Strategic Planning in the Educational System of Poland: Complex Challenges of the Past, Present, and Future

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ABSTRACT

The purpose of this article is to provide insight into the strategic transition of preK-12 education in Poland in the Post World War II Period. Strategic planning was primarily focused on centralized state-control and was heavily predicated on Marxist-Leninist ideology in the three decades following World War II. However, since that time, there have been significant developments to decentralize education in Poland and empower more local control. This article provides the historical context of strategic planning during this transition.

When describing the Polish education system in general terms, it is necessary to state that, in the past, it was heavily state-controlled and entirely subjugated to Marxist-Leninist ideology. State control was reflected in a centrally designed syllabus, in the ministerial monopoly over textbook production, and in the laying down of strict requirements for teachers and other educational staff. In fact, teachers in the classroom had room for maneuver in their choice of methods, but hardly any in the content of their teaching.

An important feature refers to something that has, fortunately, not happened: the planned reform of the early 1970s intended to introduce the so-called "ten-year secondary school", which, in fact, would not have been secondary but rather a prolonged primary school. The reform would have been the belated implementation of the similar Soviet project of the 1950s. Although experience with the ten-year school in the Soviet Union was negative and the experiment was discontinued in 1973, it was, nevertheless, to be realized in Poland. Due to a shortage of teachers, financial means and a lack of progress in producing the required curricula, the reform remained on paper and was never really implemented (Piwowarski, 1996b, p.16).

Another typical feature of the Polish system was the limited involvement of parents and the local community in school life. On the rare occasions it did occur it was limited to the problems of the material well-being of schools, and did not affect the syllabus and the contents of learning. For many years the development of general secondary schools was curbed, the learning of foreign languages was reduced and young people of the working class were led into a cultural cul-de-sac, namely, basic vocational schools. There was wide-scale destruction of the school network in the country; the educational (Communist Party) authorities decided, at the end of the first half of the 1970s, on a concentration of the rural school network because there were too many small schools. There were good reasons for the decision, but it was carried out without any preparation and in a mechanical way. Many schools that had existed for many years, some of them built by the farmers, peasants themselves, simply disappeared. Many teachers from these closed-down small schools left the teaching profession because they had lost their special allowances for work at a small school.

CONCEPTUAL FRAMEWORK AND THE HISTORIC CONTEXT IN POLAND

Education has been classified as an “open-social system” that is continuously impacted by its mega, macro, and micro environment in such a manner that as the environmental context or the specific social, economic, or political aspects of the society change significantly so does the society’s educational philosophy, policies, and practices (Hoy & Miskel, 2005; Norton, 2005; Polka, 1999; Polka, 2014). Accordingly, strategic planning for schooling within an open-social system is a multi-variable uncertain experience based on ‘best projections’ of educational leaders at a specific time, but, because everything that contributes to an open-social system as well as the entire complex of systems within the society are inter-dependent, everything depends on everything else (Norton, 2005; Polka, 2014). Subsequently, any significant changes in the social, economic, or political systems of a country have major impact on the educational system including: educational visions, goals, objectives, instructional materials, teaching strategies, and assessment systems whether intended and carefully planned, or not (Hatch, 2013; Hoy & Miskel,

2005; Kaufman, Herman & Waters, 2002; Norton, 2005; Polka & Guy 2001; Polka & Pucher, 1994).

The history of education in Poland reflects this general symbiotic interrelationship between schools and societies. The educational institution in Poland has been evolving in structure and substance as the nation evolved, especially in the second half of the twentieth century. The Polish education system from the end of World War II to the pre-dawn of the Twenty-first Century was, generally, heavily state-controlled and entirely subjugated to Marxist-Leninist ideology. The economic and political philosophy of the state was reflected in the educational orientation of the schools as state control was reflected in a centrally designed standardized syllabus, in the ministerial monopoly over textbook production, and in the promulgation of strict requirements and expectations for teachers and other educational staff. In fact, teachers in the classroom had some flexibility in their respective classrooms in terms of the instructional methods they would employ to teach the government determined curriculum, but had hardly any choice in the content of their teaching. Convergence to the state controlled educational system was not only expected but it was reinforced via legislative fiat and inspector supervision. Times change and so do individual as well as societal values and perceptions of the past, the present, and the future. Consequently, a strategic planning change in education that may have been considered appropriate and positive at one time may be considered inappropriate and negative at another time.

A good example of this perception regarding planned change in Poland was a major educational reform initiative of the early 1970s. A countrywide planned reform of primary and secondary schools titled, "The ten-year secondary school" that was not really intended to improve secondary education in Poland but rather was designed to prolong primary school education. This educational reform plan was designed in a similar fashion to a Soviet project of the 1950s. Although experience with the ten-year school in the Soviet Union was negative and the experiment was discontinued in 1973, it was, nevertheless, planned for implementation in Poland. However due to a shortage of teachers, financial support and a lack of progress in producing the required curricula, the reform remained on paper and was never really implemented much to the chagrin of the government but much to the delight of most educators (Piwowarski, 1996b, p.16).

