thirst for knowledge and self-activities, which are manifested in decision-making.

The objective factors are: the work under the guidance of a teacher; family financial status, favorable home atmosphere; friendly relations with children; appropriate organization of lessons at school, the access to various additional sources and many others.

Such very close combination of these factors leads to the harmonious and optimal development of children's abilities.

⁴ *Одаренность и возраст. Развитие творческого потенциала одаренных детей: учеб. пособ., под ред. А.М.Матюшкина, Москва: Изд-во Моск. психолого-социального института; Воронеж: Изд-во НПО "МОДЭК", 2004, pp. 192.*

Among the **means of individualization** of learning activities we can single out the following ones:

- the variability of usage of a flexible curriculum;
- large amount of educational material at choice and including interests, abilities of a student;
- the creation of various educational programs that differ in content and the degree of their mastering and complexity;
- the selection of the individual learning pace and the way of learning the program including the results of educational diagnosis and control;
- the development of different approaches to the diagnosis of individual features and abilities of students
- the detection of the level of educational achievements;
- the support of students in the educational process, including individual consultations; the teacher's plans of individual interaction with students;
- the motivation of his/her educational activities, and forming the student's responsibility for education.

The individual study related with the organization of various forms of support of children in the classroom or school and during extracurricular activities.

The acceleration of the rates of gifted students' learning, which can be achieved through individual educational programs, presuppose the combination of different rates of learning and differentiation of educational content. However, transferring the child to the class, which works under the accelerated program, not only the intellectual level but also his/her social, emotional and physical condition must be taken into account.

The extension of the program and the extracurricular content of the material is the best solution because it allows the student to remain in the regular classroom, that is essential for the social and intellectual development of all students.

The radical method of enrichment of the programs' content is special programs for gifted students. Their implementation is related with the organization of additional classes in school and the participation in university classes. The teachers with rich professional experience work with these students.⁵

Today all schools provide an active search of forms, directions and methods of individual and differentiated approach to learning, that includes:

⁵ *Ibid.*, p. 81.

- the development of different variants of diagnosis of individual student's characteristics;
- the preparation of educational programs with different content of complexity;
- the choice of rate of work;
- the support of students by means of individual consultations;
- the creation of a flexible curriculum with a large volume of educational material that meets the needs of all students.⁶

The most common forms of education of gifted students are: the acceleration; the enrichment; extracurricular activities; the distribution by streams; the creation of special classes and special schools for gifted children; advanced learning of certain subjects; the differentiated homework; the separation of special education for the gifted.

Let us make more ample treatment of two alternative educational strategies: **the acceleration** and **the enrichment**, which lately have become the most common in European countries.

The acceleration is associated with a faster rate of enrichment than it is recorded in the program, which means an advanced and differentiated education compared with the traditional one.⁷

The acceleration is effective in specialized classes, where the specialty of educational programs takes place in accordance with the interests of students, their inclinations to a particular field of knowledge, as well as in private schools where most students with high mental development study. Such strategy best "works" in teaching children with mathematical abilities and inclination to foreign languages. However, the teacher must remember that there are children who "slowly gear, but quickly go", that is learn slowly, but firmly, their knowledge is really functional and efficient. With the proper organization of acceleration of learning, the negative consequences should not appear.

The acceleration has the following forms:

- a) early entrance to school;
- b) "jumping" through the class;
- c) the establishment of schools and classes with acceleration;
- g) the study of one or more subjects of higher educational establishment;
- e) the grouping of students according to the abilities and knowledge.

⁶ *Ibid.*

⁷ J. Piirto, *Talented children and adults: Their development and education*, Upper Saddle River, Prentice-Hall, New York 1999, pp. 64–65.

In educational practice the acceleration that is associated with early entry to primary, secondary and higher educational establishments. It is believed that gifted children who have not reached the school age can start their study at school earlier if their cognitive development meets their school maturity. However, as it has been already proved by educational practice, not all the gifted children may begin school education, since some of them are unable to cope with school amount of work. Children who start school earlier are characterized by the developed abilities and cognitive interest, imagination, exhibit perseverance and enthusiasm to science.⁸ The absence of these features can lead to the fact that children have the results below their capabilities and will lose the interest in learning.

Many researchers point to the negative aspects of the acceleration, notable: bad relationships of gifted students with senior colleagues and deprivation of their childhood. Besides, the acceleration envelops a considerable amount of material that the child has to learn. These overloads can lead to stress and to "early combustion of the child's interests". This term was introduced by professor E. Winner. It applies to children who, in early childhood, were dedicated to improving their knowledge and skills greater part of the day. Later on, some of them were reluctant to study, and in some cases, even decreased their activity that negatively effected their development.⁹

Poor results in science are also related with the child's unpreparedness for school rivalry, which is a typical school phenomenon, and learning in the group of senior students can lead to frustration, as well as inhibition of abilities, particularly of leadership.

However, as practice shows, there are many parents who are determined to send their children to school before they are ready for it. In some cases, such an action is justified, but each child must be regarded individually, and all the prerequisites must be analyzed to ensure that the studies which were started earlier would not negatively affect his/her development. To start schooling earlier, the child must possess: intelligence, which is 130 and above, have good eyesight and hearing, should be able to read and understand a text, and be notable for developed logical thinking.

⁸ J.F. Feldhusen, *Identification of gifted and talented youth*, [in:] *Handbook of special education: Research and practice*, eds. M.C. Wang, M.C. Reynolds, H.J. Walberg, Pergamon Press, New York 1991, pp. 7–12.

⁹ W. Limont, *Uczeń zdolny. Jak go rozpoznać i jak z nim pracować*, Gdańskie Wydawnictwo Psychologiczne, Gdańsk 2005, pp. 129.

The guarantee of success is the appropriate emotional and physical state of a child. When making decisions about early entrance to school, parents should also pay attention to the difference in the rate of maturation of girls and boys because girls mature earlier than boys, better solve problems related to acceleration.

Thus, early entry to school is justified only when the intellectual development of children is much above the average, and the emotional, social and physical condition is adequate to the age characteristics of the child.

Another type of acceleration is an early entry to higher educational establishments. While entering the university the student faces with a faster rate and style of education than in school. In teaching gifted students there is applied the concept of dual programs that combine school education with training in the chosen high school. Similar strategies are applied to teaching gifted students, implementing the program in accordance with an individual plan with elements of acceleration and enrichment.¹⁰

Another type of acceleration in teaching gifted students is **“jumping through the class”**, named by Polish researcher T. Levovysky “double aid”, which is more often used in elementary schools than in secondary ones.¹¹

T. Levovysky writes about the six-month (semester) acceleration, which is to use the free time that remains after the program. The saved time is devoted to the study of program material in the next class.¹²

Thus, the student studies the material of two classes throughout the school year, and the next year he begins studying with the “jumping”-the-program material already learned.

The advantage of such studying is training children to permanent, systematic and intensive work. Acceleration is useful for gifted students who have poor results in science.¹³

Education of students in high school increases their motivation for science and allows them to use all their potential, which will allow to obtain good results in science.

¹⁰ J.S. Renzulli, S.M. Reis., *The Schoolwide Enrichment Model*, [in:] *International Handbook of Giftedness and Talent*, eds. K.A. Heller, F.J. Mónks, R.J. Sternberg, R.F. Subotnik, Elsevier, Oxford–New York, 2000, pp. 367–382.

¹¹ T. Lewowicki, *Kształcenie uczniów zdolnych*, WSiP, Warszawa 1980, pp. 81.

¹² *Ibid.*, p. 85.

¹³ S.B. Rimm, K.J. Lowance, *The use of subject and grade skipping for the prevention and reversal of underachievement*, „Gifted Child Quarterly” 1992, Vol. 36, pp. 100–105.

Thus, “jumping through the class” requires the child’s independence in the study of the next class subjects, so such a form is recommended only to the gifted students, who are noted for good discipline, persistence and thirst for knowledge.

Students with special needs can take advantage of **partial acceleration** associated with the study of one subject. So, for example, from the fourth grade of the elementary school, mathematically gifted student can carry out the program of Maths of the sixth grade, and a high school student can also be directly elected as a university student.

A distinctive feature of partial acceleration is independent mastery of the material during the classes. Partial acceleration usually refers to the study of mathematics and foreign languages. It should be noted that gifted individuals appreciate the opportunity to use acceleration, which allows fast and advanced level of mastering knowledge.

Such a form of acceleration prevents “gaps” in the material, and in addition, students systematically learn all the material, but faster than others. Polish scientist T. Levovytsky points to the possibility of accelerated vocational training, during which the next class program is studied. However, most researchers and practitioners do not agree with this form of work, because it deprives the child of proper rest.

There are many teachers who have negative attitude to the acceleration because they believe it promotes the appearance of “gaps” in the knowledge of students, that in future will complicate the study of a new material. As a result, students’ motivation and interest in learning disappears. There also can occur the student’s enstrangement by senior colleagues.

However, despite the warnings and criticism in the address of acceleration, the results of researches indicate that the acceleration increases the motivation of students to learning, strengthens the faith in themselves and their own abilities.¹⁴

One of the forms of acceleration for gifted students is their **grouping**, which allows to modify and adapt programs to their abilities.¹⁵

Grouping has the following form: **grouping according to the level of abilities** and **according to the type of abilities**.

¹⁴ J. Van Tassel-Baska, *Theory and research on curriculum development for the gifted*, [in:] *International handbook of giftedness and talent*, eds. K.A. Heller, F.J. Mönks, R.J. Stenberg, R.F. Subotnik, ed. 2, Elsevier, Oxford 2000, pp. 179–196.

¹⁵ *Regulamin studiów Uniwersytetu Mikołaja Kopernika w Toruniu*, Toruń 2008, pp. 7–8.

While **grouping** children according to the level of abilities the basis for the creation of a class is a level of intelligence or a level of school achievements. Some teachers consider that this form trains elite and, by this way, discriminates less able pupils.

The second type is grouping children with similar abilities' levels in one class. In this case, the same age students are divided into three groups, and the work with these students is divided into three or more levels, with different degree of complexity.

Another type is grouping "a team of students" who study at a fast pace, with the elements of enriched and advanced education, but without excessive overloading with additional work. These teams bring together a group of seven people who attend additional classes and are given advice by experts. In this kind of grouping the identification of gifted students among peers is important.

Grouping of students by abilities levels is used in teaching primary school children, and grouping by types of abilities – in the high school.¹⁶

Grouping can be used during extracurricular activities, but not just in the classrooms. There is also a partial grouping – when students spend some time in the regular classrooms, and some – in the thematic circles.

Acceleration of gifted and talented students' education is used equally in the middle and in the high school. If during acceleration it comes out that the student cannot cope with educational objectives, it is always possible to move to the regular class.

Many scholars and practitioners consider acceleration the effective form that has many advantages: it is an early entry to school, and "jumping through the class", and early entrance to university, as well as acceleration in the regular classroom through individualized education for some gifted students if there is admiration for the subject and independence in solving tasks. The acceleration is possible due to the attendance of classes in high school, if it is approved by the teachers who want to stimulate students intellectually and creatively. The acceleration is also effective in specialized classes, where the specialization of educational programs is taken place in accordance with the interests of students and their inclinations.¹⁷

¹⁶ *Ibid.*, p. 133.

¹⁷ М. Татаренко, *Закони ойкумени: розвиток творчої особистості молодших школярів шляхом театральної педагогіки*, „Рідна школа” 2000, No. 4, p. 44.

However, acceleration in education is often accompanied by **enrichment**.

The enrichment may concern all the programs or separate parts of its content. Most programs intended for gifted students are in agreement with the classical methods of teaching but with different amount of information that students have to learn.

Thus, the enrichment means adjustment of education to student's intellectual abilities in the result of which the intensity of work increases. The content of the enriched programs includes additional material which was not included in the regular education programs.

Enriched curricula offer students many proposals for modification of the standard curriculum. As it was mentioned above, the enrichment may relate to the whole program or its individual parts, and the implementation of changes or additional elements may relate to the content or teaching methods.¹⁸

There is the **vertical enrichment**, which involves rapid promotion to the higher cognitive levels in the subject of study, and the **horizontal** one, to promote the field of knowledge of the subject.

During the vertical enrichment, the enriched knowledge is advanced, students are offered more complex tasks, i.e. the work proceeds at a higher level of complexity.

During the horizontal learning students' knowledge is expanded by studying additional literature, including new topics.

The ideal modification is the processing of an individual program for gifted students, taking into account the intellectual and individual features of a child. Enriched programs can be divided into two types: those which modify educational processes, the content of the programs and separate parts of the material. The aim of the first type of program is the development of individual cognitive, special and creative abilities, the second one – is deepening and expanding the program's content.

The enriched programs related to mathematics, natural and social sciences. Additional material that is offered to students to study mobilizes them to increase their efforts in achieving this goal.¹⁹ However, as scholars noted the disadvantage of the enriched programs is the lack of association with the school material.

¹⁸ S.W Schiever, C.J. Maker, *New directions in enrichment and acceleration*, [in:] *Handbook of gifted education...*, pp. 163–173.

¹⁹ T. Lewowicki, *Kształcenie uczniów zdolnych*, WSiP, Warszawa 1980, pp. 108.

Thus, the enriched programs are used in the preparation of individual training programs, in which the gifted student's teacher may extend the material for study.²⁰

It should be noted that this type of education can be used at almost all stages of education – from the elementary school, middle and ending with the higher educational institution.

Gifted students who study in the higher educational institutions are also eligible for individual education.²¹ In terms of individual students and in educational programs the scope of knowledge is expanded, as two or more specialties of one or two areas of study are combined, it provides an opportunity to study in two areas at the same time, encourages students to researches conducted together with scientists. Studying by individual program may lead to the accelerated education and early graduation from the higher educational establishment.

However, as practice shows, the organization of education of gifted students provides mainly the preparation of differentiated tasks of different levels for students if they are divided into traditional academic groups. Only in some universities education for gifted students by individual programs and the division of them into groups in terms of special abilities is realized.

Although the enrichment requires no financial cost from schools, instead, it requires from the teacher experience and a lot of time for preparing lessons. A teacher wants to use the enrichment, if he has any opportunity to consult and work with other teachers.

During the enrichment not only goals of the educational programs are under the modernization, but the content of the traditional subjects. When the enriched programs are associated with the main program, they become more efficient, since they relate with the content of education and a range of hobbies, extracurricular classes, individual counseling of a teacher (e.g. in preparation for the Olympiad and competition).

Another form of the support is the consultations of teachers and the faculty of higher educational institutions.²²

²⁰ *Regulamin studiów Uniwersytetu Mikołaja Kopernika...*, pp. 7–8.

²¹ J. Piirto, *Talented children and adults: Their development and education*, Prentice-Hall, Upper Saddle River, NJ 1999, pp. 64–71.

²² W. Limont, *Uczeń zdolny. Jak go rozpoznać i jak z nim pracować*, Gdańskie Wydawnictwo Psychologiczne, Gdańsk 2005, pp. 136.

So we can conclude that the acceleration, grouping, and enrichment are actively used in a typical system of classes.²³ The emphasis is not on promoting students' development, but on the adaption to the pace of science. The authorial programs facilitate the grouping of children. The research results show that due to special authorial programs students have an opportunity to master certain skills earlier than in traditional education.²⁴

Thus, the specific strategies of educational programs can be grouped into two areas: the acceleration and the enrichment. The acceleration (according to other sources, advancing) – is a faster pace of learning the material; the enrichment – is increasing the amount of the educational material.²⁵

The methods of work with gifted students are very specific. The use of many of them allows to implement in practice the principle of individualization. According to the Polish scholar A.L. Bandura, in order to brisk up the activity of the gifted students, multi-level education, active methods, well-thought homework can be applied in groups, it is possible to encourage students to participate in competitions, tournaments, contests.²⁶

Teachers who work with this group of students have to follow the rules in their work:

1. The educational material should consider the possibilities of a student, and the tasks should encourage "the trial of own capacities" and have an optimal level of complexity.
2. The education is concentrated not only on the field in which the student demonstrates particularly high level of skills, but in others as well.
3. It is very difficult to assess the work of the gifted child because it differs significantly from the others, it cannot be compared with those standards which assess regular activities.
4. Gifted students' education is associated with the concentration of efforts on achieving clearly defined goals and requires from them

²³ T. Giza, *Socjopedagogiczne uwarunkowania procesów identyfikowania oraz rozwoju zdolności uczniów w szkole*, Wydaw. Akademii Świętokrzyskiej, Kielce 2006, pp. 90.

²⁴ *Ibid.*, p. 92.

²⁵ Л. Липова, *Специфіка навчання обдарованих дітей*, „Рідна школа” 2003, No. 7, p. 8.

²⁶ T. Giza, *Socjopedagogiczne uwarunkowania procesów identyfikowania oraz rozwoju zdolności uczniów w szkole*, Wydaw. Akademii Świętokrzyskiej, Kielce 2006, p. 90.

certain personality traits: passion, inner discipline and endurance.

5. Gifted children's education should consider the value of talent and the willingness to apply their knowledge and skills for other people.

The process of education requires from the teacher:

1. To use such methods, which stimulate student's thinking, encourage independent work.
2. To state problem questions that contribute to convergent, divergent and evaluating thinking of the students.
3. To use of language exercises that enrich children's vocabulary.
4. To use the elements of algebra and complex mathematical problems that develop cognitive skills and memory in teaching mathematics. Providing independent tasks in the classroom, the encouraging the search of knowledge in different sources are the main principles in the work of teachers.
5. The individualization of the educational process: the separation of children into groups according to the level of abilities of the child.
6. The intensification of thinking of gifted students (the preparation for special challenges that exceed the capabilities of students).
7. The individualization of homework (more complex tasks for gifted children and the use of additional exercises).
8. The encouraging of students to participate in extra-curricular subject groups, which operate on the territory of school, reading technical journals, watching television, listening to the broadcasts that meet the enthusiasm and abilities of students.

The above mentioned issues show that gifted and talented children have specific educational needs of substantial and procedural levels. However, there are no united recommendations for the education of gifted children, because each child is a unique personality with its own advantages and disadvantages. That's why the most important thing is to find the key – an individual approach to each student, particularly gifted student, with marked individuality and independence.

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BULGARIAN SCHOOL SYSTEM – CURRENT PROBLEMS AND TRENDS

Abstract

Problems of reforming school are universal and apply to all countries. Programme and structural changes are particularly important in countries where, at the same time, the social and political transformations occur. It is related to the social function of the school.

In the article the issues of changes, that are happening in the school system in Bulgaria, will be undertaken. Bulgaria has been a member state of the European Union since 2007. At that time a lot of attention was paid to education. The legislative works are aimed at adapting the education system to the needs of a changing society and the requirements of the Bologna process. Reforming is accompanied by financial and political problems. Currently, in the Polish pedagogy, the issues of education in Bulgaria have been taken occasionally.

On the one hand, the current education policy of Bulgaria, is influenced by the directives and the recommendations of the European community, and on the other hand – by the internal problems specific for the poorest EU country. Statistical data on education in Bulgaria show the decrease in public expenditure on education. Number of students, teachers and schools continues to reduce as a consequence of population decline.

The analysis will include qualitative and quantitative data showing the range of the implementation of the educational and social functions by schools. Among the specific issues there are: directions of reforms, educational problems and priorities, education and training of teachers.

Key words: social determinants of educational system, political and educational challenges, educational priorities, effectiveness of the school system, education of teachers

Introduction

Problems of reforming school are universal and apply to all countries. Programme and structural changes are particularly important in countries where, at the same time, the social and political transformations occur. It is related to the social function of the school.

In the article the issues of changes, that are happening in the school system in Bulgaria, will be undertaken. Bulgaria has been a member state of the European Union since 2007. At that time a lot of attention was paid to education. The legislative works are aimed at adapting the education system to the needs of a changing society and the requirements of the Bologna process. Reforming is accompanied by financial and political problems. Currently, in the Polish pedagogy, the issues of education in Bulgaria have been taken occasionally.¹

On the one hand, the current education policy of Bulgaria, is influenced by the directives and the recommendations of the European community, and on the other hand – by the internal problems specific for the poorest EU country. Statistical data on education in Bulgaria show the decrease in public expenditure on education. Number of students, teachers and schools continues to reduce as a consequence of population decline.

The analysis will include qualitative and quantitative data showing the range of the implementation of the educational and social functions by schools. Among the specific issues there are: directions of reforms, educational problems and priorities, education and training of teachers.²

¹ The period of close cooperation between Polish and Bulgarian educators was in the years 80. Nowadays researchers in Bulgaria know little about the Polish pedagogy, because contacts are sporadic. Polish educator Wincenty Okoń is still cited. Bulgarian educators relate to theory and research in the area of English-speaking Western Europe and the United States. Scientific relations with centers in Russia are still important for Bulgarians. The scale of oblivion the Bulgarian pedagogy in Poland is observed not only by the lack of citations, but also by the fact that in the multi-volume *Pedagogical Encyclopedia XXI century*, ed. by Tadeusz Pilch, Bulgarian education did not appear, as well as in the earlier *Pedagogical Encyclopedia*, edited by Wojciech Pomykało. Individual publications (articles of Magdalena Dybaś and Valentina Milenkova) deal with specific problems.

² The article uses data from observations, interviews and contents analysis, collected during the stay at the University of Shumen Episkop Konstantin Preslavski in Bulgaria in May 2013 under the programme Erasmus Teach-

Social determinants of educational system

Bulgaria has 7.35 million inhabitants. Population continues to decrease. The majority are Bulgarians. 16% are persons belonging to national minorities, 9,5% – Turks and 4.5% – Romani people. 83.4% are Orthodox Christians. The percentage of Muslims have been increasing.³

In the recent history of Bulgaria it can be pointed out two facts that significantly have changed the theory and practice of education. Firstly, there were mass demonstrations at the end of 1989, which led to free elections and the fall of communism. Secondly, the accession of Bulgaria to the European Union in 2007. As a consequence of these events, the two leading trends developed consecutively – actions connected with decommunization of education and construction of a new school system, and – efforts to adapt Bulgarian education to the standards of EU countries.

Bulgaria has been a democratic parliamentary republic since 1991. As in other countries of Central and Eastern Europe, until the political transformation, education was under the influence of communist ideology and Soviet pedagogy. Vocationally oriented education predominated. The reform in 1979 introduced a uniform 12-year polytechnical school. The main problems of education, which the new governmental authorities had to deal with in the early 90s, was the problem of depoliticization the teaching programmes, the low qualifications and morale of teachers, the collapse of vocational education and low public expenditure on education. The system has been rebuilt. The inspiration was gained from the short traditions of independent Bulgarian education before World War II and the experience of European countries. In 1998, a new 12-class school system was introduced. Next, the minima curricula were defined and the system of financing education was regulated.

Great social expectations soared with the accession of Bulgaria to the European Union. Positive changes took place in the economic sphere. The problem are, still not completed, decommunisation processes, which have resulted in corruption in three sectors – special services, energy and higher education.

ing Mobility. I would like to thank Associate Professor Penka Kozuharova for helping to query and access to materials.

