

Education policy in Poland: The impact of PISA (and other international studies)

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Abstract

The impact of the PISA study on Polish education policy has been significant, but probably different from any other country. Poland has not experienced the so-called 'PISA shock', but its education system has been benefiting considerably from PISA. For experts and policy makers, it has been a useful and reliable instrument that has made it possible to measure the effects of consecutive reforms of the school education system. Moreover, PISA and other international studies have influenced the perception of education policy in Poland. The latter has shifted from an ideology-driven, centralised policy to an evidence-informed policy, developed with the involvement of multiple stakeholders, although this has mostly affected the thinking of experts and policy makers rather than the general public. The new government (in power from 2015), following public opinion polls, has reversed most of the previous education reforms, eliminating lower secondary schools introduced in 1999.

KEYWORDS

education policy, educational reform, PISA, Poland

1 | THE HISTORIC CONTEXT BEFORE PISA

As with other former Soviet Bloc countries, profound changes began in Poland in 1989. A shift to the principles of a modern democracy, based on human rights and the market economy, affected most aspects of the State, society at large and individual citizens. However, the scale of the changes in the school education system was rather limited - a result of the common belief that the quality of basic education was decent. It should be noted that it was not possible to verify this opinion at the time, since student assessments were not standardised until 2002. In addition, before 2000, Poland did not participate in international comparative studies on student achievement such as TIMSS (Trends in International Mathematics and Science Study). In addition, education policy makers and researchers believed at that time that 'any revolution was not good for education' and that any changes should be properly designed, tested and introduced step-by-step. This can be illustrated by a quote by Anna Radziwiłł (Deputy Minister for Education in the first 'Solidarity' government): 'I am equally afraid of the general statements on a crisis and degradation of the school education as of a myth of substantial reform or reconstruction of the system' (Radziwiłł, 1992).

Gradually, it became increasingly evident that education was lagging behind the many economic and societal developments taking place in Poland. The most apparent challenge was the scale of unemployment, which increased from less than 1% in 1990 to 15% in 1995 (GUS, 2017). Besides internal dynamics and new challenges, Polish education policy was being influenced by the quickly developing contacts and collaboration with partners in the 'West' and its international organisations: the Council of Europe, the EU, the OECD and the World Bank.

In 1994, Poland joined the International Adult Literacy Survey (IALS) conducted by the OECD. The results, published in 1995, demonstrated a very low level of competence among adults, which was far below the scores of other developed countries covered by the survey (less than 230 points on the 'prose' and 'document' scales, whilst the international average was 250 points; OECD, 1995). As a consequence, a debate was triggered on the quality of education in Poland, starting with a school education system that failed to satisfactorily provide young people with the key competence of using written information. The IALS also revealed profound deficiencies in the education system for adults, which did not offer them the opportunity to compensate for a lacking competence. The IALS brought to the Polish educational debate, and consequently to education policy, a number of important concepts such as key competencies or functional literacy. Interestingly, the last term did not have an equivalent in Polish at that time. The IALS contributed to the public awareness that being literate could have very different meanings – from possessing basic reading skills to the ability to understand and interpret complicated texts. Understanding this paved the way for the promotion of the idea of the continuous development of competencies and the implementation of the principles of lifelong learning. Also, in 1995, the OECD conducted a review of education policy in Poland. A special session of the Education Committee was organised in Warsaw. Experts, academics, representatives of local governments, trade unions and NGOs were given the opportunity to take part in the discussion on the findings and recommendations of the OECD experts.

Beside participating in the OECD Review of Polish Education and the International Adult Literacy Study (IALS), which were influential in rethinking policy, Poland took part in several projects and training events organised by the World Bank and the European Commission. In the wake of such cooperation, a new terminology and the know-how related to it were imported to Poland. Concepts and terms such as evidence-based policy, quality assurance, competence and skills, task designing came into use, untranslated, for quite a long time. While implementing these international programmes and projects at different levels of management, a transformed idea of educational policy gradually emerged. In a nutshell, policy making should now consist in creating quality and promoting equality in the process of access to education. In more explicit terms, quality in education should focus on the development of competencies that would be useful and adequate for what was needed in life and work. The PISA programme and its rich theoretical framework offered methods and tools with which to define and measure the key competencies required in life and work.