Another typical feature of the Post-World War II Polish educational system was the limited involvement of parents and the local community in school life. However, on the rare occasions when it did occur it was limited to problems related to the physical well-being of schools, and did not affect the syllabus and the contents of learning. For many years the development of general secondary schools was curbed, the learning of foreign languages was reduced and young people of the working class were led into a cultural cul-de-sac, namely, basic vocational schools. There was wide-scale destruction of the rural school network in the country as the Communist Party education authorities decided, at the end of the first half of the 1970s, to concentrate on the rural school network and consolidate schools because there were too many small rural schools. There were good reasons for the decisions to consolidate schools, but it was carried out by the central government without any preparation and in a methodical way without regard to the needs of the communities and students impacted. Many schools that had existed for many years, some of them built by the peasants themselves, simply disappeared. Many teachers from these closed-down small schools left the teaching profession because they had lost their special allowances for working at a small school. Some researchers, educational experts as well as economists, consider that the expenditure on education in the 1970s was reduced to the level of a non-developed, poor country, and at any rate far below the level of so-called "educational death" level.

The same constraining model of centralized educational planning control prevailed in the 1980s. The first parliamentary bill during this martial law period was "Teachers: Charter of Rights" in the beginning of 1982. It granted many unexpected benefits to teachers including the following key provisions: a shorter working week and less working hours, early retirement, and the right to become a certified teacher after two years of work in the school (Kwiecinski, 1995 p. 82, 240). As a result, in the second half of the 1980s, schools employed more than 100,000 teachers with no proper educational qualifications (about 25% of total). And, to add to the negative impact of this education policy, even those teachers who were not performing well in

their schools could not later be dismissed easily because they had become "certified teachers" and were entitled to stringent job security protections. In addition these inopportune social privileges given to teachers via this government policy in order to secure their loyalty to the martial law authorities cannot be revoked today (Piwowarski, 1996b, p.10). However, a major problem, a serious negative legacy of the policies of the martial law period in Poland, is the way most teachers thought about teaching and learning. Most educators were not able to and/or not willing to use the freedom of thought and action that they had been given by government policies. Unfortunately, the new "Proletarian" teachers did not automatically become creative individuals involved in the democratic transformation of society (Piwowarski, 1996a, p.60). Subsequently, the country as a whole, and, specifically, the individuals educated in it, did not experience a learning renaissance in the fifty years after World War II as was the case in other European countries. Therefore, in Poland, both the best laid plans and the worst laid plans did not come to fruition.

Accordingly, the following statistics about Polish secondary schools in the 1980s reveal the lack of educational successes associated with that centralized approach to strategic planning for education:

- Only about 40%-45% of primary school-graduates completed full secondary education and, thus, became eligible for university studies (In 2015 that figure is about 83%);
- An extensive system of three-year basic vocational schools existed throughout the country that did not provide full secondary education certificates and offered very narrow vocational training without solid theoretical framework. In about 1970, 50% of the primary school completers attended this type of school (In 2015 that figure is about 14%).

Plans were developed to revise the system and accommodate the ever-changing needs of society and contemporary students. The Polish educational system, like all other educational open-social systems, continued to evolve influenced by the changes in the mega, macro, and micro environments of the time. The present constitutional and legal foundations for education were strongly influenced by the Solidarity period (1980-81), by the "round table" negotiations with communists in spring 1989, and finally were given shape in the Polish Educational Act of 1991. That act and later amendments to it comprehensively describe the whole educational reality in Poland until recently. In line with the Polish Educational Act of 1991, schools can be of two types: public (state) schools, which offer free education within the framework of the defined curriculum, and non-public schools. The latter schools can be social, civic, religious affiliated, or private schools, etc. Non-public schools appeared for the first time in the Polish education system in September 1989. The schools were then called "social" or "civic" because of the great amount of work that was invested in them by people from local social groups; mostly parents and teachers. These schools have their own curricula that are approved by the Minister of Education. They are financed from fees paid by parents. Funds can also come from private enterprises and foundations. Since February 1990, according to education policy, non-public schools receive a subsidy calculated according to the number of pupils and 50% of the average cost of pupils in state schools. “Private” schools have also opened in Poland functioning as profit-making enterprises. Unlike the "social" or “civic” schools, these private schools are clearly intended for the children of wealthier families.

After World War II, demographic changes and developments in Poland strongly influenced its education system. There were two great baby boom peaks: 1955 and 1983. At the end of the 1980s and the beginning of the 1990s, it was particularly difficult for primary schools, as they had to cater for the largest groups of children in some time due to the latest “baby boom”. Similarly, the last years of the twentieth century were especially difficult for secondary schools since they had to educate the greatest numbers of 15-year-olds. Together with the economic recession, these strongly fluctuating demographic developments made it difficult for the Polish education system to engage in meaningful reforms. Thus, the current decline in the school-aged population is more conducive to facilitating substantive educational reforms because of the decline in pupil numbers. Consequently, educational planners focused less on the physical needs for schools and classrooms and more on philosophical and pedagogical issues.