³ *Country Profile: Bulgaria 2006*, <http://lcweb2.loc.gov/frd/cs/profiles/Bulgaria.pdf> (access 20.07.2013).

The structure, objectives and tasks of education in Bulgaria

The current education law (*Закон за народната просвета*) was adopted in 1991 and since then it has been amended more than 20 times. Existing regulations are inconsistent. Since 2012, there have been discussions on the proposal for the new law on pre-school and school education, as well as the new law on higher education.

Pre-school education is not obligatory. It includes children at the age from 3 to 6 or 7-year-old. Kindergartens are run by the communes. The fees for kindergartens vary and depend on family income.

Compulsory education covers students at the age of 7 to 16-year-old. Parents may decide to start learning by children at the age of 6-year-old. Education in public schools is free. Almost all students (99.58%) attend public schools. In 2011 there were 68 private secondary schools across the country. Five-degree evaluation system is applied, where 6 is the highest mark. Bulgarian teaching programme focuses on eight core subjects: Bulgarian language and literature, foreign languages, mathematics, information technology, social sciences and civics, natural sciences with ecology, music and art, physical education with sports.

Early childhood education covers classes 1–4. Primary education covers classes 5–8. After the graduation from these schools, students continue education in the lower secondary schools – classes 9–12 or in the vocational lower secondary schools – profiled (technique) – classes 9–13. In a classroom there are average 22 students.

After World War II, the system of elite schools has been formed in Bulgaria. These are the language lower secondary schools. The communist authorities recognized the importance of teaching foreign languages in shaping the future state elites. In practice, children of party activists attended these schools. After 1990, high prestige of linguistic schools has remained, and the results of entrance examinations have decided about the admission to school. In Bulgaria, profiled lower secondary schools are now considered elite schools: first of all, the language ones, but also mathematical, artistic, and certain vocational lower secondary schools⁴. It can be assumed that they are schools for students well motivated to learn and having high

⁴ V. Milenkova, *Rola bułgarskich szkół elitarnych w procesie społecznej reprodukcji*, „Kultura i Edukacja” 2008, Vol. 66, No. 2, pp. 104–122.

achievements. In recent years, more and more schools offer an extended option of teaching foreign languages to students. Linguistic education is no longer elite. There is a great diversity of schools due to students' achievements and selections on the threshold of admission to school.

Higher education was reorganized in the mid 90s. An important change was the official introduction of the European Credit Transfer System (ECTS) and the Diploma Supplement – solutions which facilitate mobility and recognition of diplomas and periods of study in Europe. Half of the students are educated in non-public universities. The number of university graduates has increased in Bulgaria, with 33 thousand to 50 thousand since 1995. In the country, 56 universities operate. All students pay semester fees for university in Bulgaria. Within 4–5 years of education at state universities (37 public and 14 private) this is usually the amount of 2200 euro. Although there are more expensive fields of study. The so-called free universities (private universities) require a much higher tuition. Public universities receive budget subsidy; its amount depends on the accreditation, and the number of students and fields of study. A limited number of students, different admission criteria and high cost of education cause corruption mechanisms. One in six Bulgarian high school graduate is trying to study abroad. Besides these factors there are also other reasons. Bulgaria has a very high unemployment rate. Even after graduating from a good field of study and university, it is difficult to find a job. In addition, salaries are low. For example, a beginner doctor receives 300 euros. As a result, many talented young people leave the country, undertaking a study abroad, hoping that after graduation it will be easier for them to remain and get a better job than in the country. Youth migration focuses mainly on the north-western Bulgaria. Above problems are one of the most important causes of political protests of youth which have lasted in Sofia for two years.

Political and educational challenges

Among many problems faced by Bulgarian schools at a different level, there are the consequences of a significant decrease in the percentage of children and young people of school age. In most of the EU countries, population at the age 10–19-year-old in 2005–2010 has been decreasing at a rate of 1.3% per year. The most significant

decline – more than 4% per year – was reported in Bulgaria, Estonia, Latvia and Romania.⁵

Another challenge for educational policy is the short time of schooling. Anticipated age of completing education in Bulgaria is among the lowest in Europe, and is 15.6 years, compared to the average for EU countries – 17.2 (in Poland – 18.1).⁶ In 2009, almost 90% of 17-year-old Europeans was still learning, and indicators concerning participation in education after compulsory period in the last 10 years have increased or remained at the stable level. The indicator of participation in education in one year after the end of compulsory education in Bulgaria, Romania and Malta did not exceed 80%.

The above issue is also related to high rates of school screenings and dropouts, particularly children from minority groups. Each year, 20 thousand of students (approximately 3%) give up school.⁷ The main reasons for abandoning school by students in Bulgaria are as follows:

- The economic situation of the family: it is closely associated with ethnic origin. Poverty is significantly more common in families from minority groups (low income, low standard of living and poor living conditions, unemployment of adults, etc.). Children from such families are often prematurely obliged by parents and the community, in which they live, to pursue employment very early and provide financial support for the family.
- Ethnic origin: it results in respecting for cultural norms, especially if a family lives in a close and unified community. School education is not favoured by social groups in which the value of education is low, premature marriages, family separation due to migration and frequent changes of place of residence by the family.
- Characteristics of the school environment and didactic difficulties (conflicts with teachers and other students, lack of motivation and educational aspirations, dislike to school, lack of help and support in learning from parents).⁸

⁵ *Kluczowe dane o edukacji w Europie 2012*. EACEA, Eurydice, Fundacja Rozwoju Systemu Edukacji, Warszawa 2012, www.eurydice.org.pl/sites/eurydice.org.pl/files/KD_2012_PL.pdf, p. 20 (access 20.07.2013).

⁶ *Ibid.*, p. 27.

⁷ A. Nonchev, *Reasons for Children Dropping Out of School in Bulgaria*, UNICEF, Publishing House “East-West”, Sofia 2007.

⁸ *Ibid.*

Giving up school in lower classes depends mainly on family factors. In upper classes, resignation of further education is the result of coincidence of disadvantages of family environment, financial problems and fixed school negativism. In Bulgaria, the actions are taken in favour of counteracting early school leaving by students. The programmes are financed largely by the EU funds. They have a various range and scope. Their feature is the simultaneous activation of many state institutions, local authorities, non-governmental organizations and support groups, teachers, school administration, parents and students. Most actions were referred to the early years of education. The effects are already significant. Basing on the success of existing programmes, decision-makers intend to extend the scope of activities for the upper classes (students from 11 to 14-year-old). The aim is to reduce the school dropout phenomenon to 11% or below, and better identification the needs of minority groups in order to comprehensive and effective help.

Negative educational phenomena most affect students from minority groups, particularly Romany students. In Bulgaria, nearly one million Romani people live. 80% of them live in conditions of poverty. In comparison with non-Romany peers, schooling indicators of Romany children are very low. Only 47% of Romany children complete primary school, secondary school – 7% (compared with 81% of the population) and even less – higher education. The problem are Romany schools-ghettos, increasing segregation of Romani people. In order to social change, the government programme *Decade of Romanies Inclusion (2005–2015)* has been adopted. Its main task is to reduce ethnic tensions, integration of students from different backgrounds at the school, the creation of integrated classes taught by specially-qualified teachers, anti-discrimination campaign.⁹

Educational priorities

It can be argued that schools in Bulgaria reflect social and economic problems of the country. The main actions are related to the liquidation of civilization backwardness and equalization of educational opportunities. The school education is seen as a chance for social integration, especially for marginalized social groups facing multiple material and cultural barriers.

⁹ H. Kyuchukov, *Dessegregation of Roma schools in Bulgaria*, S.E.G.A. Sofia 2006.

Special attention is directed to the two categories of students: children from risk families and children talented in science, art or sport. It was regulated in *Act on the Protection of Children* (*Закон за закрила на децата*). In this document it was emphasized that the specialist care and pedagogical-psychological support are necessary, especially for students with special educational needs, not achieving the development standards, as well as for students exceeding the standards. Thus, it was indicated the need for training of teachers and other professionals in the care and support the development of students.

Government education policy is aimed at resolving these issues. For this purpose, appropriate educational programmes have been prepared and implemented. The list of such programmes, adopted in 2013 is as follows:

1. National programme *Optimization of schools network*. Due to the geographical conditions of Bulgaria and a significant reduction in the number of school-age population, in some regions there is a need to close schools.
2. National programme for enhancing the qualifications of teachers. The taken actions are associated with reforming the whole system of in-service training and professional development of teachers. It includes free in-service trainings of teachers.
3. National programme for *Information and Communication Technology (ICT) in schools* – it is aimed to continue efforts for universal access to computers and the Internet, especially among young Bulgarians.
4. National programme *School – the territory of students* – it focuses on the development of students' self-governance and the creation of a friendly climate of the school.
5. National programme *Modernization of vocational education* – it relates to adapt vocational education (adjusting profiles of skills) to labour market needs and to help young people with low qualifications.
6. National programme *Concern for each student* – it is connected with satisfying the diverse needs of students from different home environments.
7. National programme *Creating a friendly architecture of environment*. This program is aimed at environmental education.
8. National programme *Native language and culture abroad*. The programme is for children and youth from families who go to work in other EU countries.

9. National programme *School without permission*. Employed Bulgarians have problems with taking extramural studies because their employers often do not agree for their studying. Introduced changes in legal regulations are designed to allow studying and training at different levels without the consent of the employer.
10. Programme *National system of standardized external assessment*. The objective is to introduce a system of uniform tests and external examinations.¹⁰

Irrespective of the above programmes, the Ministry of Education and Science (MON) of Bulgaria has formulated two priorities:

1. Computerization of Bulgarian schools.
2. Improvement of schooling indicators.

In 2005, even before the accession to the EU, the actions to computerization of schools have been taken in Bulgaria. They were linked to the priorities set out in the Lisbon Strategy. Their aim was to improve the quality and effectiveness of the system of education and to ensure universal access to ICTs. Through the large financial expenditures, primary and secondary schools were equipped with computers and as a result the number of students per one computer was reduced. Moreover, the access to the Internet was increased, teachers were trained, specialized software was developed, and educational portals for teachers and students were launched. In secondary schools in Bulgaria, one computer is for 3.4 students, whereas the EU average is 1.4.

The numerical data point out that correlation between the availability to computers and the financial situation of societies disappeared. In Europe, it is now possible to speak about universal access to computers. Practically all young Europeans use computers. In 2009, 86 computers were per 100 families in the EU (with an average gross domestic product GDP 23600), in Poland – 87 (GDP 14300), and in Bulgaria – 64 (GDP 10900). The number of households with the access to the Internet, in which children are brought up, significantly increased in the last decade: Bulgaria – 59, Poland – 75 and average in the EU – 79. In 2007 over 92% students in the fourth and eighth year of schooling, inhabitants of the European Union countries, were using computers at home. Bulgaria (along with Romania and Turkey) stood out from this level for the eighth year of schooling – 73.3%. In Bulgaria, there are no national recommendations on the use of new technologies as tools for shaping the interob-

¹⁰ http://www.minedu.government.bg/left_menu/projects.

jective information and communication skills in primary and general secondary education. These competences are not checked out during exams. The European Commission highlights and recommends the use of computers for the purpose of ensuring of equal opportunities and promoting the equality in education. In most European countries the national recommendations in this area are obligatory. In Bulgaria there are no such recommendations.¹¹

In 2009 almost 90% of 17-year-old Europeans have been still learning. The expected duration of time schooling in Bulgaria is among the lowest in Europe, and it is 15.6 years.¹² As for the second governmental educational priority, the actions are taken to increase the participation rate in the group of students at the age of compulsory education, and to encourage young people to continue their education. It is assumed the improvement of schooling indicators by ensuring all students equal access to education through: providing textbooks and school supplies to students of classes from I to IV in state and municipal schools, the optimization of the school network, providing school breakfast to all students of classes from I to IV, assistance for parents and establishing interinstitutional cooperation. The low schooling indicators in Bulgaria are also affected by the phenomenon of school drop-out by students.

The effectiveness of the school system

According to data published in 2011 by the National Institute of Statistics (NSI),¹³ almost 20% of Bulgarians have completed at least the first cycle of study (bachelor's degree course). The number of students is systematically increasing. The most popular field of study is business and administration. The second cycle of study (masters programme) is more often completed by women than men. 43.4% of the population has completed secondary education. At this level, men slightly dominate. It is noted here, large difference because of the place of residence – almost $\frac{3}{4}$ of the population in cities have a secondary school certificate, compared to 40.3% in rural ar-

¹¹ *Kluczowe dane o kształceniu i innowacjach z zastosowaniem technologii informacyjno-komunikacyjnych w szkołach w Europie*. Published 2011, http://www.eurydice.org.pl/sites/eurydice.org.pl/files/KD_ict_PL.pdf (access 20.07.2013).

¹² *Kluczowe dane o edukacji w Europie 2012...*

¹³ *Peer Review on Early School Leaving – Bulgaria*, February 2013, http://ec.europa.eu/education/school-education/peer_en.htm (access 20.07.2013).

eas. Number of people, with primary education or less, is steadily declining.

Improvement of quantitative indicators of education is not equivalent to increase in the level of education in schools. In international comparative studies, Bulgarian students achieve poor results. Data from international skills studies of 15-year-olds *PISA 2006* show that young people in Bulgaria obtain results definitely below average (500) for subjects tested in three areas: reading comprehension (402; Poland – 508), Mathematics (413, Poland – 495) and reasoning in the natural sciences (434, Poland – 498).¹⁴

The system of the state external examinations was introduced in schools. The matura examination (Държавен Зрелостен Изпит – ДЗИ) includes one compulsory subject: Bulgarian language and literature. Students must also additionally choose the second school subject and they may take the third selected school subject. The third school subject is chosen occasionally, even more rarely its result is satisfactory. Usually students, who are choosing the prestigious fields of study, take the third school subject.

Education of teachers

Teachers in Bulgaria are obliged to complete the first cycle of study (bachelor's degree) for lower classes or the second cycle of study (master's degree). The education of teachers is held at pedagogical colleges, state and private universities. 91.3% of Bulgarian teachers have completed higher education. The teaching profession is dominated by women (84.5%).

In order to counteract the disadvantageous position of Bulgarian teachers (low socioeconomic status, low authority, low vocational motivation), the National Programme for the Development of Education and Preschool Education for years 2006–2015 has been adopted.¹⁵ The programme envisages, among others, the introduction of a new system of professional development, closely linked with earnings of teachers, which aims to create the conditions for positive competition and motivation for engagement in the educational process at school. Five levels of promotion for teachers have been

¹⁴ *PISA International Report 2006*, <http://www.oecd.org/pisa/pisaproducts/pisa2006/42025182.pdf> (access 20.07.2013).

¹⁵ *Eurypedia-Bulgaria*, http://eacea.ec.europa.eu/education/eurydice/eurybase_en.php (access 20.07.2013).

introduced: teacher trainee, teacher, senior teacher, principal teacher, methodologist teacher. The other proposal was the promotion of teachers by taking administrative positions in the public education sector and by job offers for the best teachers in prestigious public schools. Promotion at work has been conditioned by: seniority, level of education, in-service teacher training, evaluation of work results, rewards for significant contribution to the work of the school. Therefore, promotion at work has been associated with gaining experience and broadening the qualifications through participation in various forms of professional training, specializing in country and abroad, undertaking additional tasks and functions in the school, as well as through self-improvement.

With the increase of competences and professional experience, in a natural way teachers' salaries have also been growing. In addition, the Programme introduces a differentiated salary scale of teachers, related to the performance of students. The aim is to improve the quality of education and introduction the dependence of the system of rewards for teachers from their involvement in the work of the school. Teacher's salary is now dependent on the level of a professional career, and achievements in the teaching process, which he or she may be proud of. Until now, the teacher salary in Bulgaria was dependent on the amount of basic salary, the level of education and qualifications, seniority, and relation to the national average wage.

Among the leading issues being undertaken in Bulgarian Pedology, there are problems of professionalization of the teacher profession, vocational development, technology of education, and engagement in the school.

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FROM INDEPENDENT LEARNING TO INFORMATION LITERACY OF STUDENTS – REFLECTION FROM THE PERSPECTIVE OF A STUDENT-CENTRED SCHOOL

Abstract

The article is a theoretical analysis of educational dimensions (spheres) which enable the creation of a student-centred school. The author claims that contemporary school, which is often focused on the teacher and the teaching process, requires a complete transformation of its nature and reflection on its role in today's world. Students live in the reality where new information emerges faster than ever and the education process needs to adjust to the new circumstances and re-define its character. The article describes the most important school processes which re-define the transmissive model of education, whose implementation would lead to the creation of a student-centred school. The essential aim of such a school is the developing the skill of independent learning. According to the text, the process is strongly connected with the students possessing information literacy, which enables them to search for, gather, select, process and use information in the independent process of knowledge creation. **Key words:** student-centred school, information literacy, teaching style, independent knowledge creation

Introduction

Changes in society related with changed social, economic, scientific and technological circumstances at the end of the 20th century have created the need for a young person to have a new set of competences. A significant feature of the contemporary civilization is pro-

duction, gathering and distribution of an enormous amount of information. Rapid and dynamic transformations of today's reality cause the skills to seek, gather, select, process and use information become vital in the autonomous process of knowledge creation. This issue is especially important for students who are about to become adults, involved in the social life. It is one of the most valuable achievements of human civilization, hence the ability to work with information and knowledge, understanding its flow, acquisition, creation or processing is central to all educational aims and objectives. Therefore, a skilled coordination of the process of knowledge acquisition is an important task of today's school, which can become a modern, student-centred school, a place where students learn how to live in the world and society of information. However, this requires effective action and adequate competences of teachers.

The process of school's improvement could be put on the continuum of evolutionary transition from transmissive school towards a school where students seek information autonomously, process it and create knowledge. In other words, by being involved in autonomous learning process they develop their information literacy. Therefore, information literacy is a vital competence the student can gain in a student-centred school. The student who is information literate can: recognize the range of required information, effectively gain required information, critically evaluate the information and its sources (including electronic sources, Internet and others), incorporate information in his or her personal knowledge, effectively use the information to meet a certain objective, understand economic, legal and social responsibility of using information, as well as acquire and use it ethically and legally¹. Information literacy has become a model of general education, it affects future professional and social activity and facilitates interpersonal communication. High level of information literacy stimulates a faster knowledge acquisition, continuous acquisition and development of qualification and competences, both professional and general, vital to living in constantly changing reality². They may influence student's success in the process of handling excess of information, dealing with the fact that they quickly become

¹ Association of College and Research Libraries. *Information Literacy Competency Standards for Higher Education* [on-line] 2000. <http://www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.htm> (retrieved on 5 May 2007).

² B. Kędzierska, *Kompetencje informacyjne w kształceniu ustawicznym*, Warszawa 2007, pp. 148–149.

outdated in the context of complexity of today's world, as well as with human qualifications becoming unfit for the changing reality.

Young people who are information literate can create knowledge autonomously. They know how to learn, how to find information and use it in such a way that others will be able to use it in the future as well. Such students may be called those who learn during their whole lives, always able to find information required to solve the problems they are faced with. Information literacy, being one of the fundamentals to the strategy of autonomous, independent learning, significantly reduces, or even lifts the threat of cultural marginalization and social exclusion. It may therefore be possible to venture a statement that information literacy is a challenge for contemporary education.

Transmissive model of education versus student-centred model of education

Effective development of such an important skill as independent, autonomous learning, based on multi-aspectual process of working with information, requires a modern school model. The two above-mentioned contradictory models of school (transmissive versus student-centred) provoke a discussion on the dominance of one of the models. It definitely may not be claimed that a modern, student-centred school is non-existent in Polish educational system. It should be certainly emphasised that transmissive schools (based on the transmission of ready-made knowledge) and student-centred schools (dialogue based, seeking methods of autonomous knowledge creation) co-exist. Before the latter model of school is characterized, a few words should be said about the nature of transmissive school.

According to Zbigniew Kwieciński, "a school which implements transmissive model of education inevitably creates authoritarianism, fear, symbolic violence, boredom and motivation burn-out, it discourages development, destroys creativity and communication and interpretation skills".³ The role of the teacher in such a model is dominant, he or she often serves as an instructor, while students passively carry out the commands. The teacher is focused on transmitting the content, precise indication of educational objectives, strict

³ Z. Kwieciński, *Tekstualizacja nieobecności. Wprowadzenie*, [in:] *Nieobecne dyskursy*, ed. Z. Kwieciński, Toruń 1991, part 1, p. 7.

organization of students' activities by giving them certain tasks. Collective teaching is dominant, and distance between teacher and student may be observed, which definitely impedes communication.⁴ In the terminology of Basil Bernstein, the above model may be placed in the category of "visible pedagogy". Hierarchy of power dominates knowledge, it is the teacher who is privileged to speak, while the student should merely "collect" information.⁵

Features of transmissive education may be distinguished during an observation of communicative relations in a classroom. Their analysis, according to Paulo Freire, "involves a narrating Subject (the teacher) and patient listening objects (the students). The contents, whether values or empirical dimensions of reality, tend in the process of being narrated to become lifeless and petrified. Education is suffering from narration sickness".⁶ According to the author, education becomes an act of depositing, in which the students are the depositories and the teacher is the depositor. Instead of real communication, the teacher issues messages which students patiently receive⁷. Such a model of education encourages a passive attitude of a student and their simple adaptation to the world.

When reflecting on transmissive education, it is worth mentioning the two contradictory roles of teachers, according to Douglas Barnes – teacher focused on transmission and teacher focused on interpretation. Adopting the first role means that the teacher sees transmitting the knowledge and checking whether students received it as his or her main objective. In the case of the teacher focused on interpretation, the most important aspect is teaching the student to interpret the knowledge autonomously.⁸

Therefore, a transmissive model of education disrupts all the most important dimensions of education: educational practice, knowledge and power.⁹ Surviving in school is often the only aim of a stu-

⁴ J. Bałachowicz, *Style działań edukacyjnych nauczycieli klas początkowych. Między uprzedmiotowieniem a podmiotowością*, Warszawa 2009, p. 150 and further.

⁵ B. Bernstein, *Odtwarzanie kultury*, Warszawa 1990.

⁶ P. Freire, „Bankowa” koncepcja edukacji jako narzędzie opresji, [in:] *Edukacja i wyzwolenie*, ed. K. Blusz, Kraków 2000, p. 67.

⁷ *Ibid.*, p. 67–68.

⁸ D. Barnes, *Nauczyciel i uczniowie. Od porozumiewania się do kształcenia*, Warszawa 1988, pp. 174–178.

⁹ M. Nowak-Dziemianowicz, *Oblicza nauczyciela, oblicza szkoły*, Toruń 2001, p. 156.

dent.¹⁰ A student who participates in disrupted educational practices, when faced with additional unfavourable circumstances, may in the future, at the beginning of his or her adult life, be at risk of becoming socially excluded. This threat results from lack of knowledge, skills, qualifications and competences which he or she was not equipped with at school, and which are vital for a conscious participation in social life.