2 | THE SYSTEMIC EDUCATION REFORM IMPLEMENTED FROM 1999

Finally, ten years after the collapse of the Communist régime, the new government formed after the parliamentary election of 1997 decided to launch a comprehensive reform of the whole education system. The following objectives were declared:

- Raising educational attainment in society by increasing the number of those holding secondary and higher education qualifications;
- Ensuring equal educational opportunities; and
- Supporting improvement of the quality of education.

In order to achieve these objectives, the Ministry of Education decided to change the structure of the school education system, redesign curricula, introduce new instruments for pupil assessment and modernise the supervision (inspection) system. The education reform was part of a 'package' of four reforms introduced simultaneously in Poland. The others covered the health care system, social security (pensions) and public administration. The latter was particularly pivotal

for education, since local governments became fully responsible for running primary and secondary schools and began to receive funds from the state budget for this purpose. The amount of the subsidy was calculated on a per capita (student) basis. As a result of the education reform, the 8-year primary school was replaced by a 6-year primary school and a new 3-year lower secondary school (*gimnazjum*). Thus, general education with the same curriculum for all young people was extended by one year. Hence, the selection of students for various types of general and vocational upper secondary schools was postponed by one year.

At the same time, a new national framework curriculum was introduced, offering schools and teachers more autonomy in the choice and adoption of curricula and teaching programmes. The textbook market was opened up and teachers were to decide which textbook to use from a list accepted by the Ministry. The reform was combined with the introduction of external standardised examinations taken by all pupils at the end of primary and lower secondary education and by secondary school leavers aspiring to be admitted to higher education. The maturity (final secondary school) exam replaced entrance exams to higher education institutions.

Moreover, the transformed approach to policy making was accepted by both parents and pupils. Their individual strategies towards education were based on the assumption that those who did well in national standardised tests would succeed in life and at work. Even if standardised tests and test-driven education were criticised by some, individual strategies such as the choice of schools and classes and of educational tracks were increasingly based on test scoring. Test results at the age of 16 appeared to be especially important because they coincided with a crucial branching point, dividing pupils into either the secondary general track or vocational/technical schooling, the former being the direct path to higher education. The last national test at the end of secondary education [in Polish: *matura*] determined entrance to higher education and students with good scores gained access to the best programmes of the best university departments. At present, data on the job histories of graduates from different higher education institutions are very limited. Parents and students are, however, aware that returns from education are high in Poland. In fact, differences in earnings between people with a tertiary education diploma as compared to those with only secondary education were substantial (OECD, 2016a).

3 | TOWARDS AN EVIDENCE-INFORMED EDUCATION POLICY: A MAJOR CONTRIBUTION OF PISA

At the level of policy-makers, the information resources, especially the data delivered by the central examination system, including the data on value added, may be used at different levels of management, be they local or national. One limitation, however, is that the test results in Poland are not equated across years so it is impossible to see trends in student results. The second limitation is that the tests assess school-related performance, whereas policy makers are usually more interested in how the skills and knowledge acquired in schools benefit the economy and society.

Is the definition of competencies declared in school curricula and measured by the testing system adequate? Are those skills taught at school really needed and useful both at the individual and national levels? Are they useful in continuing education and succeeding in adult life? One of the most important anchors indicating the extent to which Polish education is producing quality is the international comparative survey. From the point of view of policy makers, PISA creates one of the most important sets of data and thus brings a credible basis for the evaluation of Polish educational policy.