CHANGES WITHIN POLISH EDUCATIONAL INSTITUTIONS

Historically in Poland as in other countries, educational planning, even if the plans are not fully implemented, commences from the point of view of educational policies that are prominently articulated and enforced. Educational planning, based on the specific focus of the lens that is used at the time, is a necessary process for raising awareness of the changes that should be made in educational organizations and the learning needs that should be met in order for the educational institution and the society to survive and thrive (Hatch, 2013; Kaufman, Herman & Waters, 2002; Norton, 2005; Polka, 1999; Polka, 2014; Polka & Guy 2001; Polka & Pucher, 1994). It should also be assumed that strategic planners are guided by financial possibilities, human resources available, sometimes political considerations - which make future changes possible as they contemplate and develop educational plans at the national level.

It is imperative, thus, to analyse of the changes in the Polish education system in the recent past, as an important starting point for thinking about the future. The main change, that was introduced as early as 1989, which is historically identified as the beginning of the end of the socialist system in Poland, was called the "putting straight" period wherein the contents of such subjects as history, civics, Polish language, and philosophy were updated to reflect a less soviet revisionist perspective and a more factual Polish orientation. In the new textbooks the content was introduced which was, previously, known only unofficially to some scholars but not in all academic learning circles. In addition, the management and funding of educational institutions changed quite radically, although both remained with the same or only differently named authorities and institutions. The essence of these changes consisted in the decentralization of the system. Accordingly, the transfer of a number of decisions to the lowest levels of government such as: local civil government, school principals, and even teachers. This devolution was a major policy change in Polish government and education and was a harbinger of less centralization and control and more local decision-making.

Currently, the Ministry of Education is responsible for the oversight and administration of the education system and coordinates national educational policy with the education authorities of the 16 voivodships (regions) of the country. The Minister has the power to adopt regulations and create a legal framework for the functioning of all public and non-public educational institutions. More detailed powers of the Minister now include:

- establishing requirements and procedures for admission to schools.
- designing core curricula for all subjects and types of schools which are freely implemented by teachers, using freely chosen textbooks and teaching aids.
- establishing the rules for assessing and promoting pupils
- conducting nationally uniform and "externally" assessed tests, examinations,
- scheduling the school year, the dates of school holidays, free days related to public/national holidays (Polish EURIDICE unit, 2012 p. 13)

Therefore, in comparison with the past political era, the Minister of Education in Poland still plays an important role in terms of initiating and coordinating national educational policy, but he/she is under much greater social control and has significantly smaller financial resources at his/her disposal.

At the regional level (voivodship) the supervision over the education system is exercised by an education superintendent. He/she is responsible for implementing the policy of the Minister of Education. Their supervisory responsibility is primarily pedagogical in nature; additionally, the superintendent is responsible for teacher training institutions and the education of teachers, excluding higher education. Before 1989 the powers of the superintendent were much greater and more comprehensive so much so that numerous decisions at lower levels of educational administration had to gain his/her approval.

Therefore, many centralized powers, including, primarily that of managing the financial resources coming from public funds, and allocations of them in the budget for educational institutions, were transferred to the lower autonomous local levels of government. In fact, both the district (powiat) and, above all, local authorities at the level of commune (gmina), and local municipality, determine the current and planned educational policy. District authorities are responsible for administering upper secondary schools (post-compulsory), and the communes run kindergartens, primary, and lower secondary schools. In simple terms, the school funding mechanism is based on the updated yearly so-called base amount allocated for an average student. The actual amount distributed to district authorities and communes depends on the type of school

and community; for example, schools in rural areas, typically with fewer students, and thus, with higher unit costs - get additional funds as supplements to address their specific needs. Also, now at the school level, the head of school is the key and often the final decision-maker. The head of the school is responsible for matters relating to teaching, personnel policy, and contact with the local community.

Child Care and Pre-School Education

Child-care and preschool education, regarded as the first level of the system of education, includes children aged 3-5/6 years. Compared to most European countries, Poland has one of the lowest participation rates at this level of child care and education. By 1989, despite numerous propaganda declarations identified that the threshold of 50% (total number of children in this age group) has never been exceeded. The decreasing number of children and the takeover and subsequent closing by local governments of pre-school institutions, kindergarten, and so-called pre-school classes in primary schools, meant that in the first half of the 1990s the participation rate in this child care sites decreased to 43 % (GUS, 2007). However, at the end of the twentieth century and in the first decade of the twenty first century the percentage of children attending kindergartens was growing and currently exceeds 71% for all children 3-6 years of age but is higher 84% in urban areas, and lower 54% in rural areas (GUS, 2013). But, those percentages are also the result of significant differences in the pre-school participation rate in individual years as most recently all 6-year-olds attend a pre-school education institution. However, among younger children, the attendance rate considerably drops.

During the past 25 years a few thousand kindergartens were closed in Poland and when, in the last few years, the number of children started to increase again, an acute deficit of places for kindergartens was felt in several large cities. This was sometimes followed by embarrassing selection procedures for children entitled to use these facilities. The problem of child care and pre-school education should not be considered exclusively from the perspective of the participation rates because the type of institution the children attend is also very important. In general, kindergartens that provide care from early morning until late afternoon are considered better since they are more comprehensive learning environments. Pre-school classes have shorter hours, sometimes have a feel of a school rather than kindergarten, and are not always completely isolated from the effect of noise, aggression, and "bad example" from the older children. Most children in rural areas attend a pre-school class in a primary school if they do attend some pre-school education institution at all. In cities, the vast majority of children attend kindergartens.