A transmissive school is contrasted here with student-centred school, which was named a dialogue model of education by Dorota Klus-Stańska.¹¹ When considering its nature, it should be assumed that the ability to gain and process information and arrive at one's own conclusions is a way to success, and student's activity during the lesson should involve communication and analysis of diversified sources of information, paired with independent creation of knowledge. Zbigniew Kwieciński describes such a model in the following way: "(...) [it] creates liberating authority and lays foundation for co-operation in the search of truth and development of important skills, it creates involvement through fascination by other people and discoveries to make, it sets framework for an honest dialogue, where different opinions are allowed and each minority can express their beliefs and doubts without fear".¹²

Irena Dzierzgowska creates an interesting concept of such a school and refers to it as „knowledge-managing school”.¹³ Such a school gives importance to the autonomous knowledge acquisition by a student, instead of knowledge transmission and dominance of teaching. According to I. Dzierzgowska, “a priority in knowledge-managing school is to teach the student how to learn (...), how to manage their own knowledge”. It involves five sets of activities: planning one's learning, acquiring knowledge, creative thinking, presenting knowledge and self-assessment. School's activity is based on the following principles: “all teachers take part in continuous education (including for example controlled self-education), teachers are able to work in a team, broadening their knowledge, all teachers have

¹⁰ K. Borawska-Kalbarczyk, *Zagrożenia podmiotowości ucznia jako rezultat procesu komunikacji językowej w edukacji*, [in:] *Podmiotowość w edukacji ery globalnego społeczeństwa informacyjnego*, eds. K. Pająk, A. Zduniak, Warszawa–Poznań 2004.

¹¹ D. Klus-Stańska, *Konstruowanie wiedzy w szkole*, Olsztyn 2002.

¹² Z. Kwieciński, *op. cit.*, p. 7.

¹³ I. Dzierzgowska, *Rewolucja w edukacji. Przekształcanie szkoły nauczającej w zarządzającą*, „Dyrektor Szkoły” 2003, No. 11.

a basic knowledge of teaching methodology, teachers not only transmit knowledge, but also teach students how to learn, each student learns about the learning process; students learn how to plan their work, they learn about the sources of knowledge and different learning techniques, they find out about creative thinking, they are taught how to present their knowledge, arguments, know the techniques of self-presentation and are encouraged to assess the effects of their own learning process.¹⁴

The most important objective of a school in view of the above assumptions is to depart from transmitting knowledge to effective learning, where each student is responsible for their own, autonomous and independent learning process. It is a school which takes a forward-thinking approach: it teaches how to manage one's own knowledge, how to organize studying time and how to obtain knowledge autonomously.¹⁵

Creating conditions for developing the above-mentioned skills (referred to as information literacy) is a complex issue involving numerous aspects of educational process. Its effective implementation at school requires presence of a teacher with special, well-developed competences. Which aspects of education should be put into practice or modified to enable a discussion on creating conditions for educating information literate students? The article is aimed at presenting some of the most significant areas for improvement.

Educational dimensions of implementing the student-centred model of school

My assumption is that the first of these dimensions is adequate communication model in a classroom, which affects not only students' language ability, but also is an important aspect of a dialogue-based model of education. Effective communication is vital, and does not only depend on language ability but mainly communication skills, understood as knowledge on using the language in a given social context. Communication literacy of teachers is, according to Genowefa

¹⁴ I. Dzierzgowska, *Szkoła zarządzająca wiedzą* – wykład na Konferencji „Akademii Zarządzania” Dyrektora Szkoły „Przyszłość Edukacji” w dniu. 23.05.2005, <http://www.oskko.edu.pl/konferencje/sejm-04-2005/index.htm> (retrieved on 6 September 2006).

¹⁵ J.P. Sawiński, *Filozofia i wartości szkoły zarządzającej wiedzą*, „Nowe w Szkole” 2004, No. 1, www.scholaris.pl, pp. 20–29.

Koć-Seniuch,¹⁶ a set of pedagogical skills based on the knowledge of student, school, methods and ways of influencing students in interpersonal communication and when setting tasks, that is in the aspects of good communication, solving conflicts in student groups, effective co-operation at school and outside school (with parents and local communities), ability to offer help and support student's development. Teacher's communication literacy is defined as "an ability to adopt a dialogue-based attitude",¹⁷ the concept of dialogue being far beyond the ability to have a discussion, but rather interpreted as such an exchange of thoughts with others which enables one to constantly look for the sense of human existence and transmit information. Therefore, dialogue is not perceived solely as a technical skill.¹⁸ An overall objective of teacher's activities should be to teach students to develop their individual style, constituting the deepest level of communication literacy, enabling the students to form opinion on reality and themselves, express satisfaction or disappointment at reception of texts of culture or at everyday encounters with other human beings.¹⁹ As noted by Kazimierz Denek,²⁰ a communication literate teacher has knowledge (on interpersonal communication), skills (e.g. ability to communicate and listen) and is able to think in a dialogue way and develop this skill in students, use various discourse techniques and non-verbal communication, express feelings and teach others to do it, accept different language codes of his or her students in order to use these differences to enhance their development, stimulate awareness of linguistic issues and demonstrate the function of language as a tool for thinking and communication.

Communication with students becomes bi-directional and the teacher may obtain feedback from students.²¹ The teacher is not the

¹⁶ G. Koć-Seniuch, *O edukacji dialogicznej nauczyciel*, [in:] *Myśl pedagogiczna i działanie nauczyciela*, eds. A.A. Kotusiewicz, G. Koć-Seniuch, J. Niemiec, Warszawa-Białystok 1997.

¹⁷ R. Kwaśnica, *Wprowadzenie do myślenia o nauczycielu*, [in:] *Pedagogika*, Vol. 2, eds. Z. Kwieciński, B. Śliwerski, Warszawa 2011, p. 300.

¹⁸ R. Kwaśnica, *O pomaganiu nauczycielowi – alternatywna edukacja*, Wrocław 1994, pp. 27–32.

¹⁹ A. Dyduchowa, B. Dyduch, M. Wędrychowska, *W stronę kompetencji. Zadania języka polskiego w szkole podstawowej*, [in:] *Kompetencje szkolnego polonisty*, ed. B. Chrzastowska, Warszawa 1995, pp. 42–43.

²⁰ K. Denek, *O nowy kształt edukacji*, Toruń 1998, p. 215.

²¹ E. Putkiewicz, *Proces komunikowania się na lekcji*, Warszawa 1990, pp. 91–98.

only person privileged to speak in the classroom. Encouraging students to speak, present their arguments, negotiate or discuss is a vital part of effective teaching, being also a means of communication. So called "cognitive terminology" may be useful in teacher-student dialogue, as it involves such instructions as: analyze, classify, compare, interpret, check, make a hypothesis, etc. This approach transforms teaching from explanatory mode to hypothetic mode,²² where student and teacher may collaborate with each other to a larger extent. Whenever the teacher refrains from speaking for the student to formulate the utterance and express their intentions, it not only facilitates language use but also increases the number of students' utterances in the classroom. Hence, the appearances of dialogue-based communication,²³ so typical for the traditional education models, disappear.

Discussion regarding communication processes in a classroom is a good opportunity to consider developing students' language skills, involving reception, understanding and interpretation of the text. According to Zbigniew Kwieciński, „functional literacy, which comprises understanding relations in the texts one reads in their native language, is a fundamental competence which gives access to symbolic culture and its resources.”²⁴ The ability to read, which comprises looking for information, making associations and using information creatively is recognized in numerous scientific research projects²⁵ and academic texts, as an elementary competence which enables the student to acquire further academic skills (including mathematical thinking or scientific thinking). Specialist texts and numerous international study projects define *reading literacy* as understanding, using and reflecting on and engaging with written texts in order to achieve one's goals, to develop one's knowledge and potential, and to participate in society”.²⁶ In Polish the term closest to the meaning

²² J. Bruner, *Poza dostarczone informacje*, Warszawa 1978.

²³ H. Synowiec, *O porozumiewaniu się w szkole*, [in:] *Bariery i pomosty w komunikacji językowej Polaków*, eds. J. Bartmińska, U. Majer-Baranowska, Lublin 2005, p. 183.

²⁴ Z. Kwieciński, *Blokada rozwoju. Skutki nierówności w poziomie alfabetyzacji*, [in:] *Edukacja przedszkolna w Polsce – szanse i zagrożenia*, ed. M. Zahorska, Warszawa 2003, p. 13.

²⁵ cf. Program Międzynarodowej Oceny Uczniów OECD/PISA.

²⁶ Unknown Author, *PISA 2015. Draft Reading Literacy Framework* <http://www.oecd.org/pisa/pisaproducts/Draft%20PISA%202015%20Reading%20Framework%20.pdf>, (retrieved on 10 October 2013).

of *reading literacy* is “reading and comprehension”, which should be further explained. The gist of “reading and comprehension” is the ability to read various signals, present not only in regular texts, as is often the case at school during the reading practice. “Reading and comprehension” is more about associating different pieces of information, the ability to select more important information in view of a given issue, analyzing information and relating it to general knowledge. When considering the essence of *reading literacy*, it should be noted that this ability may be placed in different contexts and numerous real-life situations (not only in the school environment and artificial situations of checking and evaluating the student). The student (being a mature reader) by learning to read in such a way, should be able to: “find the gist of the text, find specific information in the text, relate information found in the text to previous knowledge, distinguish between fact and opinion, understand the chronology of events, recognize historical and/or communication context, interpret the text, meaning decipher the meanings it encodes, identify author’s ideological standpoint, find specific information in a diagram, table or a map, use information from the text, understand and carry out instructions, evaluate thesis present in the text, formulate one’s own opinion on the thesis, argue with the thesis, draw a conclusion, make a question, find missing information and spot mistakes”.²⁷ It should be also emphasized that reading and comprehension skill may be considered a component of information literacy. The ability to understand a text is crucial in educating an information literate student.

Another important feature of a school which places emphasis on students’ independent learning and their information literacy is teacher’s ability to frame appropriate questions. The fundamental rule of formulating a question is to ask open-ended questions which encourage students to analyze the problem and think independently. Open-ended questions ask for opinion, explanation, comparison, analysis and many others. The knowledge acquired through these questions is a so called “knowledge-how” and “knowledge-why”. When a teacher formulates open-ended and semi-open questions and creates situations which require autonomous thinking and using different sources of information, he or she places responsibility for their own learning on the students themselves, making them participate in the creation of knowledge. Furthermore, it is worthwhile

²⁷ A. Pacewicz, *Szkoła czytania*, „Dyrektor Szkoły” 2004, No. 12, pp. 18–20.

to emphasize the role of the questions framed by the students. When a student asks a question, he or she usually “is not only aware that they do not know something, but also in general know what they do not know and know what they ask about”.²⁸ Students’ questions are a bridge between the student and the teacher and enable the teacher to treat a student as a rightful addressor of information and its competent source.

Developing information literacy in students requires the educational environment to be organised in such a way that student’s active participation in the lesson is encouraged, provided it is understood in an appropriate way. How does a traditional school define student’s active participation? As diligence? Attention on the content of the lesson? Quick response to the teacher’s orders and instructions? Quiet group work under teacher’s close supervision? All the above questions should be answered positively, even though they demonstrate profoundly mistaken common interpretation of student’s activity. In her analyses, Dorota Klus-Stańska frequently appeals to the teachers not to interpret student’s activity as diligence and attention paid to information transmitted by the teacher, memorizing information and readiness to respond in an expected way. “In this approach activity is not understood as reaction to certain stimulus, but rather as the initiative to solve unclear, new situations, and, as a result, conceptual transformation of new and old data. Therefore, activity is constructive and re-constructive in its nature rather than perceptive and associative”.²⁹ In order to stimulate this kind of activity in students, presence of a creative teacher is necessary. According to Józef Kuźma, creative teacher “needs to have a nature of an investigator which means they need to have intuition, be good observers, identify real problems or difficulties, ask questions, (...) and constantly broaden and extend their knowledge in order to handle new tasks; they should also teach their students how to answer questions, have a dialogue with them and solve problems together”.³⁰

²⁸ A. Twardowski, *Trudności w porozumiewaniu się nauczyciela z uczniami*, [in:] *Porozumiewanie się w szkole na rzecz tworzenia edukacyjnej wspólnoty*, ed. A. Sajdak, Kraków 2005, p. 27.

²⁹ D. Klus-Stańska, J. Kruk, *Tworzenie warunków dla rozwojowej zmiany poznawczej i konstruowania wiedzy przez dziecko*, [in:] *Pedagogika wczesnoszkolna: dyskursy, problemy, rozwiązania*, eds. D. Klus-Stańska, M. Szczepńska-Pustowska, Warszawa 2009, p. 480.

³⁰ J. Kuźma, *Nauczyciele przyszłej szkoły*, Kraków 2000, p. 76.

It may also be assumed that a teaching strategy aimed to activate students, as a way to counteract cognitive passiveness in a student-centred school, is only feasible if the teacher employs a negotiative teaching style. Teaching style is defined as the approach towards working with a student, understood as the result of scientific and common knowledge, as well as beliefs and attitudes resulting from the teacher's professional experience and social and material circumstances in school.³¹ Among several teaching styles (such as frontal teaching) analysed in the review articles, negotiative style is crucial for a student-centred school.³² It is based on the assumption that knowledge is not something external, but is created in the process of teacher-student interaction. It may be noted that this style has a strong base in constructivist teaching. In order to understand new information, students need to engage in cognitive processes through problem solving, research projects and exercises, discreetly supported by the teacher.³³ In negotiative teaching the student is treated as an active explorer of educational situations created by the teacher. The teacher needs to incline towards such an organization of teaching process, where focus is put on student's involvement in creating knowledge through independent problem-solving. This teaching style is also supported by psycholinguistic theories which demonstrate the importance of speaking for thinking. Specially designed exercises enable the students to think on a higher level. Such exercises may require the students to make a general statement on the basis of transmitted information, transmit registered data, speculate, make hypothesis, predict potential results, causes, events, phenomena on the basis of acquired information. The highest level of thinking is stimulated by skillfully framed questions asked by a teacher, such as "what if...". Such questions open the way for students to synthesize their knowledge, and as a result to theorize about problems and possibilities.³⁴

Analysis of scientific texts and educational experience demonstrates that lessons in schools tend to be too formal, and the knowledge transmission too verbalized, focused on memorizing and re-

³¹ B. D. Gołębnik, *Nauczanie i uczenie się w klasie*, [in:] *Pedagogika*, Vol. 2, eds. Z. Kwieciński, B. Śliwerski, Warszawa 2011, p. 161.

³² *Ibid.*, p. 165.

³³ J.A. Reid, P. Forrester, J. Cook, *Uczenie się w małych grupach w klasie*, Warszawa 1996, p. 9.

³⁴ *Ibid.*

production of knowledge.³⁵ Teachers too often employ passive teaching methods which do not require the student's active participation in the learning process, their autonomy and creativity.³⁶ There are various techniques and methods which can stimulate students to use diverse sources of information, analyze and evaluate it critically, use it in practice or modify it. It is impossible to characterize all valuable teaching methods in this article, however it would be worthwhile to mention some of them: project method, didactic games (brainstorming, situational, simulation and biographical method), discussion, mind map, meta plan. Nonetheless, special attention should be paid to project method, highly valued for its educational benefits, which has recently been going through a renaissance. This method perfectly fits the concept of autonomous learning and enhances information literacy.

Project method develops numerous skills related to undertaking specific actions, from planning and seeking support to execution and evaluation. Student learns how to co-operate in groups, how to divide roles and tasks, make decisions together and solve potential conflicts. It is also beneficial for developing didactic skills in formulating problems, planning and organization of one's work, using different sources of information, classifying information according to objectives of the project, recording and presenting materials (in different forms). Project method also helps students to master the skills of integrating knowledge from different subjects, preparing and delivering presentations, formulating and expressing opinion, listening to the opinions expressed by other members of the group, learning to evaluate one's own work. It gives students the opportunity to adopt the role of authors, show their initiative, organize work, co-operate and present the results of their work. This method fosters independence, self-management and ability to work in a group. It takes into account both individual needs and interest and skills of the whole class. Project as a method of teaching enables the teacher to meet many important objectives, including the development of communicative and interpretive competence, creative competence, co-operative skills, computer literacy and media literacy.³⁷ The analysis of

³⁵ K. Denek, *Ku dobrej edukacji*, Toruń–Leszno 2005, pp. 168–182.

³⁶ K. Borawska-Kalbarczyk, *Praktyka edukacyjna w opinii uczniów – od instruowania do tworzenia*, [in:] eds. A. Karpińska, W. Wróblewska, *Kierunki rozwoju dydaktyki w dialogu i perspektywie*, Warszawa 2011, pp. 114–122.

³⁷ A. Mikina, B. Zająć, *Jak wdrażać metodę projektów?*, Kraków 2004.

integral features of project method, as well as teacher's competences it develops, leads to the conclusion that this method fosters the transformation from traditional model of teaching (where transmissive teaching dominates) to the model which activates the student to construct his or her knowledge autonomously. Therefore, project method improves communication between teacher and student,³⁸ as well as reinforces cognitive processes which are fundamental to developing information literacy in students.

Conclusion: hopes and dilemmas

School, with its roots in the Middle Ages, shaped in Industrial Age, whose main aim was to prepare students to function in the reality and do the one job they were qualified for, focused on teaching and teacher, requires a complete transformation of its nature and reflection on its role in today's world.³⁹ Students live in a reality where new information emerges faster than ever and the education process needs to adjust to the new circumstances and re-define its character. Education, having contemporary young people as its clients, should re-define the traditional (and often outdated) teaching methodology. Students' way of thinking, their perception of reality and dynamic changes in the world mean the young people nowadays need to be taught in a different way.

As I am slowly approaching the conclusion of the above analysis, I would like to note that the article has covered only several aspects of teaching process that I found important in the context of the development of student's information literacy. It should be borne in mind that there are other, equally important areas of the teaching process, whose negligence or various deformations do not foster developing student's autonomy in the process of obtaining information and creating knowledge. I would argue that the execution of the above propositions forces the teacher to apply other didactic activities, including group work, individualization of teaching, use of diversified

³⁸ K. Borawska-Kalbarczyk, M. Zińczuk, *Metoda projektów jako sposób aktywizacji przestrzeni komunikacyjnej w nauczaniu dydaktyki*, [in:] *Interakcje komunikacyjne w edukacji z perspektywy sytuacyjności i kontekstowości znaczeń*, eds. A. Błachnio, M. Drzewowski, M. Schneider, W.J. Maliszewski, Toruń 2008, p. 531.

³⁹ K. Robinson, *Changing Education Paradigms*, http://www.youtube.com/watch?v=_wxcXd5Cnv8 (retrieved on: 8 August 2012).

didactic resources, use of modern information and communication technologies, effective classroom arrangement, etc. I am aware that the dynamic changes in today's world should translate into the transformation of contemporary education system. Constant changes are required not only by the external world, but also by the students themselves, who constitute a unique, unconventional group. Non-repeatability of educational scenarios in given context means the teacher should not repeat the same activities or get stuck in a routine. The clash of teacher's competences and needs and expectations of students leads to the constant reform of teacher's skills.

The aims of student-centred school seem to be universal and genuinely useful also in student's life outside school. Consequently, the teacher who is competent in achieving these aims should adopt the role of the interpreter of complex reality and a guide of students who promotes their information literacy, which involves teaching students autonomous learning, being a kind of "security deposit" for the future, fostering their development and constant improvement. Student should be treated as an individual entity, eager to explore the reality, whereas teacher should create such environment in which the student can become involved in the search of information and creation of knowledge through observation of the world, prediction, making hypothesis, experimenting, drawing conclusions, etc.⁴⁰ Teaching information literacy effectively involves creating the conditions for independent and autonomous learning, where student, by doing various exercises or education project, uses diversified sources and forms of information.

Finally I would like to cite Hanna Hamer, whose observation corresponds with my views: "in a world flooded with information it is important to know how to move: be able to use different sources of information, look for necessary information, respect the value of information, make choices and use information consciously in order not to become a slave of information".⁴¹ Keeping this in mind, we will be able to give the students a chance to construct their own system of knowledge which will be operative, dynamic, "at their fingertips", ready to use outside school reality.

⁴⁰ S. Juszczyk, *Edukacja na odległość. Kodyfikacja pojęć, reguł i procesów*, Toruń 2003, p. 86–100.

⁴¹ H. Hamer, *Metody aktywizujące procesy uczenia się w szkole*, „Trendy. Uczenie się w XXI w.” Internetowy magazyn CODN, 2005, No. 1, p. 14, <http://www.bc.ore.edu.pl/dlibra/docmetadata?id=30&from=publication&tab=1> (retrieved on 4 June 2008).

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EARLY CHILDHOOD EDUCATION TEACHER TRAINING AS CONDITION OF EFFECTIVE IMPLEMENTATION OF THE MODEL OF WORK WITH GIFTED CHILDREN: “TEACHING-ART-EDUCATION”

Abstract

This paper presents Innovative Model of diagnosis, methods, forms of work and supervision of artistically gifted students, for teachers of grades 1–3 as well as students and lecturers of pedagogical specializations at higher education institutions. Respective elements of the model are as follows:

1. Diagnostic part (describing the specific character of the diagnostic process of gifted children and consisting of chosen and translated, into Polish language, diagnostic tools used to diagnose gifted children in partner countries);
2. Part covering areas and methods of supporting artistically gifted children (psychological and pedagogical part);
3. Program part concerning art education programs;
4. Part devoted to art education teacher training;
5. Methodical part (presenting forms and methods of work with artistically gifted children).

The author describes some of this elements through the experience from Ukraine, Slovakia and Slovenia.

Key words: artistically gifted students, artistic education, innovative model of diagnosis, methods of supporting artistically gifted children; art education programs; teacher training

The project entitled *Teaching – Art – Education* implemented in years 2011–2013 at Andrzej Frycz Modrzewski Krakow University was based on creating a new network of cooperation, within the sphere of education of artistically gifted children from grades 1–3 of elementary school, with foreign institutions such as: the University of Primorska (Slovenia), the Catholic University in Ružomberok (Slovakia) and the Donetsk National University High School (Ukraine) as well as the Polish partner – Aleksander Kaminski Polish Society of Extracurricular Education. The main principle of this cooperation involved compilation of the **Innovative Model** of diagnosis, methods, forms of work and supervision of artistically gifted students, for teachers of grades 1–3 as well as students and lecturers of pedagogical specializations at higher education institutions.

Numerous countries develop legal changes in order to increase educational offers directed to gifted students. The effects of these activities will just now be subject to evaluation. Thus, the model created in the project supplements the innovative educational activities currently undertaken within the whole European Union.

Artistic education, including education within the scope of visual arts, so important in child's development, has been shifted to an insignificant place, as a subject for which little time is devoted in the structure of general education. Such a situation is encountered not only in Malopolska Voivodeship but also throughout the whole country. The tendency to reduce the number of hours of art education resulted in sudden decline in the education level, in the students' level of competence and skills within the scope of visual arts. The habit of teaching art classes by persons without any education in this field has also been put into practice.

Art work, constituting the basic form of expression, is an expression of individual psychological development of children. It constitutes means of development of cognitive and emotional processes as well as higher feelings. Most important of all is to arouse children's interest in art, to create conditions enabling them to use their skills and to encourage to spend time creatively. Hence, such an important role of teachers at schools and institutions of extracurricular education.

The title of the project, *Teaching – Art – Education. Compilation and Popularization of the Innovative Model of Diagnosis, Methods, Forms of Work and Supervision of Artistically Gifted Students*, points to the significance of teaching in education through art in grades 1–3. It signalizes that it is not only important to rely on children's

random creativity (often overused by contemporary teachers) but also on exploitation of teaching in art. In the present time art is becoming an interdisciplinary field, reaching information technology, appearing in public life during conferences, public performances or private meetings. Therefore, in the project we have emphasized the role and importance of exploiting scientific sources in educating children through art and connecting it with other leading fields in the present developing society e.g. information technology. The objects of the project interpreted in such a way are expected, in prospect, to contribute to escalation of awareness of own constructive and creative actions relying on the main scientific assumptions, and to the possibility of employment of artistically gifted persons in various fields of professional life.

Authors of the model, scientists and practitioners, work with pre-school and early school children on a daily basis. The following names can be found among authors of descriptions of particular models of work with artistically gifted children in partner countries:

- professional educators: pro. nadzw. dr hab. Teresa Giza, prof. dr hab Bożena Muchacka, prof. nadzw. dr hab. Teresa Olearczyk, dr Joanna Aksman, dr Krystyna Grzesiak, dr Klaudia Węc;
- psychologists: doc. dr Stanisław Nieciuiński, dr Małgorzata Karpińska-Ochalek, dr Maria Kliś;
- art education methodology specialists: doc. dr Danuta Skulicz, dr Jolanta Gabzdyl, mgr Anna Zięba;
- artists and art historians: prof. dr hab Stanisław Hryń, dr Anna Dettlof, mgr Katarzyna Piętka.

Interdisciplinary teams were to describe respective elements of models of work with artistically gifted children in partner countries and, as a result of comparative studies, they were to compile a final model using conclusions arising from descriptions of work with artistically gifted children in partner countries, possible to implement in working conditions of Polish schools. **Respective elements of the model are as follows:**

1. Diagnostic part (describing the specific character of the diagnostic process of gifted children and consisting of chosen and translated, into Polish language, diagnostic tools used to diagnose gifted children in partner countries);
2. Part covering areas and methods of supporting artistically gifted children (psychological and pedagogical part);
3. Program part concerning art education programs;
4. Part devoted to art education teacher training;

5. Methodical part (presenting forms and methods of work with artistically gifted children).

The elements of models of work with artistically gifted children in Partner countries (Slovakia, Slovenia, Ukraine) and the model composed on the basis of compiled materials, possible to adapt in working conditions of Polish schools, described in detail, can be found in the following publication: *Teaching – Art – Education. Innovative Model of Diagnosis, Methods, Forms of Work and Supervision of Artistically Gifted Students*¹ (the first and second part of the publication). The third part of this publication also includes tools of diagnosis of artistically gifted children, from Ukraine and Slovenia, chosen for the purpose of the model, and supplementary materials for teachers: an exemplary plan of class activities compiled by Danuta Skulicz, presenting innovation in conducting art classes according to theories of shaping living skills of young human beings, categories of analysis of art work according to Stanisław Popek, artworks of children from Slovakia, Slovenia and Ukraine, as well as films presenting good practices of implementing the Teaching – Art – Education model in foreign Partners' schools and schools of Małopolska.

The created model was being implemented in chosen schools of Małopolska in summer semester of school year 2012/13. In academic year 2013/14 the model will also be included in the program of training of future teachers in the field of Pedagogy, specialization: Early Childhood Education at Andrzej Frycz Modrzewski Krakow University and in the future at other interested universities.

The aim of the project is coherent with the aims of the Małopolska Regional Operational Programme:

- creating new, innovative solutions (new model of work and supervision of gifted children);
- raising qualifications of participants;
- bringing Ukrainian, Slovakian, Slovenian and Polish culture closer together.

Within the assumptions of the project the following detailed / direct aims have been composed:

- raising qualifications of teachers, within the scope of diagnosis, work and supervision of artistically gifted children, through study trips to partner countries;

¹ *Nauka–Sztuka–Edukacja. Innowacyjny model diagnozy, metod, form pracy i opieki nad uczniem zdolnym plastycznie*, ed. J. Aksman, Krakowska Akademia im. Andrzeja Frycza Modrzewskiego, Kraków 2013.

- raising qualifications of students, specializing in Early Childhood Education at Andrzej Frycz Modrzewski Krakow University within the scope of diagnosis, work and supervision of artistically gifted children, through study trips;
- shaping creative attitudes of teachers and future teachers (students) through observation of foreign models during study trips;
- creating the Innovative Model of diagnosis, methods, forms of work and supervision of artistically gifted children by using elaborated models of partner countries;
- making the study program of Pedagogy specialization more attractive by introducing an innovative class within the scope of Innovative Model of diagnosis, methods, forms of work and supervision of artistically gifted children;
- transferring knowledge, good practices involving work with artistically gifted children by creating new networks of cooperation.

The last of the detailed aims, most significant considering further perspective of implementation of the model – referred to commencement of knowledge transfer, good practices involving work with artistically gifted children by creating new networks of cooperation. For this purpose an international web site, (www.artisticallygifted.eu), was created where descriptions of respective activities of the project were successively placed as well as materials of the participants of the project from the side of foreign and Polish Partners. They include: multimedia presentations, scientific texts, fragments of students' research concerning artistically gifted children as well as film and photographic coverages (films and project bulletins). The web site also includes the publication describing the Teaching – Art – Education model together with comments concerning its implementation and materials for teachers and lecturers, diagnostic tools and films (the film summarizing the model and ways of its implementation translated into three languages: Slovak, Slovene and Ukrainian). It is assumed that during implementation of the project in elementary schools of Małopolska and other educational institutions the site will be fully active and will be filled with information from the region as well as from foreign Partners interested in the subject undertaken by us.

It is intended that thanks to the created contacts (foreign Partners, Partner from Poland and creators of the model, creators of the model and teachers implementing the model, lecturers and students of Pedagogy equipped with knowledge about the model) the network will become a platform of exchange of information and experi-

ence concerning implementation of respective parts of the model in school practice.

The intended and implemented results and products of the project are presented below: 9 undertakings within the scope of inter-regional cooperation: 1. introductory seminar, 2.3.4. three trainings describing models of work with artistically gifted children in following countries: Slovakia, Ukraine, Slovenia, 5. training in Teaching – Art – Education innovative model, 6.7.8. three study visits of a group of specialists and students as well as a film crew to Slovakia, Ukraine and Slovenia, 9. conference summarizing the project.

All together about 260 participants of undertakings within the scope of interregional cooperation participated the project.

Noticeable results of the project also include:

- formation of new network of cooperation (activities undertaken on new web site of the project: www.artisticallygifted.eu, cooperation of foreign partners and the beneficiary, cooperation of creators of the model with teachers implementing the model, further contact plans of mentioned network groups);
- publication including the theoretical base and description of the innovative model of diagnosis, methods, forms of work and supervision of artistically gifted children;²
- film presenting classes conducted on the basis of the elaborated model (constituting annex to publication describing the Teaching – Art – Education model) and as additional products: three films depicting models of work with artistically gifted children in early childhood education in Slovakia, Ukraine and Slovenia;
- tools for diagnostic studies and evaluation of the innovative model of diagnosis, methods, forms of work and supervision of artistically gifted children: diagnostic tools and supplementary materials can be found in the third part of the publication describing the Teaching – Art – Education model;
- reviews of specialists from partner countries concerning the Innovative Model of diagnosis, methods, forms of work and supervision of artistically gifted students – fragments presented in subsection of part 3 of the study report on model implementation;
- cooperation network web site (www.artisticallygifted.eu);
- publication of the report with final conclusions and recommendations,

² *Ibid.*

- bulletin concerning cooperation network (4 issues placed on project's web site: www.artisticallygifted.eu in tab: News).
Respective elements describing the model are as follows:
- aims, norms, parts of the model, principles of introduction, values of the model, breaking stereotypes, knowledge, application in education system, recruitment criteria, diagnosis, methods of activity, model development criteria. The respective elements are described in the table below:

Table No. 1: Model structure: Teaching – Art – Education

Elements describing the model	Characteristics of the respective elements of the model
Aims	<p>Creation of cooperation network with Ukraine, Slovakia and Slovenia for identification and implementation of new models of diagnosis, methods, forms of work and supervision of artistically gifted students.</p> <p>Implementation and verification of the new art education program by twenty early childhood education teachers.</p> <p>Introduction of the model into the student education program in the field of Pedagogy, specialization Early Childhood Education at Andrzej Frycz Modrzewski Krakow University and at other interested universities in the future.</p> <p>Changing the situation of artistically gifted children in elementary schools in grades 1–3 in Małopolska Voivodeship.</p> <p>Identification of children's educational needs and directing specially prepared actions towards them.</p> <p>Fuller exploitation of voivodeship region potential and potential of Krakow, possessing strongly rooted artistic traditions.</p>
Norms	<p>The model is based on current core curriculum in accordance with the Ordinance of the Minister of National Education of 27th August 2012 on core curriculum of pre-school education and general education in particular types of schools. First educational stage, grades 1–3. Early childhood education.</p>
Parts of the model	<ol style="list-style-type: none"> 1. Diagnostic part; 2. Part covering areas and methods of supporting artistically gifted children; 3. Program part concerning art education programs; 4. Part devoted to teacher training; 5. Methodical part

Principles of model introduction	The model is intended for every teacher of early childhood education, for authorities of teacher training Pedagogy departments as well as parents and tutors of children with special artistic skills.
Values of the model	Cognitive, praxeological, axiological, aesthetic.
Breaking stereotypes	<p>In early school education major role is given to teaching writing and reading as well as to introducing students to the world of multimedia, forgetting that drawing development occurs simultaneously with speaking development and in an essential way supports learning of writing.</p> <p>In the development of cognitive processes experience and practical activities, as essential ways of children's learning, are marginalized. This results in negligence of children's artistic development and skills.</p> <p>General conviction exists that drawing lessons may be conducted by all teachers of early childhood education.</p> <p>Meanwhile, from the beginning of education, artistic subjects should be taught by professionals.</p>
Knowledge	<p>The elaborated model is based on:</p> <ul style="list-style-type: none"> • Stefan Szuman theory of children's drawing creative activity and Stanisław Popek psychological concept of artistic creative activity development; • P. Aggleton concept covering the structure and shaping of living skills, enabling human beings positive adapting behaviors which allow effective dealing with tasks (requirements) and challenges of everyday life, this term refers to psychosocial, personal, social, interpersonal, cognitive, affective, universal skills; • on the structure model of artistic skills according to Stanisław Popek and Wiesława Limont; • on the general theory of giftedness: Joseph Renzulli Three-ring Model of Giftedness; • on the theory of multiple intelligences of Howard Gardner; • on R.J. Sternberg and T. Lubart investment theory of creativity; • on Janusz Gnitecki theory of constructing original education programs stimulating and supporting development of students in contemporary education.
Application in education system	Elementary schools grades 1–3; Pedagogy departments of higher education institutions; cultural institutions, non-school institutions; parents.

Recruitment criteria	The model is intended for work with all children in early childhood education, with the possibility of exploitation with students diagnosed as artistically gifted (within the frames of individualized education, extracurricular or non-school classes).
Diagnosis	The model presents diagnostic tools possible to apply by teachers and parents referring to the following areas: child's giftedness profile, creativity, motivation, artistic skills.
Methods of activity	The methods of art education are based on stages of drawing development and on creative activity of children. They refer to the shaping of art skills and living skills of younger school aged children.
Model development criteria	The innovative program of art education for children from grades 1–3 of elementary school is of spiral structure, its parts should be developed in successive grades of middle school and high school.

Appropriate preparation of the teaching staff is the essential implementation condition of the presented model of work with artistically gifted children. Therefore, already after the completion of implementation of the program at Andrzej Frycz Modrzewski Krakow University numerous trainings, for early childhood education teachers as well as teachers of school common rooms and non-school institutions, are held. The teachers, more and more frequently, feel the need to use art education in educating younger school aged children as an antidote to children's most frequent form of spending free time – i.e. accompanied by electronic media.

We are convinced that the model should be presented not only to experienced professional teachers but also to students, future graduates of teaching specializations. For this purpose, on the basis of experience acquired during study visits in Slovakia, Slovenia and Ukraine, the model educating contemporary teachers of early childhood education has been composed, with particular consideration of their work with gifted children.

Suggestions and forms of work with future teachers, which according to us deserve special attention, are presented below.

SLOVAKIA:

New subjects and forms of education

Solid actualizations of knowledge made in general education and psychoeducational program guidelines;

- introducing the new subject: Working with gifted children;³
- introducing the new subject: History of the region and cultural heritage;⁴
- educating teachers able to undertake other, apart from lessons, forms of work with gifted children;
- educating teachers able to work or cooperate with “Children’s Universities”;
- preparing teachers to work in institutions intended for gifted children. The idea of cooperation of universities with schools, known as training schools, is a commendable idea, deserving to be continued in Polish process of educating teachers, however, it should concern organizing mutual meetings of teachers and academic teachers, educationalists and students, enriching knowledge of working teachers with latest scientific and diagnostic news concerning work with gifted children in early childhood education;
- changing requirements included in core curriculums specified by the Ministry of National Education – clear definition of arbitrariness in possibility of choosing by teachers (from the list of subjects prepared by the Ministry) such, which according to them are most appropriate for students under their supervision. Children are also left with unconstrained possibility of choosing implementation methods of the given work subjects, with teachers’ additional professional help in situation when asked for such help by the students. This strategy, as Slovak teachers believe, develops students’ initiative;
- motivating students and teachers to shared artistic work through teacher and student work displays (how the subject is perceived by the master and the scholar);
- shared research of students and scientists on the issue of gifted children in early childhood.

³ Pedagogy specialization at the Catholic University in Ruzomberok does not hold separate classes devoted to this subject, however, like in Poland, the need to introduce knowledge about gifted children (particularly diagnosis as well as methods and forms of work with gifted children) in the form of separate and obligatory classes is noticed. This has been done by several Slovakian universities (from the text of Božena Muchacka, 2012)

⁴ In Slovakia great role is attributed to educating teachers through microregion art, especially with reference to folk art, which the Slovak people take pride in, and taking advantage of the EU programs (grants) renew and popularize. It is one of the main subjects of educating teachers within the field of art and culture – next to such narrow subjects as: doll making, pottery, carving and others.

UKRAINE

- Supporting professional adaptation of young teachers, Introducing, into the activities of universities educating teachers, annual meetings with graduates within the frames of *Young Teacher's Schools* – “*Ex Professo*”;

- Mechanisms motivating teachers (choosing teacher of the year and other teacher titles, local and national).

Also in Poland best teachers are chosen and rewarded by local authorities and the president. According to us, this set of awards should be enriched by the award of the dean of the university with which the teacher cooperates.

- Increasing the number of teachers and students jointly undertaking experimental and innovative tasks. These tasks should be carried out during student practices.

- Pedagogical skills connected with taught artistic subjects.

In Ukraine artistic subjects (music, art) are taught by professionals already from first grade of elementary school. In Europe this is only practiced in Denmark, Latvia and Germany. We like this solution very much and would put forward the idea to accept such a way of treating art – professional approach towards this field already from the beginning of school education.

Broadening the study program intended for teachers of early childhood education with subjects conducted not only by educators, art educationalists, but also by professionals – artists.

We would suggest to include in contemporary programs of early childhood education teacher training, at least two subjects broadening knowledge in given artistic field (methodical and content-related):

1. Methodology of art education in pre-school and grades 1–3 as well as
2. Personal development of artistic skills (or other subject conducted by a professional artist).

SLOVENIA

- In the Polish model we would suggest applying, similarly as it functions in Slovenia, a homogenous form of diagnosis of gifted children. However, using the OLNAD07 test in Polish conditions would require its suitable standardization before applying it generally within the territory of the whole country.

- We also suggest to introduce the subject already at the first level: Working with gifted children (preparing Polish teachers to work

with gifted children at the level of early childhood education, with homogenous form of diagnosis and training in writing programs of individual work with such children), however, at the second level, to broaden their knowledge by additional methods and examples of work with the gifted and talented with the following subject:

Methods of work with gifted and talented children.

- Educating professional teachers, greater importance should also be given to practices during second-cycle teacher-training studies.
- Introducing various forms of meetings inside and outside of the universities. As forms of motivating students. Permanent and temporary exhibitions of students' and children's work constitute an important element of the described form of motivation. Gifted students should be given an opportunity of independent presentation of their work accompanied by an official ceremony and promotion in the media, both in the country as well as other places in the world.
- We encourage to introduce non-standard, interesting and necessary actions e.g.: *Mobile expert bus*. It is a bus with consultants of various school connected issues travelling to different schools, willing to engage in discussion, training and counselling, sharing knowledge and professional experience. It is a very interesting idea for a diagnostic and research project.
- Preparing students for cooperation with museums where, as in Poland, museum lessons are held.
- Preparing teachers for classes at summer camps and outdoor artistic sessions conducted by psychologists developing creativity, works of young people, teachers from schools cooperating with universities as well creators of art. This is an idea suggested to be implemented in Poland as well as, in fact, worth popularizing by universities educating teachers with the support of other institutions of art, culture and education.
- The idea of placing all recommendable opinions, given by teams of experts on courses and trainings, on the Ministry of Education web site seems necessary for teachers searching for given trainings. The conditions of participation in courses, especially their active part (report and description of course acquired knowledge exploitation form in everyday educational tasks) are also worth imitating.
- Independent pedagogical lectures and workshops are teacher training forms worth popularizing at Polish universities. Teach-

ers interested in chosen topics apply to the dean of Pedagogy department who directs them to heads of faculties, with whom they decide upon the program of courses and workshops, which the teacher wishes to attend with the students. Thus, supplemental education programs are individual, adequate to teachers' needs and not generating high costs.

- Motivating teachers to participate and create projects and research grants financed by the European Union – as forms of supplemental training.
- Paying attention to activities of amateurs, people devoted to various interests or holding diplomas of the same studies, enthusiasts of given fields of knowledge, university employees conducting research and cooperating students. This initiative is very interesting and worth implementing in Poland, involving presentation of educational issues by non-political enthusiasts of education, interested in solving educational and didactic problems through student media (magazines, university radio and television) in the form of courses possible to carry out in self-regulated time.

We hope that the model will enable teachers, who get acquainted with elements of the model and apply them in their professional work, to give credit to the need of adequately conducted art education at early school age and the necessity of constant self-improvement. They will finally be able to diagnose educational needs of children and direct specially prepared activities towards them, taking full advantage of the potential of their region and country.

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SHAPING TEACHER COMPETENCIES IN THE EDUCATIONAL PROCESSES IN HIGHER EDUCATION FACILITIES

Abstract

This paper presents the analysis of shaping teacher competencies in the educational process in the Andrzej Frycz Modrzewski Krakow University with the postgraduate studies students preparing to perform the role of teachers of occupational subjects. In the empirical study completed in the years 2009–2011, 158 students participated, with 86 women (62.1%) and 72 men (37.9%), with all the persons in the study having rich professional experience in fields other than pedagogical / teaching work. Initial thesis in the study based on the statement that the future of education will depend on teachers aiming to be multi-dimensional human beings, pursuing growth, capable of adjusting to modern time challenges in the scope of his/her competencies (consisting of the component of knowledge, skills and attitudes/experience) and bestowed with perseverance and wisdom in reacting to unique and unforeseeable pedagogical situations in this profession..

Key words: education, teacher competencies: interpretation and communication, creativity, cooperation, pragmatics, IT and media

Introduction

The education system functioning in Poland has been deeply transforming in recent years, and the related discussions and debates in various social groups show that the need is real for finding effective, alternative methods for transformation, quality changes in the Polish school, and an innovative approach.

The school is no longer recognised as the main place to acquire knowledge, develop skills, and develop attitudes. The education pro-

cesses start happening in parallel in several planes, in various spaces. Thus, the role of the school has to be redefined. The concept proposed by J. Kuźma,¹ assigning the school the role of an organisational centre which coordinates education focused on students in three spaces: the intra-school space, the off-school space and the virtual space, corresponds with the challenges of the modern time.

The objective/aim of operation of the student centred approach school is mostly supporting and stimulating development of the potential in the individual, helping in designing one's own development path. An important element is coming up in how to create comfortable conditions for the students in charge to allow collecting various experiences and cultivating values appreciated by the society. This requires a new approach and performing new roles, having specific competencies, meeting new requirements by the persons directly affecting the pedagogical microsystems: by the teachers. For this reason, I focus in this paper on the issue of shaping the competencies necessary in the teacher profession.

The context of own research

In 2000, the need of having good preparation to perform the role of teachers has become a strong impulse to develop specific strategies in this important field, and the European Network on Teacher Education Policy has been established for this purpose (ENTEP). In 2002, the Council of Europe, during a meeting in Barcelona, decided that teachers would perform the main role in all strategies significant for social and economic development. This is why the issue of improving quality of teacher education has priority significance and is one of the basic objectives in reforming the education systems in the European countries. Modern education of teachers is to be developed based on:

- Academic education,
- Creative, innovative approach,
- Enhancing and verifying knowledge and improving teacher skills for continuing education².

¹ J. Kuźma, *Szkoła polska na rozdrożu. Jak zmieniać szkołę i edukację nauczycieli?*, [in:] *Ku dobrej szkole skoncentrowanej na uczniach*, Vol. 1, eds. J. Kuźma, J. Pułka, Oficyna Wydawnicza AFM, Kraków 2014.

² J. Kość, *Nowy model nauczyciela w świetle standardów edukacyjnych Unii Europejskiej*, [in:] *Kształcenie pedagogiczne w dobie przemian edukacyjnych*

According to the new model of education, the teacher should be able to learn innovatively, and at the same time be capable of developing this skill in his/her students, quickly reacting to anything that is progressive and creative. In all EU countries, common documents are used about the necessity of professional education and development of teachers. This results from the Bologna declaration adopted in 1999, signed and adopted for execution by Poland as well.

The current studies and international debates related to the teacher profession indicate several basic problems, the most significant of which seems to be determination of desirable teacher competencies and the status and prestige of the teacher profession.

Work in Poland on developing the set of teacher competencies desired for performing didactic, pedagogical and tutelary functions was conducted by, among others, the PAN Pedagogical Studies Committee directed by K. Denek and the Team of Pedagogical Preparation of Teachers with the Board for Training in MEN in 1998.³ The team classified the following types of professional competencies in teachers: interpretation and communication, creativity, cooperation, pragmatics, IT and media. With the operational definition of the above types of competencies, I have designed the self-assessment card for teacher competencies (Likert scale, 5 is the highest, 1 – is the lowest). Reliability of the tool in own research measured with Cronbach's alpha was 0.93, which is a highly satisfactory result. I have also analysed written and verbal statements of the students related to teacher competencies acquired by them. I have also taken into consideration the opinions expressed by practical training tutors (teachers in secondary schools: technical colleges, grammar schools) who filled in student opinion card (Likert scale, 5 is the highest, 1 – is the lowest), thus obtaining feedback about the pedagogical practical training executed by students (the substantial and methodical preparation and the attitudes presented by the students in the work environment).

w Polsce, ed. K. Wenta, Wydawnictwo Naukowe Uniwersytetu Szczecińskiego, Szczecin 2000, pp. 150–151.