But, full access to child-care and pre-school education in Poland, especially in rural areas, is one of the most urgent problems that needs to be solved by the authorities at all levels of school management. In January, 2008, the Minister of Education issued regulations establishing two new forms of preschool education, to meet these needs. The forms are: pre-primary education groups and pre-primary points where classes can be held in less numerous groups of children. In both of these new forms the classes are even shorter than the pre-school classes in schools and, also, in the pre-primary education groups students are not expected to attend daily.

Primary and Lower Secondary Schools

The school year 1998-1999 was the last in which the traditional eight-year primary school was functioning. The following year, a six-year primary school and a three-year lower secondary school organization started operation. Also, in the 1999-2000 school year, the highest number of primary schools were closed or reorganized into lower secondary schools. However, some Polish education experts point out that the network structure of lower secondary schools is not favourable from the educational and organizational point of view, due to its considerable fragmentation. Secondary schools numbering up to 160 students may be considered too small because they can have, at best, only two parallel classes. This imposes limits on, for example, the choice of foreign languages and organizing extra-curricular activities and this small school size is not conducive to healthy competition and increases the cost of education per student.

But, there are grounds for concluding that the introduction of lower secondary schools has contributed to raising the level of general education of 15-year-olds in Poland. The results of the (PISA) study from 2000 to 2012 have shown a significant increase in the achievements of Polish students primarily in reading comprehension with results in mathematics close to the OECD

average. Currently, all 15-year-olds attend lower secondary schools; previously some of the students, especially the weakest ones, attended vocational schools. The PISA study shows that Poland belongs to a small group of countries that have improved their score since 2003 (OECD (2000-2012), PISA Results).

Two main achievements of lower secondary schools, at least in the area of reading and reasoning, are: firstly, the inclusion of a substantial part of the weakest students in a unified system of general education with much better results than in the former, eight-year primary school and secondly, extending the teaching of more advanced skills of working with text materials via reading and reasoning to the entire population of students. The first of the aforementioned achievements has resulted in the reduction of the group of students poorly prepared for further study and the second has improved the academic achievement of the top group of students. Therefore, the lower secondary schools have undoubtedly contributed to the spread of reading comprehension and reasoning skills, which, subsequently, resulted in raising the general level of education of their respective students, and the students of vocational schools have demonstrated slightly better results than their colleagues who had previously graduated from the eight-year primary school.

Upper Secondary Schools

After graduating from lower secondary school, students choose one of the two main education pathways: (1) general secondary schools, whose main objective is preparation for the continuation of studies in higher education institutions which requires successful achievement on the national Matura examination or (2) vocational education which has been greatly impacted due to the unfinished reform syndrome of recent years. But, there are still systemic problems that need to be addressed since in Poland, on one hand, it is declared with pride that over 86% of young people aged 16-18 are educated in schools that end with the Matura exam; however, on the other hand, due to low interest of young people in vocational education, some sectors of the economy suffer labor shortages that is further exacerbated by the emigration of mostly young people.

Secondary schools

Among secondary schools, three year general secondary schools are most popular with young people. Until 1989, the access to the 4-year general secondary schools was rationed in such a way that they could be attended by no more than 20-22% of a given age group of young people (15 - 18 years of age). But, with the transformation of the political system came a rapid development of general secondary schools as the following data illustrates:

- Prior to 1989 there were about 900 general secondary schools.
- 1990 there were about 1,100 general secondary schools.
- 1992 there were about 1,500 general secondary schools.
- 2007 there were about 2,500 general secondary schools (GUS 2007, GUS 2013a).

Today, the number of general secondary schools is slightly lower than in 2007 which is a result of not only the population demographics but also of a slow, but growing interest in vocational schools based on employment demands the labour market.

For a number of years now these general secondary schools have been the ones upon whose completion one had the best chance of continuing education in higher education institutions. However, the mere completion of general secondary school and getting into college/university, especially paid private, but also public, because of the system of extramural studies is not as difficult as in the past. Due to the small number of potential students - many schools, to enrol adequate numbers of young people, significantly lowered the threshold requirements. Currently, in many cases, the general secondary school exit certificate is the only one requirement for admission to higher education studies.

Vocational education

Schools in Poland currently offering vocational training programmes can be divided into two groups:

1) Secondary schools that are either:
    a) Two or three year basic vocational schools that culminate without taking the Matura examination,

b) Four year technical secondary schools that preparing students for the positions such as specialized technicians. Students in these schools can take the Matura examination,

2) Post-secondary schools, designed primarily for graduates of general secondary schools who want to get vocational qualifications and enter the workforce.

Historically, the students who attended the various types of vocational schools were mostly primary school graduates (c. 80%). Currently, the percentage of students who attend vocational schools has dropped to about 45% of the graduates of lower secondary schools. In recent years, the fastest growing and fastest commercializing sector of vocational education are post-secondary schools. They are designed primarily for graduates of general secondary schools wishing to obtain a vocational qualification at the level of technician or skilled worker. The number of these schools increased in the last 10-20 years several times and most of them are non-public schools. However, a renewed interest in vocational schools has emerged. This interest is associated with trends in the labour market where trained technicians and graduates of vocational schools or post-secondary schools with a vocational qualification have a better chance of getting a job than in previous years including jobs working abroad.

Non-Public Schools

The non-public education services market is now relatively stable. After the fast pace of growth in the nineties, it reached a higher "saturation" level. For instance, the growth of the number of non-public kindergartens and post-secondary schools, and, to a lesser degree, of primary and secondary schools, is slower than it was in the 1990s and the number of general secondary schools decreased. Non-public educational schools and institutions are generally smaller and attended by, on average, only a few percent of the total number of students who are eligible to attend. But, the importance for the whole educational system of this kind of educational option is meaningful since there is definite interest in these non-public schools. And, the government's attitude towards, and state funding of, non-public education is a barometer of educational policy towards non-public education. It seems that a good benchmark of this educational segment is the quality of education provided comparable to that of the public schools and the eventual careers of the non-public school graduates. The results on national tests and external examinations that are given at the completion conducted of consecutive stages of education show that non-public school graduates obtain results much better than graduates of public schools. Note, however, that it is not only the merit of the schools, but also the result of the selection of students as well as the cultural and socio-economic status of their family that factors into student achievement success.

It can be assumed that, similarly to other countries, non-public education in Poland has become a permanent part of the national education system. One of the advantages of non-public schools, especially private schools, is their autonomy. Some experts point out that if public schools succeed in adopting some of the characteristics of private schools, the attractiveness of non-public schools may significantly decrease and, consequently, the loss of a part of the educational market may ensue (Finn, Ravitch, 1996). If, however, the competition between the two segments benefits state schools, which are the foundation of any educational system, it would be, from the point of view of the majority of citizens and the state, favourable change.

Higher Education

Higher education, especially non-public, has been developing since the early nineties at an unprecedented pace as the following data points illustrate:

- In the academic year 1990/91, the second year of political transformation, 112 higher education schools were attended by about 404,000 students.
- In 2007/2008, 448 higher education schools of all types were attended by 1,940,000 students or over four times more than in 1990.
- The consequence of the change is the fact that Poland has now one of the highest "academic" enrolment rates in the world.
- The enrolment rate has, in the past 10-20 years, increased almost fourfold (from 12% to 44-47%) (GUS, 2013b).

More than 70% of the higher education institutions in Poland are non-public, but it is in the public schools where more than two thirds of all students are enrolled. Non-public schools are, thus, much smaller and much more often located in relatively small cities/towns with perhaps up to twenty thousand residents, and, in extreme cases, with only a few thousand inhabitants. Most of the non-public higher education institutions offer only undergraduate economics courses. However, this dynamic growth and development of higher education institutions is considered to be taking place, to some extent, at the expense of the quality of education. The rate of growth of the number of academic staff and of the improvement of the material base of higher education is much slower than the increase in the number of students in the same period.

In higher education, the deficiencies of earlier levels of education can be clearly seen. This phenomena applies primarily to mathematics education whose position weakened in lower and upper secondary schools as a result of some of the reform agenda changes. Poorer readiness of secondary-school graduates to take college/university courses in mathematics, natural sciences, and engineering was partly due to the withdrawal or lowering of the requirements in mathematics as a compulsory subject in Matura examination. There was always a political subtext to the decisions regarding the inclusion of mathematics on the Matura examination for the first time in 1983, and again in 2003 there was a downgrading of mathematics content, but mathematics was restored as a compulsory Matura subject in 2010. The effects of these manipulations were clear in that the graduates of secondary schools ending in Matura examination all too rarely chose the aforementioned courses since for many graduates the main criterion for the selection of the course of study was the absence of mathematics. Thus, the percentage of students in mathematics/natural sciences and engineering courses is too low when one takes into account the high practical value of these studies for the knowledge-based economy. The deficit of such specialists is exacerbated by the fact that until recently, more than 25% of the students in these courses dropped out after the first year.

PROJECTIONS AND PLANS

Currently, compulsory education in Poland comprises primary and lower secondary education with a combined total of nine years of required schooling, but it is legally extended until the age of 18, which means that the vast majority of young people continue learning after they leave lower secondary school. In the future schools ending in Matura examination will probably be obligatory, thus, the period of compulsory education will last more than ten years. The UNDP forecasts, which estimate the average number of years a child born today will learn in the future are worth looking at. For the countries at the top of the ranking list such as Australia, and New Zealand, the estimates indicate around 20 years, but, for Poland the estimate is 15 years (UNDP, 2013, p.144). Of course, it is difficult to predict the future of schooling and how long the process of education will last in the perspective of 10-20 years from now, and, even more difficult, in the perspective of several decades. It is highly probable, however, that alongside institutionalized kindergartens and schools in Poland the following will occur:

- pre-school education will cover 3 years (children aged 2-5) at the level of about 85% of the population but, if this level of education is compulsory - the percentage will be even higher.
- compulsory school education will certainly start earlier than at present, and will include more than ten grades.