³ D. Kukla, *Kompetencje europejskiego nauczyciela*, [in:] *Profil kompetentnego nauczyciela w europejskiej szkole*, eds. M. Blachnik-Gęsiarz, D. Kukla, Wydawnictwo Wyższej Szkoły Lingwistycznej, Częstochowa 2008; cf. J. Szempruch, *Nauczyciel w zmieniającej się szkole. Funkcjonowanie i rozwój zawodowy*, Wydawnictwo Oświatowe „Fosze”, Rzeszów 2007; idem, *Pedagogiczne kształcenie nauczycieli wobec reformy edukacji w Polsce*, Wydawnictwo Wyższej Szkoły Pedagogicznej w Rzeszowie, Rzeszów 2000.

This paper presents the analysis of shaping teacher competencies in the educational process in the Andrzej Frycz Modrzewski Krakow University with the postgraduate studies students preparing to perform the role of teachers of occupational subjects. In the empirical study completed in the years 2009–2011, 158 students participated, with 86 women (62.1%) and 72 men (37.9%), with all the persons in the study having rich professional experience in fields other than pedagogical / teaching work. The detailed data related to gender and seniority as well as gender and age of the respondents are given in the following summaries:

Summary no 1. Gender and seniority of respondents

		seniority						Total
		1–5 years	6–10 years	11–15 years	16–20 years	21–25 years	above 25 years	
gender	men	36	34	1	0	1	0	72
	women	36	34	6	5	1	4	86
Total		72	68	7	5	2	4	158

Source: own research 2010.

Summary no 2. Gender and age of respondents

		age						Total
		20–25 years	26–30 years	31–35 years	36–40 years	41–45 years	above 45 years	
gender	men	0	38	31	1	2	0	72
	women	3	38	36	5	1	3	86
Total		3	76	67	6	3	3	158

Source: own research 2010.

I find the context of transformations and visions of changes in the teacher education system not only in the element of faster than ever civilisation and technological development of the modern world, but mostly in the changing vision of man and what he is to become. To meet challenges of the modern world, it is important for every man, and for a teacher in particular, to develop adaptation skills, flexibility, exceeding oneself and overcoming own weaknesses and continuing education throughout lifetime. For this reason, I have used the transgression concept of man developed by J. Koziński as the ground for the discussion⁴.

⁴ J. Koziński, *Koncepcja transgresyjna człowieka*, PWN, Warszawa 1987; idem, *Człowiek wielowymiarowy*, Wydawnictwo Akademickie Żak, Warsza-

The transgression concept of man features various references, both constructive (leading to growth) and destructive (contributing to regression). Going beyond the typical limits of activities, man shapes new structures or destroys what was already stabilised. He is continuously exposed to making important decisions and difficult choices, as well as facing dilemmas whether his/her actions were appropriate or whether they are leading in a good direction. The teacher is surrounded by a number of elements which determine his/her decisions and responsibility for the other, which are closely related to his environment (natural, social, psychological, and cultural). Many implications for professional functioning of teachers follow. Being aware of degression and assuming what W. Cichosz said: "*transgression is a certain type of game which may be won or lost, and the result of which depends on the player in the given game*,"⁵ the need increases to verify personality as well as characterological predispositions to the teacher profession. In line with the transgression concept of man, I have made my initial thesis in the study based on the statement that the future of education will depend on teachers aiming to be multi-dimensional human beings, pursuing growth, capable of adjusting to modern time challenges in the scope of his/her competencies (consisting of the component of knowledge, skills and attitudes/experience) and bestowed with perseverance and wisdom in reacting to unique and unforeseeable pedagogical situations in this profession.⁶

Analysis of results of the self-assessment study of teacher competencies

I would like to begin my discussion of competencies of future teachers with the statements of the participants in postgraduate studies.

wa 1996; idem, *Zaduma nad możliwością ulepszania człowieka*, [in:] *Humanistyka przełomu wieków*, ed. J. Koziński, Wydawnictwo Akademickie Żak, Warszawa 1999; idem, *Koniec wieku nieodpowiedzialności*, Wydawnictwo Jacek Santorski, Warszawa 1995; idem, *Transgresja i kultura*, Wydawnictwo Akademickie Żak, Warszawa 2002; idem, *Spółczesność transgresyjna. Szansa i ryzyko*, Wydawnictwo Akademickie Żak, Warszawa 2004.

⁵ Cf: W. Cichosz review of J. Koziński book entitled: *Transgresja i kultura*, Wydawnictwo Akademickie Żak, Warszawa 2002, pp. 2, 4, [in:] „*Studia Gdańskie*”, ed. M. Bał, 2004, Vol. XVII, pp. 274–277.

⁶ This work presented only part of results of wider scientific inquiry based on this thesis.

The statements made during work with students may be classified in 2 groups. The first of them is made up by the students who consider themselves to be teachers (52 persons), and who internalise and identify themselves with being a teacher. All the tasks and works showed consideration of their place in education. Here are selected examples of their statements:

“Shaping teacher competencies is a very important element in the work of the teacher. It allows us grow and continuously improve our knowledge and skills. The world around is changing and this is why it is so important for us to catch up with it and change along.”

“I believe that the most important step for us, future teachers (...), is to recognise the competencies we already have and those which we are still lacking. I believe that many teachers whom I had opportunity to meet in my educational process forgot about supplementing the lacking competencies or allowed themselves becoming so much subjected by the routine of teacher work that they forgot that each pupil is different and should be regarded as an individual.”

The second group (106 persons) constituted of the students who were observers to events and who formulated their statements in categories of teacher duties:

“The teacher should have strong motivation to work on himself/herself, on improving the areas which require improvement. As a result, they should cope not only with the proper transfer of knowledge, but also with solving of problems, which is highly important because the teacher must cooperate with disciples, parents and colleagues.”

“...The teacher should inspire disciples, encourage to work, but should also acquire new competencies which allow him/her professional development and promotion.”

“The teacher should make efforts to develop his/her competencies in a balanced way with a view on the target group of students.”

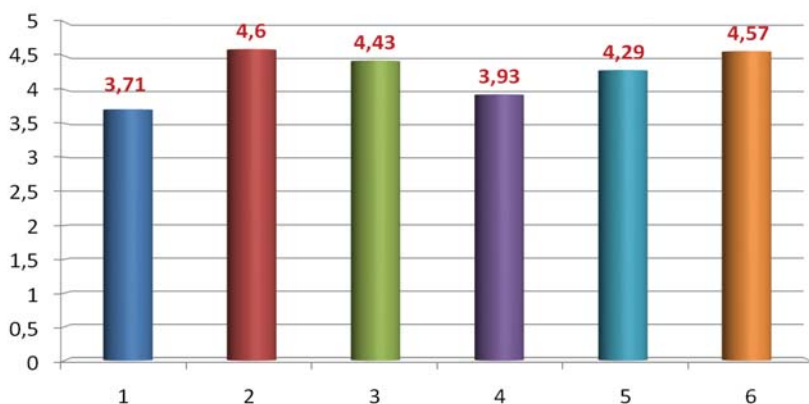
“The teacher who is aware of his/her profession is educating himself/herself, enhances his/her qualifications, (...), and for this will develop personality, hobby, and will become interested in many walks of life, develop his/her outlook, strengthen or revalue his/her hierarchy of values, will intensely develop his/her moral, creative and... research attitude.”

I see in both groups a major role of own experience, personal experience (the descriptions of relations with the teachers whom the students met). The students interpreted the impact of events from the past, from their own school years, on their current attitude to

education. Irrespective of the type of experience (positive, negative), they could make conclusions from them. In some persons, major strength resulted from opposing what happened and how critical their opinion about the school and the teachers was. Preparing to meet the challenges of the modern world, they very carefully approached their first clash with the school practice in a role different than before, as a person running the classes. With this background, after completing the full pedagogical practice, almost finishing the post-graduate studies, the students began self-assessment of their teacher competencies.

IT and media competencies,⁷ expressed with:

1. Knowledge of a foreign language (foreign languages) at the level sufficient for communication with media (mostly the internet)*⁸
2. Knowledge of computer operation, technical equipment, new media* (have the skill of using databases, networks, including the internet, email),
3. The skill of using modern technologies in support of their own and disciple teaching and learning processes,
4. The skill of creating original educational programmes and making them available in the internet,
5. The skill of using e-learning courses*
6. The skill of using software to create tests in the electronic version, transfer of content (multimedia presentations)*.



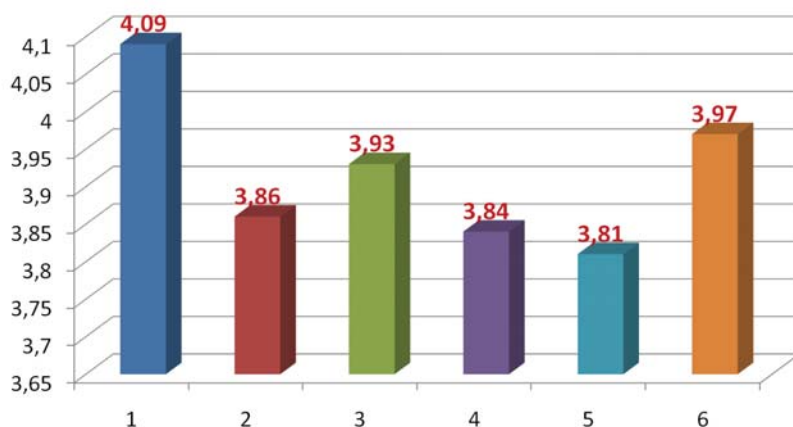
⁷ Cf. D. Kukla, *op. cit.*; cf. J. Szempruch, *Nauczyciel...*, *op. cit.*; idem, *Pedagogiczne...*, *op. cit.*

⁸ The * symbol means enrichment of the definition adopted by the Team of Pedagogical Preparation with the element supplemented by the Author on the basis of own conclusions and observations of the educational reality.

These competencies have been assessed highest by the students, which corresponds with the modern vision of the world in which images, new technologies, and virtual spaces prevail. In the virtual world, students feel best grounded, as they have the skill of using databases, networks, including the internet, email, in a very good degree (with the average 4.6) and use knowledge to create tests in the electronic version, to transfer content (multimedia presentations), with the average 4.57. The worst result, although in a high (good) level, was recorded for assessment by the students of the skill of creating original educational programmes and making them available in the internet (3.93) and knowledge of a foreign language (foreign languages) at the level sufficient for communication with media (3.71).

Interpretation and communication competencies⁹, expressed with:

1. Knowledge of interpersonal communication and the skill of using it for educational purposes,
2. The skill of interpretation of various educational situations and adjusting own style of communication with the disciple to them,
3. The skill of making and maintaining contact with the disciple, as well as proper receiving and interpreting educational messages,
4. Understanding the dialogue nature of the teacher-disciple relationship and the skill of proper formulation of educational messages,



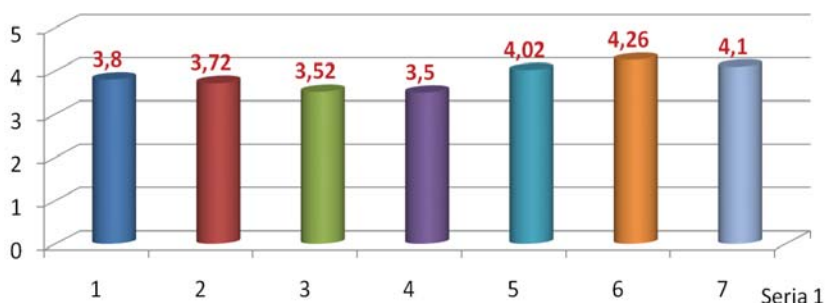
⁹ Cf. D. Kukla, *op. cit.*

5. The skill of using non-language means of expression appropriate for the situation (non-verbal communication),
6. Improving correctness, legibility and ethical nature of own language behaviour: the skill of shaping linguistic sensitivity of students.

Interpretation and communication competencies in one only item of knowledge about interpersonal communication and the skill of using it for educational purposes were assessed as good (4.09). Other elements which form this area of competencies applied to the area of skills and were within the range of average values from 3.81 to 3.97. The lowest value in self-assessment was attributed to the skill of using non-verbal communication in the process of education (3.81).

Creative competencies,¹⁰ expressed with:

1. Understanding and knowledge of the specific nature of pedagogical activities as a creative and non-standard process,
2. Knowledge of the possibilities and safe limits in making creative changes in the work of the teacher and of the school,
3. The skill of creating and transforming elements of one's own skills and tools (e.g. development of the original programme of one's own subject taking into account the so-called inter-subjective paths),
4. Understanding and the skill of acting for the benefit of increasing autonomy of educational subjects,
5. The skill of critical thinking and stimulating individual development and critical thinking in one's students, as well as their self-education and work on themselves,



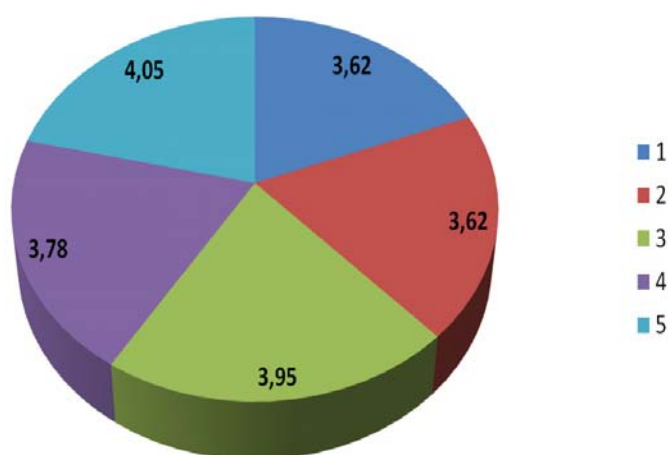
¹⁰ *Ibid.*

6. The skill of planning own concepts of professional development and self-education,
7. The skill of studying one's own practice, reflecting on it and creating professional knowledge on this basis.

Creative competencies expressed with the skill of planning one's own professional development path have been assessed highest (4.26), and the values above the good mark were also recorded for the skills of self-evaluation, reflection (4.1) and critical thinking, working on oneself in the teacher and in the students (4.02). The component of understanding and the skill of acting for the benefit of increasing autonomy of educational subjects was graded lowest, as satisfactory plus.

Competencies of cooperation,¹¹ expressed with:

1. Having knowledge of correctness of cooperation and social development of the disciples and the skill of its appropriate use for creating the pedagogical environment from the disciple group,
2. Understanding the relationships between one's own interaction style and social processes in the disciple group,
3. The skill of modifying one's own style of managing the group of disciples depending on the degree of their development and social and moral maturity,
4. The skill of solving conflictual situation by negotiating and compromise and developing this skill with the students,



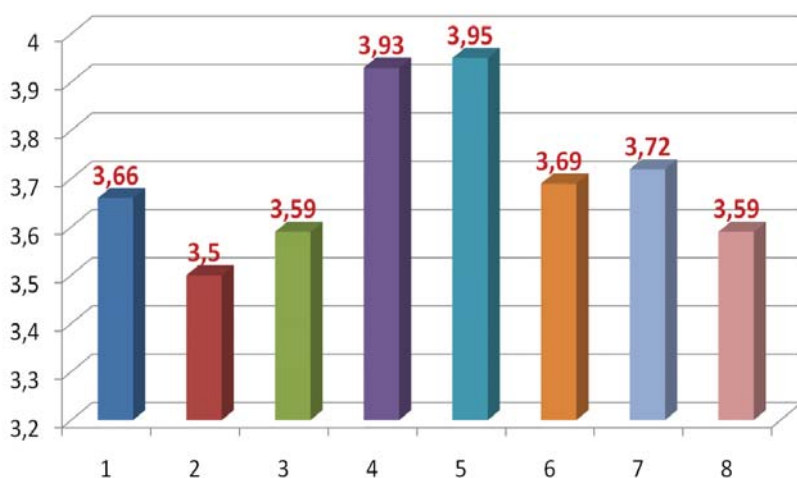
¹¹ *Ibid.*

5. Understanding the need of cooperation with off-school participants in the educational process and the skill of cooperation for the benefit of creating conditions for learning in cooperation and shared responsibility for the final result¹².

In the area of cooperation competency, the highest grading was assigned to the item related to off-school cooperation (4.05), which corresponds with the modern trend in activities for the benefit of development of the disciples in various educational spaces. The lowest grading was recorded for the elements related to knowledge of correctness of cooperation and social development and understanding relationships between one's own style and social processes in the disciple group (3.62).

Pragmatic competencies,¹³ expressed with:

1. The basic psychological, pedagogical and methodological knowledge about effective professional action,
2. The skill of recognition of the initial conditions for pedagogical activities (e.g. diagnosing the knowledge in the disciple, disturbances in his/her development, special skills, interests or educational needs),



¹² *Ibid.*

¹³ *Ibid.*

3. Understanding the need and skill of differentiating activities depending on the diagnoses, the skills of the disciple in the subject and cultural conditions,
4. The skill of using the basic elements of the skills and tools of the teacher in educating and training (methods, didactic rules, organisational forms, the skill of converting objectives of education into operations),
5. The skill of developing one's own programme for execution of the subject on the basis of curriculum grounds and other teaching programmes,
6. Understanding the processes of school evaluation and the skill of development of various techniques for control of achievements in disciples and using them,
7. The skill of examining and documenting own actions, assessing effectiveness of these actions and appropriate adjustments to them,
8. Knowledge of the Polish system of education, professional regulations in the law and the skill of managing documentation required by the school.

Pragmatic competencies are the weakest of all areas of teacher competencies in the light of self-assessment in the students. The highest values were obtained for the elements related to using the workshop of teacher's vocation (3.95) and development of one's own programme of execution of the subject on the basis of this curriculum basis (3.93). The lowest values were assigned to diagnostic skills in the scope of knowledge in the disciple, disturbances of development, skills (3.5) and differentiation of activities depending on the recognised conditions (3.59) and knowledge of the Polish system of education and the documentation managed by the school (3.59).

Analysis of teacher competencies on the basis of the opinions of practical training tutors

The pedagogical practical training executed by the students during the studies were aimed at comparing the theoretical knowledge acquired during the studies (including in the scope of pedagogy, psychology, sociology) with the pedagogical and teaching practice and the skill of using theory in designing own actions; developing the habit of continuous enhancing of qualifications and the capacity of

flexible adjustment to the evolving reality; as well as building bonds with the future work environment and developing skills of becoming identified with the profession. Various criteria were subject to providing opinions, presented here along with the obtained average grades in the following tables.

Table 1. Categories of assessment of the students by the tutor of the practical training

Assessed category:	Average grades
Theoretical background	4,9
Practical background	4,8
Characterological predispositions	4,8

Characteristic of student	Average grades
Attitude towards duties	4,9
Attitude towards students	5,0
Attitude towards other employees	5,0
Teamwork skills (cooperation)	4,9
Involvement, willingness to work	5,0
Activity, creativity, initiative	4,8
Execution of tasks	4,9

In all the categories of assessment, the students were graded very good by their tutors (132 persons), with good grades for 25 persons, and satisfactory grade for 1 person. Criteria of assessment were also specified in a descriptive way. I shall only state those elements of them which contribute to the tasks executed by the students autonomously: drafting of summaries for the classes, didactic aids, distribution of the material and the subjects of the classes, preparation of questions for examinations, multimedia presentations, correction of tests, help in execution of the preventive programme, activating the disabled, using activating methods during the conducted independent classes.

Summary

In the modern world, the teacher is expected to be versatile and multidimensional. On one hand, this applies to his/her knowledge (its continuous updating, enriching and supplementing), on the other

hand emphasis is put on developing skills by way of participation in training activities, workshops, enhancement courses and other forms of additional education. The teacher's attitude is also expected to be creative, originality and innovativeness.

The competencies of the students are important, but are not there "for good," so they need to be developed, taken to higher levels of exhibition and using them in one's own work. Teacher competencies constitute the structure which is subject to continuous development under variable and uncertain conditions of the world around. The causes of this situation are the transformations happening in various realms of life: social, economic, global, as well as in the accepted vision of the modern man.

In the light of the obtained data, one can conclude that students consciously analyse the type of their chosen vocation: the teacher profession. They perceive weaker areas of their preparation, which is a mark for further growth or resignation from the plans of undertaking work as a teacher. With participation in postgraduate studies (grades obtained from lecturers, opinions from practical training teachers), they verify substantively and methodically their own preparation for working as a teacher. The shared responsibility for the educational decisions made presented by the students shows that they are ready to meet requirements of modern times and challenges facing the school: crossing the limits of own possibilities in the scope of the competencies mastered, the method of thinking about the way of obtaining them, analysing the method of reaching goals. Shaping teacher competencies executed by the students refers to four constructive transgression actions stated by J. Koziński:

- practical actions focused on the physical world, or transgression "on the objects" (having favourable working conditions for teachers: computers, network access, the platform, modern communication devices, verified in the area of IT and media competencies, the global average grade for this competency is 4.25 and 3.70 for pragmatic competencies),
- actions focused on people, or transgression "on the other" (expansion of the educational space, of the scope of impact of teachers on disciples in the context of shaping the attitude of shared responsibility for oneself, one's own development, verified with competencies of cooperation: 3.80),
- symbolic actions ("on symbols"), or individual transgression (self-improvement, enhancing knowledge, skills, positive atti-

tudes, creative activity, going beyond the current mental structures, selection of various methods of teaching adjusted to the individual development of the child, verified with interpretation and communication competencies: 3.92),

- self-creation actions (“on oneself”), or self-development, intentional shaping of the character, and the personality of the disciple, enriching personal experience of the teacher and of the disciple, providing support (verified with creative competencies, with the global average grade of 3.84).

The values obtained by those examined in the area of their competencies in the light of self-assessment are within the good level. Creative competencies, which are the priority for UNESCO in the light of the documents of the Commission on Education for the Twenty-first Century, were ranked third by the students. This shows how difficult it is to be in continuous readiness for new challenges, and taking non-standard, creative actions beyond set patterns.

It follows from the opinions of the practical training tutors who had direct contact with the students that these ranks are definitely higher and are at the very good level in all the assessed criteria in reference to: duties, students, employees of the facility, team work skills, cooperation, commitment and willingness to work, activity, inventiveness and initiative, as well as in the execution realm of the entrusted tasks.

In the realm of education, continuous movement, changes resulting from complexity of pedagogical situations and their uniqueness and difference make defining teacher competencies the area which should be open to modifications, and shaping competencies of the future teachers should be executed in all educational spaces, thus allowing “going beyond limits” on their own development path. The teacher can show the path but the rest have to be done by the student through practice and hard work. The teacher cannot walk it for student.

The future teachers experiencing shared responsibility for the educational process executed by them, and the possibility of creating and modifying it will allow initiation of changes in a new dimension: the student centred approach school.

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ATTITUDES OF TEACHERS TOWARDS INTERCULTURAL EDUCATION IN THE LIGHT OF EMPIRICAL STUDIES. STUDY REPORT

Abstract

The studies presented in the work pertain to one of the numerous areas included in the theoretical and empirical analysis. They are also a record of the conducted empirical analyses, which will be published in full in the form of a book that will be a socio-pedagogical study regarding the position of intercultural education in the school environment. The presentation concentrates on the attitudes of teachers towards intercultural education, including the following three components: cognitive, emotional, and behavioural one. The empirical material (both quantitative and qualitative research) was analysed based on collected results obtained through research methods and techniques in accordance with the triangulation technique.

Key words: attitudes, cognitive component, emotional component, behavioural component, teacher, intercultural education

Introduction

The preparation of teachers to work in a multicultural society, their cultural competence, and the degree to which the school is open to foreigners and their problems, the undertaken actions, the presence of cultural differences and their pedagogical implications, the dissimilarity of cultural codes and the presence of cultural stereotypes, seem to be the factors influencing teachers' attitudes towards accomplishment of educational contents with regards to intercultural education. What is more, they also define the attitudes of the teach-

ers towards students who are culturally “different”, assistance with student adaptation and cultural integration. Said attitudes include both the realisation of the contents with regards to intercultural education, and the process of colliding with cultural diversity in direct contacts with students of different nationalities (Nikitorowicz 2007, 2009, 1995; Lewowicki et al. 2009, 2008, 2006, 2003; Szczurek-Boruta et al. 2006, 2008, 2007; Ogrodzka-Mazur et al. 2003; (ed.) 2006 a, b; 2008; Dobrowolska 2010 a, b, c; Gudykunst, Kim 2000; Chromiec 2004).

Basic information about the research

The objective of the presented research includes the attitudes of the teachers towards intercultural education, perceived as realisation of the contents of the teaching process in multiculturalism and work in a multicultural class, or school, environment. The idea of an attitude – quite ambiguous indeed – is interpreted in a number of ways by individual scientific disciplines. Due to their diverse methodologies, when referring to the attitude we correspond to various theoretical assumptions (Rokeach 1968; Newcomb et al. 1970; Hilgard 1967; Reykowski 1973, 1976, 1992; Nowak 1973; Mika 1984; Marody 1976). The idea of an attitude used in pedagogy is associated with currents in psychology, whereas in empirical research, according to the concept by S. Nowak, the attitude of a man towards some object is all the relatively permanent predisposition to evaluate said object and reacting emotionally thereto, relatively constant convictions pertaining to the nature and features of the object, and relatively constant dispositions to act towards the object (Nowak 1973: 7). Every attitude is characterised by a specific composition of three components: the cognitive, emotional, and the behavioural one (Mika 1984; Krech et al. 1962: 117; Tomaszewski 1963). The cognitive factor comprises convictions, knowledge of an individual; while emotions determine the feelings of various load (positive and negative) that one has towards the object of the attitude. The behavioural component defines the manners of execution of the attitude resulting from concomitant emotions.

Because of the structure of attitudes in the case of teachers' attitudes towards intercultural education, some particular variables have been adopted with regards to each of the components. In the case of the cognitive component, they include amongst others: teach-

ers' knowledge about other cultures, their cultural and intercultural competence, pedagogical training and preparation for working with a student of another nationality, and accomplishment of intercultural educational contents, which is a function of issues in the field of multiculturalism. On the other hand, the emotional component of the attitudes of the surveyed teachers is defined by the following variables: the type of emotions in relation to the representatives of national and ethnic minorities, the attitude of students to the students of other nationalities, tolerance towards the "strangers" and the culturally "different", and satisfaction with working with a student of other nationality. Behavioural aspects of the attitude of the studied persons are determined by: initiatives and actions in the field of intercultural education and their forms, practical benefits from working with a foreign student, and obstacles ensuing there from.

The objective of the research in the scope presented herein, with regards to the issue of teachers' attitude towards intercultural education, was to find the answer to the question below: ***What attitudes do teachers tend to adopt towards intercultural education?***

The diagnosis and depiction of teachers' attitudes towards intercultural education, including but not limited to the three underlying components of these attitudes (the cognitive, emotional, and the behavioural one), was conducted on the basis of empirical material collected with the use of a diagnostic survey (Original Questionnaire designed for teachers). The analysis of the papers yielded information on the realisation of intercultural educational contents. Moreover, an observation with participation and an interview with a random group of teachers working with children of other nationalities (especially Romani, Chechen, and Vietnamese children) were also applied. Statistical analyses were employed to evaluate the collected empirical material with the use of descriptive and correlative statistics. On the basis of triangulation type categorization by K. Denzin, method triangulation was applied (Hammersley, Atkinson 2000: 235–236).

The research involved 344 teachers in randomly selected urban and country schools (primary schools and junior secondary schools) located in three adjacent provinces: mazowieckie, podlaskie, and lubelskie. In order to verify the prepared study tools, a pilot study was performed on a random group of 150 teachers, based on which a few positions in the questionnaire were modified. The analysed sample is representative in the area of dependent variables, such as: the sex, age, professional qualification, years of work, environment (city, country) of the respondents.

Results of Research

1. Overall description of teachers' attitudes towards intercultural education

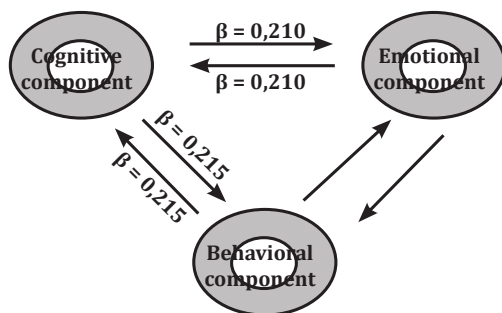
Pursuant to the structural theory of attitudes, when determining the attitude of the teachers towards intercultural education some detailed variables corresponding to the individual components of an attitude were used. The cognitive component was set on the basis of the average value of teachers' responses to the indicator questions of the Original Questionnaire concerning knowledge about other cultures, the possibility of realisation and realisation of contents in the field of intercultural education and intercultural competence. The foundation for determining the emotional component was teachers' satisfaction with working with children other than of Polish origins, the assessment of the influence of other nationalities on customs, norms and interpersonal relations, and tolerance of "others", "strangers". The behavioural component is work and willingness to work with a child from a different cultural background and its pedagogical consequences, foreign child adaptation to the Polish schools, and the effect of other nationality students on the customs, practices and norms of the school.

The general level of teachers' attitudes towards intercultural education was evaluated using the standard deviation method. Based on the ranges of the levels of attitudes of the study teachers towards intercultural education, we can say that the majority of them (66.3%) represents an average level. While nearly one respondent in five (21.5%) represents a high level of attitudes, 12.2% of the teachers have a low level of attitudes towards intercultural education.

Teachers from urban schools (26.2%) and those experienced with working with children coming from other cultural backgrounds (28.3%), more often than other study participants displayed a high level of attitudes towards intercultural education. It might result from experiencing "other" cultures in a direct contact with a foreign student and a positive approach to otherness. Whereas, country school teachers (16.8%), who have never worked with children of other origins (14.7%) more frequently declare a low level of attitudes. Perhaps, it is a consequence of a lack of cultural experience, greater "insularity" of the community, and unfamiliarity with "foreign" cultural patterns, or stereotypes.

The relations occurring between the individual components of teachers' attitudes towards cultural education are presented through the multiple regression model (Fig. 1).

Fig. 1. Relations between the individual components of teachers' attitudes towards cultural education



The β value indicates that the relation between the cognitive component and the emotional component, and between the cognitive component and the behavioural component is weak. The analysis reveals that the cognitive component affects the emotional component ($\beta=0.210$) with quite the same strength as the behavioural component ($\beta=0.215$), and that both emotions ($\beta=0.210$) and actions ($\beta=0.215$) influence the shaping of the behaviour towards the subject of the attitude. No relation between the emotional and behavioural components has been detected.

1.1. The cognitive components of teachers' attitudes towards intercultural education

The highest level of the cognitive component – assessed with the application of the standard deviation method – is characteristic of 17.7% of the study teachers. 13.7% of them show a low level thereof. The largest number of respondents (68.6%) is at an average level. The above indicates that teachers' knowledge about other cultures, their intercultural competences, and accomplishment of intercultural education contents in the majority of them is average. Less than one fifth of the polled, simultaneously with a high level of cognitive competence of their attitudes towards intercultural education confirms awareness of the meaning of knowledge of other cultures and the importance of intercultural competence necessary to realize educational contents in the field.

The cognitive component significantly correlates with the school environment ($p < 0.013$) and experience in working with children coming from a divergent cultural background ($p < 0.006$).

Teachers from urban schools (20.5%) and those experienced with working with children coming from other cultural backgrounds (23.6%) more often than other study participants display a high level of the cognitive component of the attitude towards intercultural education. Whereas, country school teachers (19.5%), who have never worked with children of other origins (17.5%) more frequently declare a low level of said component.

The teachers reviewed were also asked about **self-evaluation of one's knowledge about other cultures**. The study demonstrates that the evaluation of knowledge on other cultures is diversified by pedagogical work experience ($p < 0.0048$), school environment ($p < 0.000$) and experience in working with children from a foreign culture ($p < 0.000$).

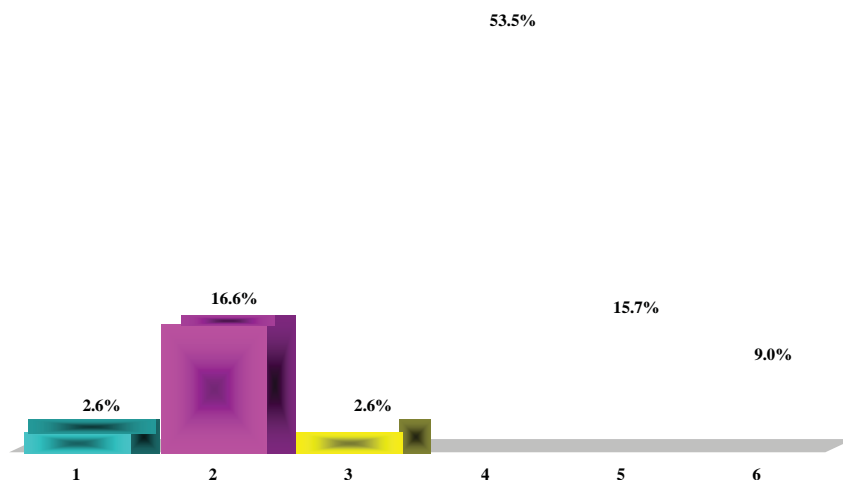
The respondents' selection of national minorities or ethnical groups was highly diversified. The justifications of the choices included some personal aspects of the polled (family relations, origins, sentiments), historical issues (historic continuity and common fate), compassion (Holocaust), interest in culture and curiosity, awareness of the limited knowledge they have about a given nation or a group, willingness to verify their cultural stereotypes, pragmatism ensuing from the fact of communing with representatives of a particular culture.

In the case of **realisation of contents in the area of intercultural education**, no statistically significant interdependencies between them and social and demographic factors have been found. However, there is an influence of the subject taught on the perception and realization of intercultural contents. To accomplish said goals, the teachers of arts use elements of material cultures of various nations. The teachers of English as a foreign language highlight the importance of the English culture in the exploration of cultural differences. In catechists and religious instruction teachers there is a discernible element of cultural differences in the teaching of religion, which they also view as a cultural aspect. They also point to missionary activities as enabling one to explore other cultures and intercultural co-operation.

Teachers indicated both traditional and digital means used in teaching, such as multimedia. Nevertheless, it is typical for the analysed teachers to point out Internet as a substantial source of intercultural education contents (Lewowicki et al 2008).

An assessment of cultural and intercultural competence of the study teachers is presented on Fig. 2.

Fig. 2. An assessment of cultural and intercultural competence of the study teachers (N=344)



1 – I have none, 2 – They are insufficient and I need to extend them, 3 – They are unnecessary in my work, 4 – I am trying to broaden my competences through self-education, 5 – Every teacher has them, as they are an element of professional competence in pedagogical work, 6 – Unable to evaluate

The evaluation of cultural and intercultural competences significantly correlates with pedagogical work experience ($p < 0.029$).

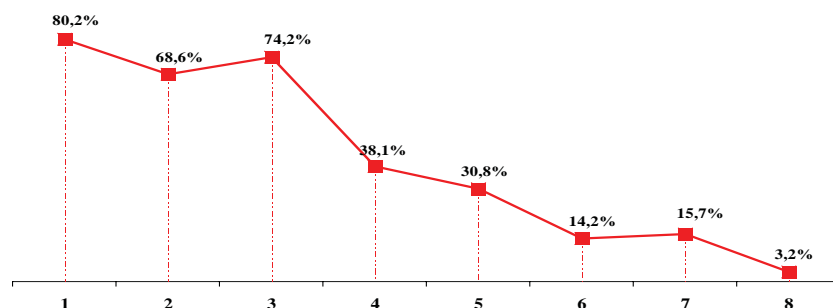
On the basis of the Cramer's V correlation coefficient, we may state that the relation between the analysed variables in the study population is unclear (0.153).

Figure 3 represents the **key attributes of cultural and intercultural competence** enumerated by the respondents.

Key attributes of cultural and intercultural competence vary according to sex ($p < 0.024$), professional qualifications ($p < 0.049$; 0.025), school environment ($p < 0.000$; 0.035), and experience in working with children from another cultural background ($p < 0.009$). **Professional training preparing the teacher to work with students of different origins** significantly correlates with pedagogical work experience ($p < 0.001$), professional qualifications ($p < 0.001$; 0.036; 0.035), school environment ($p < 0.005$; 0.003) and experience

in working with children coming from a different cultural background ($p < 0.000$; 0.027; 0.042; 0.015; 0.005; 0.012).

Fig. 3. Key attributes of cultural and intercultural competence



1 – Having knowledge about other cultures and the need to broaden it, 2 – Ability to cooperate with the “others” and to empathize, 3 – Tolerance and rejection of stereotypes for the benefit of a dialogue and mutual understanding, 4 – Knowledge of foreign languages, 5 – Ability to adapt to new cultural circumstances, 6 – Understanding “others” without engaging in adaptation problems, 7 – Tolerant attitude, while admitting that the “other” should adapt to the conditions in his/her target country, 8 – Other expressions

1.2. The emotional component

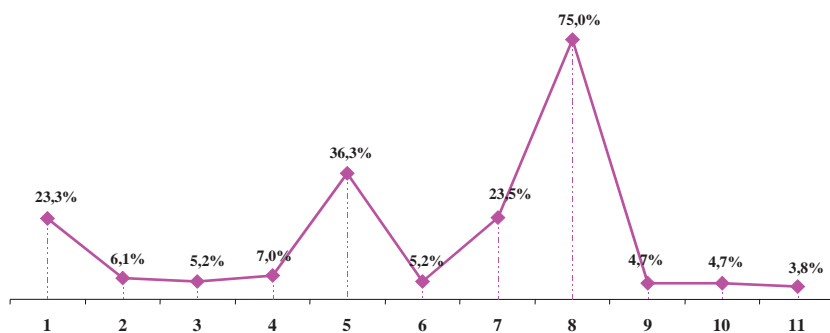
The level of the emotional component of teachers’ attitudes towards intercultural education was evaluated using the standard deviation method. No statistically significant relations between the social and demographic factors and the level of the emotional component were observed. The majority of the study population (82.0%) displays an average level of the emotional component of their attitudes towards intercultural education. Every tenth respondent has a high level of the component, whereas 7.4% of the teachers have a low level thereof.

Satisfaction with working with children of nationalities other than Polish is differentiated by sex ($p < 0.001$) and experience in working with children from a foreign culture ($p < 0.027$). Women (44%) and those experienced in working with children of other nationalities (44.9%) are satisfied with the work.

Tolerance towards “others”, “strangers” is differentiated by sex ($p < 0.023$) and experience in working with children from a foreign culture ($p < 0.023$). Men (63.6%) and those experienced in working with children of other nationalities (63.98%) are tolerant towards “others” and “strangers”.

Attitude towards representatives of other countries, national and ethnic minorities are shown in Fig. 4.

Fig. 4. Attitude towards representatives of other countries, national and ethnic minorities



1 – I am interested in everything related to “other” cultures, 2 – I am rarely interested in the problems of “others” because I have enough of my own, 3 – I believe that their presence in Poland is a source of problems and conflicts, 4 – I am indifferent to them, 5 – I really like mixing with representatives of “other” cultures as it enriches me, 6 – Their presence in Poland is a financial burden for us, 7 – I sympathize with immigrants and I can imagine myself in the emigration context, 8 – I believe that everyone, regardless of its origins, has the right to a safe and happy life, 9 – I believe that everyone should live in one’s own country rather than be a burden for others, 10 – My attitude towards them is unspecified, 11 – Other

The attitude towards representatives of other countries, national and ethnical minorities significantly correlates with the gender ($p < 0.000$) and experience in working with children of other nationalities ($p < 0.027$; 0.033 ; 0.038). Women (95.0%) and teachers experienced in working with foreign children (96.9%) are not indifferent to representative of other states, and national and ethnic minorities. Teachers having experience in working with children other than Polish more often consider it important to be interested in the issues of “others” despite one’s own problems (97.6%) and think that representatives of other nationalities do not need to live in their own country and are not burden to other people (98.4%).

1.3. The behavioural component

The majority of the polled teachers (71.5%) displays an average level of the behavioural component of their attitudes towards inter-

cultural education. 16.6% represents a high level thereof, whereas 11.9% – a low level.

The presence of a child of a different nationality in the Polish school significantly correlates with gender ($p < 0.013$; 0.001; 0.043), school environment ($p < 0.001$; 0.030), and experience in working with children coming from a divergent cultural background ($p < 0.000$; 0.002; 0.044).

Women are more likely than men to notice that the presence of a child from another cultural background in the Polish school *does not hinder everyday didactic and educational work* (93.0%), *does not introduce turmoil into school, and does not disturb its atmosphere* (99.3%), and *does not stimulate searching and gaining new knowledge regarding other cultures* (69.3%). Likewise, country school teachers hold that the presence of children from other countries in the Polish school *does not hinder everyday didactic and educational work* (97.3%), and *does not integrate teachers to undertake common actions and to design innovative methods of working with a “foreign” student* (76.5%).

Teachers without any professional experience in working with other nationality children more frequently than other polled regard the presence of culturally “different” children in the Polish school as not hindering the didactic and educational work (96.8%), not “compelling” other educational activities and not giving rise to any conflicts (96.3%), not introducing turmoil to the school and not disturbing its atmosphere (99.5%).

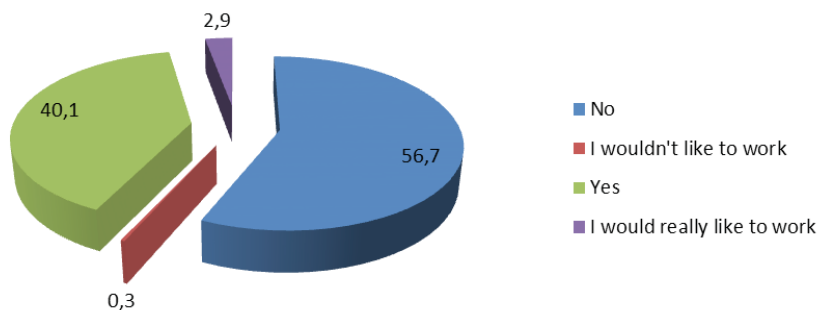
The analysed teachers described the **types of actions undertaken** by them for the benefit of common integration. They comprise, amongst others: trainings, cooperation with non-governmental organizations (NGOs), class and school celebrations, special days devoted to a given culture in the school (such as the Day of the Chechen Culture).

A positive evaluation of the readiness of the Polish school to work with children of other nationalities the study population justifies as follows: the school is open to new challenges resulting from multiculturalism; the attitudes and tolerance of the teachers are adequate; there is a need of legislative changes with regards to the organisation of school work in the presence of multicultural students; changes in the didactic and educational process; psychological and financial support to students of other nationalities. The authors of the presented opinions direct our attention to transformations in the substantive preparation of the teachers, as they are aware they

are necessary in the context of social migration. They also point at deficiencies in the factual teacher training, impediments in the organisation of school work, and adaptation problems of culturally “different” students.

Experience in direct contact with children from another cultural background is claimed by 40.1% of the respondents, whereas 56.7% have no such experience, which differentiates the nature and forms of work in two study groups (Fig. 5).

Fig. 5. Working with a child from a different cultural background (of other nationality)



No – 56,7%; I wouldn't like to work – 0,3; Yes – 40,1%; I would really like to work – 2.9%

The polled were also asked about the specific nature of **difficulties experienced when working with a child from a “different” culture**. The opinions presented by the teachers reveal a diverse picture of difficulties and problems incidental to working with children representing “other cultures”. When indicating said difficulties, numerous study teachers simultaneously enumerate a nationality or an ethnic group (e.g. Chechen, Romani).

As part of the conducted diagnostic survey, the analysed teachers described the **benefits they draw or could draw from working with a different nationality student in the Polish school**.

Respondents' statements is enriched with empirical materials in the form of narrative interviews of an expert nature conducted with teachers working with children of other nationalities. The interviews were conducted in an open manner and were not biased. They were a narration supplemented with researcher's questions, depending on the structure and context of the statement. The interviews were carried out with teachers having experience in working with Romani, Chechen, and Vietnamese children.

A large part of the collected opinions reflects well on the tolerance and willingness to help the “strangers”, it confirms that multiculturalism in the Polish school is perceived as an asset in the process of learning from “others”, enriching one’s own culture, creating conditions for extending teachers’ pedagogical skills. We may speak of them as being open to new experience related to the functioning in a multicultural environment and acquiring cultural and intercultural competence. They view their work not in terms of a problem, educational difficulties, but rather novel situations that will let them develop both personally and professionally.

Conclusions

1. The majority of the polled teachers (66.3%) represents an average level of attitudes towards intercultural education. Merely one fifth of the study population shows a high level of attitudes, whereas nearly every tenth teacher – a low level.
2. There are no strong relations between individual components of the attitudes of the study teachers (cognitive, emotional, and behavioural components). There is a weak relation between the cognitive component and the emotional one, and between the cognitive component and the behavioural one. However, no relation was observed between emotions and actions of the analysed teachers.
3. Having regards to the cognitive component, evaluated with the application of the standard deviation method, a relation between the school environment (city, country) and experience in working with children from other nationalities was established. Based on the above, we may assume that due to the more intense dynamics of social process (migrations, interpersonal relations with the representatives of “other” cultures) the urban environment creates favourable conditions for broadening knowledge and developing teachers’ competence in the area of multi- and interculturalism. On the other hand, working with children from different cultures (multicultural experience) is another factor adding to teacher’s knowledge and his competence, which results from direct contact with the “foreign”. Realization of educational contents regarding intercultural education is determined by the type of the school subject taught, while professional work experience of the study population affects the broadening of one’s cultural

and intercultural competence (77.8% of the studied teachers in the group having professional work experience of 11 to 15 years).