It can be assumed that in the future a young person will attend all kinds of pre-school institutions and schools on average, for about 21 - 22 years, excluding any subsequent professional training, work-related courses. This period will be shorter for students who will start work relatively early, in occupations which do not require particularly high qualifications, and longer, for students doing a course of study similar to the current doctoral or academic postgraduate studies. Future models of school will be affected not only by the concepts relating to the period of education, number of years, but also by detailed guidelines concerning, for example: the number of children in the class and school. Such concepts can be elaborated based on current experiences, however, one thing is certain, the less numerous the classes, groups, schools, the higher the cost, but, at the same time, generally, the higher the quality of education and care. As usual, these considerations concern public education, largely in cities as there are slightly different rules that will govern or educational institutions and schools in sparsely populated rural areas.

The Dominant Models of General Education in The Future

The earlier published proposals presented bellow (Piwowarski, 2008), are related to the trends which are likely to intensify in the future, and, to some extent, may already be in existence in various places in the world and in Poland. More often, they will also contain elements of other models that rarely exist in "pure" form and the nomenclature for them will be decided because of their dominant feature or function:

City model

It will be probably be the most common model, and the higher the level of education, the greater its dominance. A distinction can be made between the following two basic variants:

- local city model typical for larger cities; due to the high density of urban development it has a relatively small range, but covers more students.
- collective city model, typical for rather smaller cities or the suburbs of larger cities; often "collecting" students from suburban residential areas, part of which is distinctly rural in character. These schools are more diverse with respect to the number of students.

Rural model

The occurrence of rural education models will depend not only on the pace of urbanization of the country and rural depopulation, but, also, on the re-ruralization that is currently being experienced in many countries including Poland. This re-ruralization, unrelated to agriculture, which is an increasingly common phenomenon among people of higher socio-economic status and includes:

- *local rural model* that is uncommon and limited mostly to the largest rural localities with sufficient number of students to organize school. But, it does not preclude the admission of students from other localities.
- *local-collective rural model* that consists of a large group of students from its locality and a significant number of pupils transported from other localities. This is a typical model for the larger schools located in rural areas.
- *collective rural model* based almost exclusively on transported students often from many localities. These schools are diverse in terms of the number of students.
- *"teachers" rural model* that is based largely on the teachers commuting to small schools and education points.

Electronic technologies model (E-learning)

This model is likely to have the widest application in sparsely populated areas because of the limited access to general education schools. The online role of this model of education will increase in lifelong learning, adult education, and, primarily, part-time studies for working individuals interested in furthering their educational opportunities. It is difficult to predict what new revolutionary information technologies may arise in the future that will further enhance the application of technology to all levels and forms of learning. Even more powerful multimedia computers will be available, there will be even more opportunities to use the synthesis of visual, auditory, and tactile technology in teaching, but, there will be an accompanying disparity between the vast knowledge concerning these technologies and the use of these learning tools based on wealth level of the students.

It should be emphasized that these new technologies should not lead to closing of the school as an institution, but, the problem is, and will be the optimal use of e-learning on the part of educational institutions. It seems that the educational system should not be dehumanized that is specifically stripped of the student - teacher relationships, and/or, to an extent student-student relationships as well as teacher-parent contacts. In Poland, as well as elsewhere in our world, the peer-learning environment, the social composition of classes, and the culture of schools generally have a highly positive impact on educational achievement. So, if there is no, "higher necessity" understood for the absence of a traditional type school, the local and state school authorities shouldn't deprive students of mutual contacts and “high-touch” learning, that for many of them, in addition to the cognitive academic benefits - is the greatest pleasure on the difficult path of education. However, E-learning as well as e-play in pre-schools will be used at each level of

education and in all its models. But, it's important that educational planners maintain an appropriate "high-touch" and "high-tech" balance for schooling so that humanness factors are preserved in future education (Polka, et al, 2014).

DETAILED RECOMMENDATIONS

It seems, as is the case now in Poland, that in the future the role of boarding schools will be marginal. The main reasons for this projection are as follows:

- the reluctance of young people and their parents to dormitory "accommodation" dating back several decades
- high cost of maintaining dormitories that is generally higher than the cost of transporting students to schools and back home.
- the development and improvement of the road network which allow better access to educational institutions.
- and, above all, the development of new information technologies that support anywhere and anytime learning and teaching.

Small kindergartens or schools have both their advantages and disadvantages. The advantages include local community bonding and interpersonal relationships, more individualized approach to teaching, and better child-centered educational climate. But, the disadvantages include: higher unit costs of education and generally inferior equipment. Closing of a school, however, results in social environment degradation, and cultural impoverishment within the local and regional area. On the other hand, it is emphasized that small schools limit the choices for students and their parents of foreign languages and other advanced content curricula as well as extracurricular activities.

It seems that the optimal size of the school in Poland is three-four tracks model (i.e. at the level of each class there are 3 - maximum 4 units/groups). One reservation being that "optimal" is a relative term, it is the result of a compromise. In terms of unit costs, the optimum school would be even bigger with more students and classes in one large school facility.