4. The emotional component of the attitude of the analysed teachers, assessed with the application of the standard deviation method as well, does not reveal any correlation between the social and demographic factors (sex, environment, professional work experience, professional qualifications). However, the satisfaction with working with children of other nationalities variable is differentiated by gender and experience in working in a multicultural school. Women more often than men confirm to be satisfied and the teachers having a long-time experience of working with children of other nationalities do, too. Men, on other hand, more often than women declare their tolerance towards the "others".

Categories specifying the attitude of the polled to the representatives of other countries, national and ethnic minorities, indicate that there is a correlation between the sex and experience in working with other nationality children. In addition, women and teachers with multicultural experience exhibit greater interest in the "foreigners".

5. The study demonstrates that as far as the behavioural component is concerned, women more frequently than men are more keen on didactic and educational work with a child from another country. Such actions are further proved by the teachers from rural communities, even though their contact with students that are culturally "different" is much smaller. Lack of multicultural experience in the school does not have a negative effect on the presence of "foreigners" in the school.

The study population specified the forms of work with children of other nationalities, described their initiatives and activities, and enumerated any difficulties encountered and benefits gained. The interviews with teachers were analysed in terms of quality. The results of said analysis indicate that they are interested in extending their competence, and in working in a multicultural school.

6. Research proves that teachers' knowledge about intercultural education and their competence in the field have little influence on teachers' behaviour, their actions, and pedagogical initiatives, and that they do not significantly affect emotions expressed with satisfaction with working with a different nationality student, attitude towards the "others", and tolerance (weak relation). What is more, emotions and actions of the study teachers in the area of intercultural education have no significant influence on knowl-

edge and intercultural competence extension (weak relation). No relation was observed between the attitude towards the “foreigners”, tolerance to them and satisfaction with working with children of other nationalities, and undertaking actions and pedagogical practice. Finally, also the practical side of activities performed by the analysed teachers with relation to intercultural education does not affect their emotional attitude towards a student of a different nationality (no relation).

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DIMENSIONS OF “EQUALITY” AND “INEQUALITY” IN THE SWEDISH COMPULSORY SCHOOL

Abstract

This article presents the neoliberal context for education, in particular for education at the level of the comprehensive compulsory school in Sweden. Neo – liberal changes, globalization have their references of „equality” and „inequality” in the areas of social life and education. Kastanjeskolan in Malmö is an example of a multicultural school that is trying to cope with the effects of global changes as a consequence of neo-liberalism and globalization.

Key words: equality, inequality, Swedish compulsory school, neo-libelism, globalization, multiculturalism

1. Areas of equality and inequality in the neoliberal view – contexts for education

In 2010, Eugenia Potulicka wrote with conviction that neoliberals discourse analysis carried out with Joanna Rutkowiak book entitled: *The Education involved in neoliberalism*, proves that there is an educational program of the corporate economy, which “is implemented for the formation of human quality corresponding to the needs of the doctrin. It is both a public program, as well as hidden”.¹ Marketability of social space is changing not only the place of the human in this space, but also changes the man himself.

“Individualism is one of the basic ideas of liberalism in general, and especially libertarianism. For the theory of liberalism was and is

¹ E. Potulicka, J. Rutkowiak, *Neoliberalne uwikłania edukacji*, Oficyna Wydawnicza Impuls, Kraków 2010, p. 311.

the basis for the assumption of supreme value of the human person endowed with autonomy and a unique identity and the ability to independently formulate a good idea. (...) EVERY MAN IS MANAGING OWN LIFE HIMSELF”²

In sociological terms, the structural unit concludes, as increasingly less dependent on community. A person is more and more autonomous, but also more and more decision-making and itself responsible.³ On the other hand, in spite of this change, there are some fixed elements, constituting our identity, our mentality, our habitus.

Sennett reads neoliberal culture as a field for the spread of meritocracy, where the investigation to craft specialization in some area beside the point. It is too large a cost to the individual in a changing, fluid world, as Bauman would say. Currently, “appreciates the potential ability instead of achievements.”⁴ The ideal is thus becoming a „unit set short-term, focused on potential ability, quick to reject the experience already acquired.”⁵ As indicated on Sennett, existence of most of society is based on “sustainable living narrative” that is not what expected in a instant culture. In 1998, Zbyszko Melosik and Tomasz Szkudlarek wrote about longing to return and discourse space – „local, small homelands, ethnic roots, neighborhoods and landscapes” and the essence of this return to „reconstruct identity exhausted conflicts in the sphere of existing, broader identification”.⁶ We should now consider whether the placement of local, fixed, detached from the process of globalization is even possible? If there is some variant of the “reconstruction of identity”, it is impossible to repeat the pre-neoliberal and global world order, which has changed most of all places, and the types of relationships. George Soros summed up the changes in the sphere of the interpersonal saying that „relationships” were replaced by “transactions”, and as emphasized by Sennett, social issues – culture, economy and politics are subordinated by constantly learning.⁷

² *Ibid.*, p. 47.

³ A. Giddens, *Nowoczesność i tożsamość. „JA” i społeczeństwo w epoce późnej nowoczesności*, Biblioteka Socjologiczna, Wydawnictwo Naukowe PWN, Warszawa 2007, pp. 8–9.

⁴ R. Sennett, *Kultura nowego kapitalizmu*, Warszawskie Wydawnictwo Literackie Muza, Warszawa 2010, p. 7.

⁵ *Ibid.*, p. 8.

⁶ Z. Melosik, T. Szkudlarek, *Kultura, tożsamość i edukacja*, Oficyna Wydawnicza Impuls, Kraków 1998, p. 55.

⁷ R. Sennett, *op. cit.*, pp. 22–23.

For Zygmunt Bauman's no doubt that globalization has dominated and determined the world.

„We (...) believe „globalization” as the inevitable fate of the world, as well as an irreversible process that affects every one of us to the same extent and in the same way. We are „globalized” and being „globalized” mean almost the same thing for all involved in the process touches.”⁸

The result of globalization is, inter alia, mobility, but also the significant role the economic sphere while minimizing political and private spheres.

„In the private sphere, free market promotes individual acting for private business, calculating, *competing – homo economicus*. The notion of common purpose has been reduced to private preferences.”⁹

A particular area of concern is undoubtedly social education. The consequences of the neoliberalism is that its determinants affect all spheres – from managing and thinking about education in a global context, by changing the role of the staff – teacher student service provider reinforcing individualism while „watch of the” level of performance and results translate into profits in the direct or indirect form, by parents and caregivers equipped with educational vouchers and stressing the need to choose an educational institution, which will determine the lifelong path for their child, and finally by the „freedom” given to the child, understood as a preparation to self-determination and self-determination election with all its consequences. You can make assumptions consistent with the thesis of Pierre Bourdieu, the reproduction of social inequality, reproduction „structured structures” is a determinant of the whole of human life. The purpose of the school system is, according to Bourdieu, instilling a socially sanctioned, validated culture. Social classes legitimize the culture of a particular type, in particular it is clear in societies strongly dominated by the class structure, and use it to legitimize their own power over the other layers of society. „Dominated adopt the dominant culture without recognizing its arbitrariness, or the accepting of this arbitrariness.”¹⁰ Despite the pervasiveness, neoliberalism can also accept the theory of The Jerome Bruner Foundation.

⁸ Z. Bauman, *Globalizacja*, PIW, Warszawa 2000, p. 5.

⁹ E. Potulicka, *Nowa Prawica a edukacja*, Część II: *Reforma edukacji według modelu demokracji rynkowej oraz z perspektywy demokracji liberalno-etycznej i socjaldemokratycznej*, Wydawnictwo Edytor, Poznań-Toruń 1996, p. 249.

¹⁰ P. Bourdieu, J.-C. Passeron, *Reprodukcja. Elementy teorii systemu nauczania*, PWN, Warszawa 2006, p. 26.

Maria Dudzikowa emphasizes that for Bruner's system of education is not only an explanation for the transmission of cultural patterns, but must provide "alternative vision of the world and the desire to strengthen their research" and improve intellectually – that will allow the exercise to exceed their capabilities, going beyond everything provides education and culture can say – replace."¹¹

Even the dominance of neoliberal ideology leaves the area for "going beyond" the realm of meanings, rules, findings, but the question remains unanswered – how are we strong to overcome adversity encountered?

2. Areas of equality and inequality in society and education in Sweden

Today, there is no doubt that Sweden as the country underwent a worldwide wave of neoliberalism. We can find the directions of the changes in politics, economy and in education. Most long-term consequences are, of course, changes in the educational system. Although these changes are not so radical that they can be observed, as for example, in Great Britain during the reign of Margaret Thatcher, but further reforms in the sphere of education proposed by the government of Fredrik Reinfeld confirm this trend.

What E. Potulicka writes, quoting F. Mayor, „Education is subjected to a specific logic, which encourages the privileged classes to the placement of their children in “good schools”, „best high schools”, „good universities”. State education is entrusted with the task of managing school failure and distribution of certificates devalued in the labor market.”¹² Swedish market of educational services, as it should be called out education and training in educational institutions, to the average observer from the outside seems to be fairly balanced and ensures that all pupils have equal access to education, and the “better school” if there are, they are the margin of the total number of schools in the country. Compared with Britain even, the number of boarding schools is negligible, because it is only a few outlets, including two renowned institutions – Lundsbergs skola¹³ and

¹¹ *Doświadczenia szkolne pierwszego rocznika reformy edukacji. Studium teoretyczno-empiryczne*, eds. M. Dudzikowa, R. Wawrzyniak-Beszterda, Oficyna Wydawnicza Impuls, Kraków, pp. 30–31.

¹² E. Potulicka, J. Rutkowiak, *op. cit.*, p. 104.

¹³ Zob. <http://www.lundsbergsskola.se>.

Sigtunaskolan Humanistiska Läroverket¹⁴, attended by reigning King of Sweden Carl XVI Gustaf and, among others, Olof Palme. The number of private schools is also a margin market of educational services. Ideas for the so-called home schooling faced with a complete lack of understanding of the Ministry of Education and Science under the leadership of Jan Björklund, derived from the People's Liberal Party, but are formed from associations of parents who would prefer themselves to supervise their children's education.

Free education market is a complete opposition to the idea of equality of educational opportunities. They are even referred to as "utopian fantasy". According to the neo-liberal ideology most ideal solution would be to complete the privatization of the education sector and as reported on E. Potulicja for Griggs, free market advocates education "deplore the fact that public education exists at all."¹⁵

The idea of equality in the social and economic is a long tradition in Sweden, starting with the Social Democrats, but it did create the slogan „equality” designation equal access to education, synonymous with „education for all”.¹⁶ After this analysis, gouvernement prepared projects for the extension of compulsory schooling, raising the level of general education and to facilitate access to higher education by overcoming any limitations. T. Gmerek stresses that despite years of effort in the development of activities for equal educational opportunities for students from different social classes from the period after World War II, still, as quoted by Ball and Larsson with their development of more than two decades before, aspirations and hopes were only partially implemented.¹⁷ Reforms started in the nineties of the last century, when Sweden decided to create a change in the management of educational institutions and decided to decentralize the opening of the market for the dissemination of private education and the increase in competition between private schools and the public. Economists Anders Björklund, Melissa Clark, Per – Anders Edin, Peter Fredriksson and Alan Krueger prepared a report: *The Market Comes to Education in Sweden, An Evaluation of Sweden 's Surpris-*

¹⁴ Zob. <http://www.sshl.se>.

¹⁵ *Ibid.*, p. 105.

¹⁶ E.D. Kyrklund, *Inclusive Exclusion or Exclusive Inclusion? Granting acces, from Thery to Practice – „Education for All” in Sweden. Strategies for supporting schools and teachers in order to foster social inclusion*, DOCA Bureaus, 2009, p. 77.

¹⁷ T. Gmerek, *Szkolnictwo wyższe w krajach skandynawskich. Studium z pedagogiki porównawczej*, Wydawnictwo Wolumin, Poznań 2005, pp. 93–96.

ing School Reforms, which tried to answer the question of whether conducted in this released experiment on the Swedish education has brought the expected results – improving the quality of education and the same learning outcomes in Swedish schools, or to the contrary, the release of the educational services market and decentralization deepened inequalities in this area. The report was published in January 2006¹⁸, and the conclusions were not too optimistic, and change „for the better” was too spectacular in relation to expenditure incurred on reforms. According to the authors the raise in the level of competitiveness of Swedish schools only resulted in a slight increase in math skills and language students, omitting those with low social capital due to the level of education of the parents or place of birth outside of Sweden. On behalf of the European Commission, General Directorate for Education and Culture created subsequent reports on inclusion and education in different European countries. Report on Sweden, released in August 2009 and was titled : *Inclusive or Exclusive Inclusion Exclusion ? Granting acces, from Thery to Practice – „Education for All” in Sweden. Strategies for supporting schools and teachers in order that foster social inclusion*. According to the author, E.D. Kyrklund, education in Sweden has always played a significant role in social development. Currently, as a result of the struggle with the effects of globalization and social change, Sweden grown „soft democratic meritocracy” and the education and the support system it is still an area of struggle for influence on both the right and left sides of the Swedish political scene. One of the ideas for improving the quality of education in the last eight years is, „reduce stress” and at the same time improving the discipline of students during attendance at school.¹⁹

The immediate manifestation of the return of Sweden towards marketisation of education and the creation of opportunities for the creation of private institutions was the reform of vouchers in 1992. The increase in these types of schools has been reported steadily since the mid-nineties of the last century, particularly education of general and particularly independent schools type for – profit. This trend has intensified especially since 2000. The authors report

¹⁸ See A. Björklund, M. Clark, Per-Anders Edin, P. Fredriksson, A. Krueger, *The Market Comes to Education in Sweden, An Evaluation of Sweden’s Surprising School Reforms*, Russell Sage Foundation; First Edition. 2006, access online: <https://www.bportugal.pt/en-US/EstudosEconomicos/Conferencias/Documents/2005LabourMarket/Krueger.pdf>.

¹⁹ E.D. Kyrklund, *op. cit.*, p. 78.

on the reform of the voucher and its consequences – *Independent Schools and the Long-Run Educational Outcomes: Evidence from Sweden's Large Scale Voucher Reform* – recognize that formation of the independent schools should be considered as a supplement to public education and response to the current needs of the educational market. As we read on, this kind of school „attracted special type of students (...). The general profile of such schools is, however, an alternative to public schools”.²⁰ Not without significance is the ideological basis of the establishment of such schools, whether the owners put on long-term gains or created schools that do not meet the criteria and of low quality, solely for the income in a short period of time. There are also private schools founded by idealists, whose main task is to educate, not profitability and can provide serious competition for other outlets.²¹ The release of the education market in this area may constitute an alternative approach to making its competitiveness, but it is difficult to talk about the quality of education and the bestowal of trust of this type of school if it does not have a long tradition of functioning and the basis of its inception are not fully known. A Definitive positive aspect of such schools is to create a place for children with special educational needs – both students of underselling achievements and extraordinarily talented students, for which there is no special place in the mainstream of public education. The Swedish school system officially competes by raising productivity, and not, as is the case in other countries, through a careful selection of students. In this report, taken into account were, inter alia, analysis of student achievement data for communities of competitiveness and learning outcomes,²² but is signaled by the researchers of other studies the problem of social inequality based on the place of residence and ethnicity translates into achieving school pupils?

Summary of results in PISA tests and for students of Swedish ICCC has shown a large impact on its results in the range has a position of social – economic of the family, sex and origin (Swedish, ethnic minority status, immigration, second generation – the children of immigrants). Another important group of factors whose increase has been observed in the recent years are those related to the economic

²⁰ A. Böhlmark, M. Lindahl, *Independent Schools and Long-Run Educational Outcomes: Evidence from Sweden's Large Scale Voucher Reform*, Discussion Paper No. 6683, IZA, Bonn 2012, p. 28.

²¹ *Ibid.*

²² *Ibid.*, p. 32.

differences translating into a variety of living conditions depending on where you live. It is not in this case impacted only on traditional and often already outdated distinction between urban and rural inhabitants (more and more people with high economic status decide to settle in rural areas), but also on the distinction between city centers and suburbs – in this case, inhabited by people with lower financial status due to the lower cost of buying or renting an apartment, and on the division of South Sweden, Sweden, Central and Northern Sweden, where the latter is the least populated area per km² and the average number of persons residing in the area. There are less cultural institutions and greater limitations resulting from the difficult living conditions in the northernmost Swedish municipalities.²³

Equal educational opportunities in Sweden also applies to ethnic minorities, including the two most important groups – the Finns and the Saami. In this case, the problem of access to education and its quality is complex. While, in contrast to the immigrants, that these ethnic minorities freely speak Swedish and contribute to the public education system here is not much of a problem, it equalizes educational opportunities in the context of preserving minority culture which will relate to the organization of education in the Finnish and Sami communities and as such the selection of activities to support the continuity of cultural traditions of the ethnic minority. Although some of these measures may seem a form of support for exclusion from mainstream education based on teaching in Swedish, however, members of these communities often submit to the strengthening of a sense of identity and promote the mentality of the community over the opportunity to study at the prestigious university in Stockholm, which of course in no case is excluded. Attachment to the land and the tradition is sometimes stronger than the aspiration to obtain prestige.

3. Areas of equality and inequality in the Swedish comprehensive compulsory school – a case study

Swedish comprehensive compulsory school lasts nine years. It is a period of the most direct and most controlled institutional impact

²³ E. Johnsson, *System edukacji w Szwecji*, [in:] *Systemy edukacji w krajach europejskich*, eds. E. Potulicka, D. Hildebrandt-Wypych, C. Czech-Włodarczyk, Oficyna Wydawnicza Impuls, Kraków 2012, pp. 435–436.

on a Swedish citizen. Because of the strict definition of the tasks, duties and responsibilities in the context of politics, economics and social interest, such controlled facility is unlikely to lead to greater autonomy, and this fact directly translates into predictability and repeatability of educational solutions aiming to form a unified model citizen. All the previously mentioned areas of inequality and equal educational opportunities have place in the everyday functioning of the Swedish compulsory school. The best picture of the emerging challenges in the field of equal educational opportunities in the Swedish compulsory school is a case study, a particular example is not hidden behind the statistics and the average results for the municipality, but the school, for which multiculturalism is commonplace. Studies²⁴ conducted in the Swedish compulsory school *friskolan*, located on the outskirts of the city Malmö, in the district of Södra Innerstaden / Sofielund show you exact everyday dilemmas and struggles of the Swedish school. Children from native Swedish families belong to minority ethnic groups and a review of the students who attend the educational institution is a reflection of the majority ethnic groups of immigrants to Sweden. Although most of the students are second generation immigrants, and so the children speak Swedish, this school aims mainly to support the area of interpersonal communication and the targets considered most important. For the school, language and communication are a priority, and knowledge is the key value. We are particularly concerned about the high level of linguistic and mathematical knowledge”.²⁵ The main challenges facing this small educational institution, attended by only 200 students include: large cultural differences between children manifested by the language used in the home environment, religion of country of origin of their parents, a large number of families with many children, when the *Kastanjeskolan* often attends several children from the same family, multigenerational families, unemployed parents benefiting from social care. As for all compulsory schools, the realization of the objectives set out in the curriculum for the compulsory school is mandatory, grades kindergarten and leisure centers – *Läroplan för grundskola, förskoleklassen oh fritidshemmet 2011*.²⁶ School staff is committed to supporting students with special

²⁴ Research conducted in septembers and octobers 2011–2012 as a part of NCN scholarship.

²⁵ *Kastanjeskolan*, <http://www.kastanjeskolan.nu> (access 16.05.2013).

²⁶ *Läroplan för grundskolan, förskoleklassen och fritidshemmet 2011*, Skolver-

educational needs, the organization of educational assistance and recognized psychological programs are organized on an ad hoc basis. Currently, three teachers holds the powers of special education and apart from implementing subjects included in the curriculum, perform and supervise shifts in diagnosis and implementation of individual therapeutic educational programs. During such meetings, up to a group of five, put the emphasis on individualization and individual support. In the younger classes most of the tasks allows you to solve problems and learn through play, but also through the implementation of joint projects. Also, senior classes implement both programming content and participate in programs to support, through joint projects, through which they acquire interpersonal communication skills, and an investigation to solve problems by consensus, they learn respect for otherness and acceptance, both in the context of cultural – ethnic, as well as the context of disagreement, opinions and ideas between individuals. Of particular interest are projects that are utilitarian, preparing students from first to ninth grade to function in the future in the Swedish society. Also supported, are all forms of self-governance and citizenship, present also in Polish schools, class council, local school, but also through co-decision task, the decor of the school.

As already mentioned, the emphasis on communication is to strengthen the language skills necessary to succeed in the next stages of education, but also the production of a sense of community where the school is treated as a place for everyone regardless of creed, color or social origin. The school is located near the Rosengård district, inhabited mainly by immigrants, and the fact generate another problem. A characteristic phenomenon for the districts inhabited by Swedish immigrants is communication between the residents in the dialect / slang created with words and phrases from the language of their countries of origin. This dialect of Swedish studies linguistic called *förortssvenska* – Swedish from the suburbs and is far from any other known Swedish dialect and individual dialects differ depending on the district and the country of origin of residents who reside in it.²⁷ Situations arise when a child often uses literary Swedish only during school hours, instead of in the family home as a re-

ket, <http://www.skolverket.se/publikationer?id=2575> (access 10.02.2014).

²⁷ E. Johnsson, *Problem multikulturowości we wczesnej edukacji dziecka w Szwecji*, [in:] H. Krauze-Sikorska, M. Klichowski, A. Basińska, *Children in the Post-modern World. Culture – Media – Social inequality*, Wyd. Naukowe UAM, Poznań 2014, pp. 245–246.

sult of the desire to sustain the culture of the country of origin often parents with children communicate with their language, and as stated above, in neighborhoods inhabited by immigrants from all over the world and identify with each other often warring religions and faiths, communication takes place in an airtight familiar slang. The chances of educational success for such a child are much lower, and any aspirations must be translated into additional work to tackle the challenges facing it by the school. A student from a family with native Swedish origins, is in a completely different position, which increases the Swedish culture and environment in the home, among peers and at school speaks svenska. Swedish schools provides the conditions to the children with special educational needs, needed for success. One way to equalize educational opportunities is the ability to implement the content of Swedish as a second language – *svenska som andraspråk* which the student can choose and can realize as a result of the recommendations and needs when he came home from school outside of Sweden and possibly for some other special reason can not attend Swedish language course to pursue with their classmates. The organization of education determines the director of the institution.²⁸

In Swedish schools students of gifted means are forgotten. This fact probably results from the Swedish mentality, the application of Swedish society, for which equality is to prevail. While the Education Act emphasizes that the functioning of the Swedish school is „the inviolability of human life, individual freedom and integrity, equal value for all, equality between women and men and solidarity with the weaker,” that “the task of the school is also encouraging students to discover their own uniqueness as individuals and thereby participate in social life by giving their best in responsible freedom.”²⁹ The daily work of all compulsory school activities are focused on the „equalization” of educational opportunities for the implementation

²⁸ See G. Tingbjörn, *Svenska som andraspråk i ett utbildningspolitiskt perspektiv – en tillbakablick*, pp. 743–761, [in:] *Svenska som andraspråk: i forskning, undervisning och samhälle*, eds. K. Hyltenstam, I. Lindberg, Lund: Studentlitteratur, 2004 and *Svenska och svenska som andraspråk*, Skolverket, <http://www.skolverket.se/regelverk/fragor-och-svar/fragor-och-svar-om-betyg/2.6058/svenska-och-svenska-som-andrasprak-1.173367> (access 02.02.2014).