From an educational planning perspective a smaller school is certainly better, but, planners need to keep in mind the aforementioned higher costs (per student and per teacher) of smaller schools as well as the generally inferior equipment, inability to offer some classes, and the problems with filling the teachers' teaching load. These problems can be overcome by organizing the work of teachers in such a way that their required hours of teaching are divided between several schools (a model based on commuting teachers) - but this is not always possible.

From the point of view of the organization of school work, the number of classes/units is no less, and perhaps even more important, than the total number of students. This indicator influences the number of teachers that a school principal should hire, the number of teaching hours allocated to individual subjects, and, consequently, how many teaching hours will be available for individual teachers. In very small schools these difficulties might be overcome by:

- organizing teachers into a combined-class system.
- preparing teachers for teaching at least two subjects. This has been widely discussed in Poland but not effectively dealt with for several decades.

Established structures of the school system in Poland including detailed guidelines on the size of the school and school teaching unit are political decisions that cannot always be predicted. It can be assumed that public, compulsory school will last 12 years in two cycles: 6 + 6 or other combinations. The total number of students in a school should not exceed 300-400 because that is the size that ensures that students are still recognized by the teacher, and that the work of the school can be organized in a proper manner. Numerous documents, international, and national studies, refer to the eight so-called key competences for lifelong learning. Those are internationally known as a recommendation of the European Parliament and the Council of Europe of 18 December 2006 and include:

- communication in the mother tongue
- communication in foreign languages
- mathematical competence and basic competences in science and technology
- digital competence
- learning to learn
- social and civic competences

- sense of initiative and entrepreneurship
- cultural awareness and expression (Recommendation, 2006).

The above competences are a challenge not only for teachers, principals, teacher trainers, but also, to some extent, also for those who will make decisions concerning educational policy on a local and regional scale since the policy that covers setting the locations of various educational institutions. The mastery of these competences will serve the three strategic objectives of the Polish education system, namely:

- ensuring fair and easy access to education
- providing education of good quality, in accordance with the requirements of the knowledge-based economy
- Adapting the education system to labour market needs.

These objectives are widely accepted in Poland and the general feeling of educators is that they should not be dropped. But, they are, perhaps, too idealistic and not easy to accomplish everywhere. Their completion should be compliant with the principle of sustainable development that has been cited repeatedly in various studies and understood as the type of development which meets both current social needs and the needs of future generations equally.

There are many expert opinions indicating that an attempt to level educational and professional opportunities, that often are the consequence of measurable school achievements, at the primary school level, is belated. Compensating for the shortcomings of the family environment and slower intellectual development of some children should start much earlier with a test of school competences. These assessments should start at the primary school and continue to be used as benchmark references until the completion of the integrated education stage. The fact remains and is supported by the results of most studies (including the OECD - PISA, PIRLS and UNESCO - Education for All) that the family plays a very strong influence on the achievements and educational opportunities of children. Therefore, local, regional, and state educational policies should take into account the family social backgrounds. Some less educated parents, who often were marginalized by the lack of proper education themselves, lack of jobs, succumb to alcoholism, and other social pathologies. The re-education of the parents from these backgrounds should start before enrolling the child in school. This form of educational activity could be implemented in schools, centres for continuing education, or with the help of qualified specialists reaching directly "at risk" families. The number of children's homes and special schools that are being gradually replaced with integration schools will likely decrease in favour of more effective institutions based on the special needs of students. The number of centres treating contemporary technology fostered maladies such as: computer, internet, and mobile device addictions, however, will increase.

It is in the arena of vocational education in Poland that requires contemporary focused decisions and resolutions. Currently, vocational education does not keep pace with the changing needs of the economy and/or the labour market. It seems that in the future this type of educational institutions will be free from the pressures of local government and teachers' lobby. In many cases, the planning formula for determining the structure, the number, and types of training programmes at the level of local, district, and state government levels has proven to be ineffective. Local governments in districts are not always able to reconcile the expectations of the local and the global labour market, and decisions relating to the network of schools and training programmes offered are substantively ungrounded. Moreover, the decisions focus only on the unit cost of education in a particular type of school, personal connections between district and school authorities, and election campaigns contexts. Qualification standards that take into account the expectations of employers will continue to play a crucial role in both in-school and out-of-school vocational training systems. Subsequently, vocational school certificates will confirm gaining specific qualifications. The role of foreign languages in basic vocational subjects' classes will increase, which will result in better preparation for the European labour market and the general recognition of the diplomas. However, practical vocational training, to a greater degree, will be provided out-of-school, at the premises of businesses, services.

New educational technologies will probably be increasingly used in higher education. The risk of a reduction in the number of schools of this type should also be taken into account. At present, small, weak, underperforming schools, those schools whose graduates have trouble

adapting to the labour market, no longer can and will not survive the intense competition. Problems of higher education are aggravated by the demographics of low birth rates and the continuous emigration of prospective students. Growth of the Internet and increasing availability of access to the Network or other, yet unknown, "cyber inventions" will continue to expand their impact on Polish society and education. Cultural and educational experiences may be limited in the areas neglected in socio-economic terms. Literature, increasingly in electronic formats, and specialist literature, including methodological books, will be available for purchase online, rather than in traditional bookstores. Increasingly, the Internet, and not traditional cinemas, will provide access to films. As to educational publications, online bookstores will probably increase their share in the distribution of textbooks, especially in supplying schools and teachers with ancillary educational publications. The situation will be similar with respect to online libraries. Thus, the "look and feel" of the traditional school in Poland, whether in the urban areas or the rural countryside, will continue to evolve as a result of the social, economic, political, and technological changes that occur in our global world.