²⁹ Curriculum for the compulsory school, preschool class and the leisure-time centre 2011, Skolverket, p. 9, <http://www.skolverket.se/publikationer?id=2687> (access 25.03.2013).

of the curriculum, but it is difficult to talk about crossing the boundaries of content in the curriculum for students, also with special educational needs – particularly gifted students.

Swedish extended compulsory school faces a number of challenges in relation to the effects of neo-liberal ideology and globalization. Multicultural, multiethnic while the need to support the unit, a Swedish student becomes more difficult, as concludes Joanna Rutkowiak;

“He is a teacher (...) poorly equipped for interpretation. The result is that poorly recognizes and is unable to decode deep relationships with cultural quality education neoliberal reality, it links the general principles of everyday school, her cunning and covert programs economically molded people.”³⁰

Neoliberalism forces the release of the education market, where the overriding value is profit, not the man. So we can ask whether the Swedish school cope with the task of preparing students for this new reality, and how even enough of that in the Swedish school pupil count?

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³⁰ E. Potulicka, J. Rutkowiak, *op. cit.*, p. 277.

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MATHEMATICAL LITERACY IN THE CONTEMPORARY WORLD

Abstract

Mathematical literacy prospers in the natural and social environment. It develops while solving realistic problems by using wider competences in a less structured context than a school situation and decisions about information and knowledge that can be reasonably used. The problems of the initially formed mathematical context, which influence the solution and its interpretation, are of key importance for the assessment of mathematical literacy. Adequate teaching and learning help develop children's mathematical literacy, indispensable in the contemporary world.

Key words: literacy, mathematical literacy, realistic problems, instruction of mathematics

Introduction

In the paper *National strategy for the development of literacy*, literacy is defined as a permanently developing capability of each individual to implement the socially agreed systems of symbols in order to receive, understand, compose and use texts for their family life, life at schools, at workplace and in the society. The acquired knowledge and skills as well as developed capabilities enable each individual to maintain a successful and creative personal growth and a responsible acting in the professional and social life. In the form of capability and social practice literacy may be acquired and developed throughout the entire life in various circumstances as well as in different areas and they are intertwined into all human activities¹.

¹ N. Bucik et al., *Nacionalna strategija za razvoj pismenosti*, Nacionalna komisija za razvoj pismenosti, Ljubljana 2006, p. 7.

Mathematical literacy

Although there is no unified definition of mathematical literacy, we could assume that the concept of mathematical literacy signifies the capability of detecting, understanding and the use of mathematical arguments in every day life. The capability of adjusting the mathematical argument from a familiar situation to the unknown situation and the use of mathematical arguments in new situations is especially important.

Mathematical literacy is therefore not only a set of knowledge or skills, but the approach to solving the situation in which the capability of reasonable handling with mathematical data, which have been detected, as well as logical decisions come into effect. Here, we are dealing with mental searching for samples and not with mere following the given instructions.

A mathematically literate person has to know a certain degree of mathematics; however, literacy does not depend entirely on the knowledge of mathematics. Someone, who knows well the formal abstract mathematical concepts, but does not recognise mathematical aspects in his environment, is not mathematically literate contrary to someone, who may be mastering elementary arithmetic and geometry and who recognises mathematical arguments around himself. Hence, who knows mathematics as a bunch of algorithms to be memorised is certainly not mathematically literate. Most important is the knowledge which enables the use of mathematical ideas in similar cases and in new situations. Mathematical literacy does not depend on the „quantity” of mathematics one has learned, but on the fact how one can use mathematics in every day life.

How to reach mathematical literacy

Primary schools are supposed to educate mathematically literate people, so it is necessary to check what mathematical contents pupils should master and know how to use them in every day life in order to comply with the criteria of mathematical literacy. And as in case of mathematical literacy the point is how to use mathematical knowledge in various life situations, it is not sufficient, that pupils get mathematical literacy only through the instruction of mathematics. It is also not only the point in the simultaneous mastering of mathematical concepts and algorithms on the one hand and the use of mathematical ideas in different life situations on the other hand. If we want to have a successful literacy education, we have to involve

pupils into the use of mathematical concepts and algorithms in a co-ordinated way in other subjects and continue with literacy also in upper grades of education.

One of the negative sides of literacy education is the instruction and learning of mathematics that we meet at schools. It is not so much a question of contents provided by the curriculum, though we should verify it as well prior to reach an agreement on the criteria of mathematical literacy. It is the way of instruction and learning which is in most cases oriented towards the final test of knowledge. The basis for the mathematical literacy is to recognise and understand the role of mathematics as well as its reasonable use in every day life, which is much different from school experiences. Pupils are directed towards the learning of procedures of how to solve problems, as it was demonstrated by teachers at schools and as pupils managed to „consolidate” it on similar problems at home. Few pupils, therefore, search for general rules which make solving of problems easier for them, since they cannot see any sense in learning procedures by heart. It is surprising what a large number of pupils prefer to decide on learning procedures by heart. Actually, they are encouraged by teachers who show them for each case how to solve it by an exactly defined procedure, as if we placed separate values into the equation².

The situation practically does not improve if we inform pupils in advance to pay attention to problems, as they are supposedly difficult and that some of them even do not have a single solution³. Even an advance warning does not reduce pupils' belief that knowledge and experiences from real life are not important for solving „mathematical” problems. On the contrary, most pupils showed a capability of solving a problem, if it was presented to them as a „project”: in a “realistic” exercise they “acted” the way to the solution⁴.

² U. Wagoner, M. Patterson McPherson, W. Sewell, P. Meyer Spacks, W. Thurston, *Pedagogy and the Disciplines*, PEW Higher Education Research Programs, University of Pennsylvania, 1990.

³ K. Reusser, R. Stebler, *Every word problem has a solution – the social rationality of mathematical modelling in schools*, “Learning and Instruction” 1997, Vol. 7, No. 4, pp. 309–327.

⁴ T.C. DeFranco, F.R. Curcio, *A division problem with a remainder embedded across two contexts: Children's solutions in restrictive versus real-world settings*, “Focus on Learning Problems in Mathematics” 1997, Vol. 19, No. 2, pp. 58–72; K. Reusser, R. Stebler, *op. cit.*; J. Wyndhamn, R. Säljö, *Word problems and mathematical reasoning: A study of children's mastery of reference and meaning in textual realities*, “Learning and Instruction” 1997, No. 7, pp. 361–382.

We can assume that pupils do not show a mental shortage, which could be the cause for the difficulties in solving mathematical problems linked with their life, but they simply keep to certain habitual trained rules of the game. Ordinary mathematical problems and textual exercises which we meet at mathematics continue to be quite "rigid"⁵.

Textual exercises as a reflection of real life situation should attract pupils to use their experiences from every day life. In reality they consider them as something unwanted where data appear in text instead of being written as "expected" in mathematics, i.e., in the form of a calculation, equation or at least in an organised column in order to be directly inserted into a suitable formula. They do not consider text as a description of problem situation, and therefore they quite often do not read it carefully enough to understand it. Most certainly one of the reasons for it lies in the way they solve problems at schools and in their home work. While there is a consolidation exercise at schools on subtracting it is known in advance that it is going to be necessary to subtract figures which take place in the text of the problem. We therefore quickly run through the text of the problem, find figures and put down the subtracting calculation without focusing on the described problem situation and have a discussion on it. The same implies for home work.

Actually, there are two reasons underneath. One is hidden in the monotonous „standard“ mathematical problems themselves. Pupils gradually do not experience them as a description of a problem situation, but a fictitious situation where they have to copy data from, in order to do a certain algorithm and thus get to a solution. A trained automation is effective also at all verifications of knowledge, which follow in a relatively short time after the treatment of a certain topic, to which those „typical“ problems are linked⁶. The other cause can be found in the way of teaching how to solve problems, in particular in the insufficient emphasising of the problem situation. Among teachers we can still find deeply rooted the conviction on the need for numerous stereotype exercises for pupils to learn the procedure

⁵ M. Cotič, *Uvajanje vsebin iz statistike in verjetnosti ter razširitev pojma matematičnega problema pri razrednem pouku matematike*, Doktorska disertacija, Filozofska fakulteta Univerze v Ljubljani, Ljubljana 1998.

⁶ E. Stern, *Warum werden Kapitänsaufgaben "gelöst"? Das Verstehen von Textaufgaben aus psychologischer Sicht*, "Der Mathematikunterricht" 1992, Nr 28 (5), pp. 7–29.

of solving a certain type of problem. Thus, particularly during the time devoted to consolidation problems are being solved without keeping any kind of discussion or consideration on the contents of the problem. Many times putting down the answers is being omitted under the pretext that it takes too much time or rather the beginning of the algorithm as a recipe for solving the problem is given with the instruction that “from now on you have nothing but calculation, which can be done by everyone by himself at home”⁷.

Realistic (authentic) problems

The first priority of mathematics is the connection of mathematics with the real world, i.e., the use of mathematics in different problem situations (personal, educational, social and scientific), into which the problems are incorporated. The capability of using mathematics is therefore closely linked with problem knowledge, i.e., the knowledge on how to use the existing knowledge in the new situations.

For pupils and adults mathematics with its concepts and methods is supposed to be above all a tool for understanding, demonstrating and critical interpretation of reality and for our conscious action in it. We should not pose to pupils only unreal, simplified, „abstract” and „artificial” problems with rigid structure, but also problems taken from pupils’ real situations, the so called *realistic problems*. Besides traditional mathematical problems we should pose to pupils during the instruction of mathematics also the following types of *realistic problems*:

- realistic problems which do not have sufficient number of data to be solved;
- realistic problems which contain more data than necessary for solution;
- realistic problems with more solutions;
- realistic problems in which data are contradictory and do not have any solution.

⁷ E. Fennema, M. Loeff, *Teachers’ knowledge and its impact*, [in:] *Handbook of research on mathematics teaching and learning*, ed. D.A. Grouws, Macmillan, New York 1992; A. Thompson, *Teachers’ beliefs and conceptions: A synthesis of research*, [in:] *Handbook of research on mathematics teaching and learning*, ed. D.A. Grouws, Macmillan, New York 1992; L. Verschaffel, E. De Corte, I. Borghart, *Pre-service teachers’ conceptions and beliefs about the role of real-world knowledge in mathematical modelling of school word problems*, “Learning and Instruction” 1997, No. 4, pp. 339–359.

- Realistic problems which do not have sufficient number of data to be solved

We distinguish two types of problems not having sufficient number of data to be solved. In one group the data are given implicitly. Although they are not written by number we can recognise from the text where to search them and/or in what way we can reach them. Then we put them down explicitly. When problems are posed in this way solving can start already while identifying and searching for the data.

We pose to pupils also problems where data are missing in the „absolute“. That means that data in no way defined (not explicitly, not implicitly), therefore we cannot even look them for. In such cases we actually cannot speak of real problems, but about open problem situations, where pupils determine the logical value of the missing data by themselves, what is all in all not easy for pupils.

- Realistic problems which contain more data than necessary for solution

We are also faced every day with problems that contain too many data, as we meet with too much information almost every day, among them we are supposed to look for those we need to solve the problem.

- Realistic problems in which data are contradictory

In this type of problems we make pupils used to never to adopt data non-critically, but to analyse them precisely or verify them whether there is a logical connection among them. To realise that the problem data are contradictory means to find out that problems with such data are not solvable. And to find out where the obstacle which prevents the solution is, demands from pupils a large amount of mental effort. If pupils rarely solve those kinds of problems, we welcome the hint that they should search for contradictory data.

- Realistic problems with more solutions

Traditional mathematical instruction consists basically of problems with one solution. And if we want to teach pupils to be able to use mathematics in concrete life problems, it is urgent that we make them familiar with the problems having more solutions. Everyday problems almost never have one single solution. Sometimes there may be no solution, sometimes there may be more different solutions among which it is necessary to select, according to the given situa-

tion, the best and the most acceptable one. Thus the „best” solution may change following the circumstances and according to the person being involved in a certain situation. Besides, this kind of problems provide to pupils the opportunity of recognising that mathematics is not a dogmatic discipline where each single situation has got a pre determined one and exact solutions.

Empirical part

Objectives of the research

The objectives of the research were to establish a model of the introduction of realistic problems into the instruction of mathematics at the lower class level. In our research we used the process-didactic approach of teaching and learning mathematics through problem situations taken from pupils’ life experiences. Through our research we verified this model in teaching practice.

Research hypothesis

H: The experimental group will be more successful in solving realistic problems with too many data, with insufficient data, with more solutions and with contradictory data than the control group.

Research methodology

Principal research method and researching approach

In the research we used, within the empirical research approach, the so called *pedagogical experiment*, because it is suitable for studying the novelties which we are introducing into the instruction of mathematics. Thus in our research the *causal – experimental method* was used.

Experiment model

We envisaged the *one-factor model* of the experiment with school classes functioning as comparative groups with *two modalities*. We took as comparative groups the existing classes of the third grade at different primary schools. We called the group where we introduced the experimental factor the experimental group (EG); and we called the group where teachers gave instruction in the traditional way the control group (CG).

Experimental group therefore went through a complete experimental treatment which included:

- realistic mathematical problems,
- strategies of solving realistic mathematical problems.

Experiment sample

The experiment included 134 pupils of the third grade of Littoral Primary Schools. Pupils were divided into two groups: experimental (EG) and control group (CG). The experimental group (EG) included 66 pupils, and the control group (CG) covered 68 pupils.

Variables

Variables comprise all the variables with which we tested the knowledge of pupils of the experimental group (EG) and pupils of the control group (CG). Dependent variables are as follows:

- results of pupils in realistic problems with too many data,
- results of pupils in realistic problems with insufficient data,
- results of pupils in realistic problems with more solutions,
- results of pupils in realistic problems with contradictory data.

The course of research and data collection

The research took place over six months in the school year 2008/2009. We prepared two tests of knowledge (the initial and final) by ourselves and gave them the most important measuring characteristics: validity, objectivity, reliability and sensitivity.

Data processing

Statistical data processing was done by implementing the statistic programme package SPSS16. In order to find the differences in the knowledge of mathematics at all the levels of knowledge between the pupils of the experimental and control group at the beginning and at the end of the experiment we used the Leven's test of variance homogeneity and the t-test.

Results and interpretation

We interpreted the obtained results in accordance with the requirement of the transparency and logics of providing proof of the posed hypotheses. We added to each interpretation of results also a table with results. For the verification of our hypotheses we kept to the

rule that the highest possible risk for the denial of the hypotheses is tolerated at 5 % error.

At the beginning of the experiment we analysed the differences in the success of solving realistic problems with the t-test, which proved that the differences in the knowledge between the EG and CG are not statistically significant.

We are to analyse the differences in the success of solving realistic problems between pupils of the EG and CG at the end of the experiment.

- Analysis of differences in the knowledge of solving realistic problems between the pupils of experimental group (EG) and control group (CG) in final stage

The main objectives of the research was to verify the hypothesis whether the pupils from EG who were given lectures in the new model of teaching and learning of realistic problems are more successful in solving different types of realistic problems than the pupils from the CG, who had undergone the classical teaching and learning of problems.

If we compare differences in arithmetic means of all variables between the EG and CG (table 1), we can find out that the EG was more successful in solving all types of realistic problems.

By Leven’s test of homogeneity of variances and the t-test we verified in what variables both groups are at the end of the experiment statistically significantly different.

Table 1. Basic statistical estimations for exercises of measuring the knowledge of solving realistic problems with too many data, insufficient data, with more solutions and with contradictory data at the final test

Pupils' results at the second level of knowledge (final test)							
Test	Group	n	Results in %	Arithmetic mean	Standard deviation	Min	Max
Too many data	ES	66	73,20	3,66	1,254	0,00	5,00
	KS	68	47,20	2,36	1,407	1,00	5,00
Insufficient data	ES	66	91,50	3,66	0,669	0,67	4,00
	KS	68	81,25	3,25	0,952	0,00	4,00
More solutions	ES	66	68,63	5,49	1,895	0,25	8,00
	KS	68	45,13	3,61	2,280	0,00	7,75
Contradictory data	ES	66	71,80	3,59	1,105	0,25	5,00
	KS	68	64,00	3,20	1,128	0,50	5,00

Table 2: Presentation of differences in the knowledge of solving mathematical problems between EG and CG at the final test

Leven's test of variance homogeneity			t-test	
	F	p	t	P
T2 Too many data	0,004	0,949	5,516	0,000
T2 Insufficient data	5,752	0,018	*2,995	0,004
T2 More solutions	0,285	0,594	5,040	0,000
T2 Contradictory data	0,458	0,500	2,031	0,044

N.B.: * the Cochran-Cox approximate method of t-test was used.

It is clearly evident from the Table 2 that the groups are statistically significantly different in all four variables. Thus, we have proved our hypothesis: *Experimental group will be more successful in solving realistic problems with insufficient data, with too many data, with contradictory data and with more solutions than the control group.*

Conclusions

In our research we proved that we can develop, by using the adequate teaching and learning, the capabilities of children to solve realistic problems and the use of mathematics in life situations and with it also mathematical literacy. Most certainly learning and teaching of how to use mathematics in life situations is a difficult job, and pupils as well as teachers prefer to avoid it. Pupils usually eagerly want instructions and teachers quite often please them by giving recipes. This „method” may be in short term successful, pupils reach good results at the forthcoming tests. The majority of pupils do not develop skills which they do not really need for testing. If it is enough to memorise the recipes they do not have to take care of anything else. Unfortunately, this way they do not build their mathematical literacy.

New demands have emerged in the mathematical curriculum that we should provide teaching and learning of mathematics furnished with understanding and usefulness of mathematics in everyday life, however, we are witnessing weak opportunities of the use of quantitative skills. It seems that after the completed primary and secondary school not many pupils are able to recall and use any experiences linked with mathematical literacy⁸. The achievements of

⁸ D. Hughes-Hallett, *The Role of Mathematics Courses in the Development of Quantitative Literacy*, [in:] *Quantitative Literacy: Why Numeracy Matters for*

mathematical literacy will have to be more clearly included into the teaching and learning practice. Though the ability to use mathematics in everyday life is one of the corner stones among the objectives of mathematical instruction, we have been only occasionally verifying it. Should we want to achieve the use of mathematical knowledge in school and outside it, we will have to verify not only mathematical abilities, but also the capabilities of using mathematical skills in everyday life, since this is really the essence of mathematical literacy.

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CONCLUSION: OBJECTIVE, INSPIRATION AND HOPES

The school and the whole sector of education still take the central place in the modern civilisation based on knowledge. The school is still an alive institution, under continuous transformations, offering many possibilities used for the development of the society. It includes a great capital of the human knowledge and experience which should be taken care of.¹

The school centred on pupils is a place where the pupil is the actual co-creator of the educational process, the subject co-responsible for his / her own development, in which the teacher is helping the pupil develop positive attitudes, the “I can” and “I will manage” beliefs, maintaining the natural lightness in making relations with the subordinates: children and youth. The school in which everyone grows according to his / her own capacity in all fields (cognitive, spiritual, social and physical) and achieves joy and satisfaction from it. The source of this approach lies in the concept of the American progressivism, in particular in the “child centred education” developed on this basis.

The objective of this publication was to present the modern dimension and implications of the idea of education centred on pupils in the activities and functioning of the school and teachers.

Many elements were presented to the reader in the papers, which are parts of the changes aimed at making the premises of the stream of education centred on pupils feasible. These were, among others:

- The child and his / her needs are the centre of educational activities;

¹ Cf.: J. Kuźma, *Nauka o szkole. Studium monograficzne. Zarys koncepcji*, Oficyna Wydawnicza Impuls, Kraków, ed. I – 2005; ed. IV – 2011, p. 277.

- The educational activities are executed not only inside, but also outside of the school, in the local environment and in the world of media (virtual), that is in various educational spaces which mutually converge;
- Significance and development of the research related to functioning and structure of the brain in terms of the method of learning and behaviour of the children;
- The culture of bringing knowledge and experience to the children in the professional activities of teachers (according to truth: *verum*; good; *bonum*; and beauty: *pulchrum*);
- Departure from rigid educational programmes in favour of active teaching and educating;
- Developing teacher competencies, based on knowledge, skills, attitudes and authority;
- Seeking innovative and creative methods of stimulating development of the child;
- Triggering activity and creativity of the child;
- Self-education and self-upbringing according to one's own preferences and interests.

The inspiration to revitalise the view of the school from the perspective of the stream of the school centred on pupils, both theoretically and practically, came from, among others, the works of the outstanding American researcher and psychologist, Howard Gardner,² who innovatively presented methods for developing the potential of the individual. H. Gardner accented, among others, the need to adjust curricula to the preferences of the learners to their methods of perception of the reality. The observation that we all learn in a way specific for ourselves only, and its recognition and understanding are conducive for effective teaching and achieving successes has helped increase the role of individuation in the attitude towards pupils. Every individual has some potential which should be discovered and properly developed. H. Gardner indicates the following possibilities of developing the potential of the individual:

- Through developing various intelligence types: logical and mathematical, linguistic, musical, bodily and kinaesthetic, spatial, in-

² H. Gardner, *Frames of mind: The theory of multiple intelligences*, Basic Books, New York 1983; idem, *Leading minds: An anatomy of leadership*, Basic Books, New York 1995; idem, *Intelligence reframed: Multiple intelligences for the 21st century*, Basic Books, New York 1999. Polish version: H. Gardner, *Inteligencje wielorakie. Teoria w praktyce*, Media Rodzina, Poznań 2002; *Pięć umysłów dla przyszłości*, Wydawnictwo Laurum, 2009.

terpersonal, intrapersonal and additionally isolated the nature-related intelligence;

- Through developing the mind: disciplinary, synthesising, creative, respecting and ethical.

Based on the theories of H. Gardner, many programs of working with pupils have been developed, thus applying American knowledge and experience on the Polish ground, including in schools.³ This expertise constitutes precious contribution to the effort to develop effective programs of working with subordinates, as they emphasise not only the aspect of teaching, but also the realm of upbringing, socialisation and preventive measures.

We hope that the thoughts presented in the paper will constitute a strong impulse to seek more perfect methods of work with pupils and transformations of the modern school towards the school more centred on pupils.

³ The projects based on H. Gardner's theories of multiple intelligencies include "The initial experience of pupils as the way to knowledge", executed by Grupa Edukacyjna S.A., Kielce, starting in 2008. It covered over 142,000 children and about 8,500 teachers all around Poland.