The importance of non-public schools will grow at all levels of education although a significant amount of their growth depends on the state policy. If the concept of "educational vouchers" is put into practice in its pure, free-market form, which, from time to time, gets public attention through some politicians who do not understand the complexity of education system, the Polish education system will undergo a revolution, especially in the location of schools. Wherever the choice of school will be possible, then some schools will have to close and the borderline between public and non-public schools will continue to blur. Another future variant of the state strategy towards non-public education may involve duplicating the model employed for years in the Netherlands, whereby most schools are private and the state subcontracts them to perform specific educational services and, most importantly, reimburses citizens for the expenses related to the education of their children (Patrinos, 2002). In this approach, the discussion about egalitarianism and elitism of education loses its importance, especially because, as should be anticipated, the student assessment system will be much better than the current one. A fair system of evaluation and selection at different levels of education, should, similarly to the present situation, cover an internal assessment, "teacher's assessment", and the assessment based on improved external examinations.

However, getting closer to objective assessment will be possible not only by improving the already functioning forms of assessment but also by promoting the so-called educational value added (EVA). Such attempts are already made in Poland, and they consist in assessment of, not only, what a student can do and what he/she knows, but also what progress is he/she has made, for example, by measuring "the input" and "output", on entering and on leaving a given stage of education. The idea is to apply different measures to the differences, of environmental character, resulting from cultural and civilizational impairment and selecting also those students, disregarding the absolute value of their assessment, who make the most progress.

CONCLUSION

The symptoms of change can already be predicted or noticed, the change which is perhaps not directly linked to the location of schools, but which will strongly affect the pedagogic sphere of educational institutions in Poland and should therefore also be included in the premises and planning of educational policy. Strategic planners and policy makers must be prepared for the challenges both well-known and less known, as well as unforeseen, which will be a consequence of demographic and migration processes. The number of children from partnerships (unregistered), and ethnically heterogeneous marriages/registered partnerships will increase. The number of children growing up in single-parent families (without one parent - most often the father) will probably also increase. It should also be taken into account that the influx of immigrants into Poland, very often from very distant and exotic countries, poses challenges to the educational system that require even more decisive action - aimed at shaping the attitudes of openness and tolerance for "the other".

It is also worth noting that the decrease in the school population may be the cause of yet other type of consequences. First - it does not have to result in reducing the financial expenditure on education. The reduction in the entire school population does not mean that the number of students decreases everywhere. There may be migration to some dynamically developing cities, centres of

economic activity, or, within other cities and there may be displacement of population to suburban areas. Thus, despite the declining number of students in the country or specific regions, there may be a need for building new schools and, while at the same time, closing schools in depopulating areas.

It should also be noted that the number of teachers generally decreases much more slowly than school populations, however in Poland, paradoxically, in spite of the decreasing number of students in recent years, the number of teachers increased. Even though the teacher-student ratio decreases, it does not always result in greater individualization of instruction because these changes are not followed by the improvement in the learning process. Without a doubt the process entails the growth of unit costs of education and additional side effects including the aging of teacher population and reduced recruitment of young teachers. This, in turn, may inhibit the introduction of pedagogical innovation, towards which older teachers are less favourably disposed. The demand for teacher training in areas such as working with pupils with special educational needs and the use of new technologies in teaching will increase. At the same time one should be aware that some schools will have to close and some teachers will lose their jobs not only because of the decreasing number of students but also because of the further development of new technologies employed not only in teaching but also in the accumulation of knowledge. There will be a common challenge too, arising everywhere: how to retain the best and the most effective teachers in job. One finding is high performing countries put much more energy into recruiting, preparing, and supporting good teachers, rather than finding ways to work with or fire weak ones (Asia Society, 2010).

As a result, strategic planning for educational success in Poland is very critical, as there are important challenges, issues, and goals that need to be addressed. However, it appears, that for various reasons, such plans will be difficult to develop due to changing demographical trends (e.g., declining population), but, those strategic plans will have to be very creative as well as bound to the practical essence of what great education can look like in Poland's future. And, those plans will need to be examined in light of Polish educational history because, as this article has portrayed, sometimes it was positive for the Polish people and their children that some of the educational schemes and plans of the past went awry. Let's hope that the educational planners in Poland have learned from their past and approach their future with vigor and enthusiasm to develop targeted, pragmatic, yet flexible strategic plans that are based on the best interests of the children and their future. Hopefully in 100 years, educational planners will analyze if there was "promised joy" from those plans and schemes developing today or was there simply more "grief and pain" because the predictions went awry and/or the open-social system of Poland experienced new dramatic changes precipitated by mega, macro, or micro environment evolutions.

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