It is hard to deny that the evaluation of reforms is always challenging. It is especially hard to evaluate reforms such as the Polish reform of 1999, which combines numerous changes introduced at one moment in time and affects all students in a country. Arguably, in most cases, it is not possible to estimate causal relationships between changes in policies and changes in student outcomes. Nonetheless, Poland was lucky to be able to benefit from the first PISA study, which was carried out for the first time in 2000. At that time, 15-year-olds (the age group targeted by PISA) were students of secondary schools who were not affected by the reform. The second wave of PISA, in 2003, covered the students who entered primary school in the former system, but were the first cohort to attend the new lower secondary schools for a full three years. These schools were the flagship of the reform. The pupils covered by the following wave

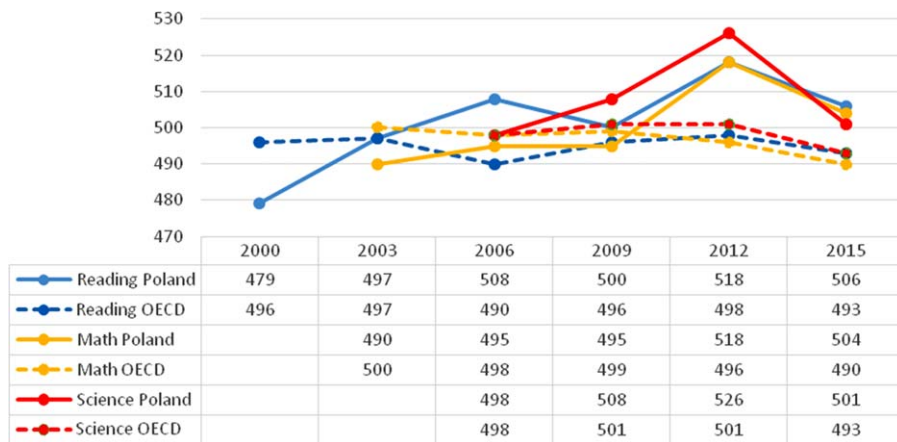


FIGURE 1 PISA results for Poland compared to the OECD average [Colour figure can be viewed at wileyonlinelibrary.com]

of PISA in 2006 were part of the reformed education system for most of their school years. They took the final primary school test in 2003 and were prepared for the final lower secondary school exams a few weeks after PISA was carried out in 2006. This means that the group targeted by PISA 2000 can serve as a benchmark for the evaluation of the impact of the reform measures, based on the comparison with the results of the PISA cohorts in consecutive waves of the study.

Figure 1 shows significant improvements in student performance in PISA. In Maths, Poland improved its score from 470 points in 2000 to 490 in 2003 and to 495 in 2006. Reading scores improved over time too, from 479 to 508. Similarly, science scores increased from 483 to 498. The results of PISA 2000 were characterised by huge variance (differences) among schools. This was not surprising given that the study was carried out in the first grade of different types of secondary school. The mean score of students enrolled in basic vocational schools was 358 points; the mean score among students enrolled in general academic schools was 543 points, whereas that of students in secondary vocational schools was around 480.

The groups covered by PISA 2003 and 2006 were already made up of students in their last (third) grade of compulsory lower secondary school (*gimnazjum*), and therefore the results were characterised by smaller variations among schools and more significant ones among students within these schools. In fact, the decrease in between-school variation in Poland was the largest among the OECD countries when the data from the 2000 and 2009 PISA editions were compared (OECD, 2010).

In 2000, it was not only the average results of the Polish students that were low, significantly below the OECD average (500 points). Another important concern was that over 23% of students did not reach the baseline Level 2 in reading, which was considered the minimal level of functional literacy needed in today's world. In vocational schools, over 80% of students did not reach Level 2, demonstrating very limited reading skills.

The analysis of the distribution of the students' results revealed that the increase in the average results between 2000 and 2003 was mostly due to the reduced number of low achievers. Moreover, as one of the studies demonstrates, the most significant improvement was by students who would have ended up in basic vocational schools under the old system, but were given a chance to acquire more general skills in the newly-created lower secondary schools (Jakubowski, Patrinos, Port, & Wisniewski, 2016). The study also proves that postponing the selection to various types of schools (vocational, general) by one year was a crucial factor of improved performance.

For policymakers, an important issue linked to the modification of teaching is understanding how curriculum standards and competencies can be influenced by designing tests and tests items. Is this a good evaluation tool? It can be argued that the abovementioned improvements in student performance can be linked to some extent to the introduction of external examinations based mainly on standardised tests. Furthermore, though claiming that their teaching is not test-driven, teachers do indeed familiarise students with this form of performance assessment by using tests in their everyday school practice. However, it is difficult to prove this since the new external examinations were first

conducted in the Polish primary schools (grade VI) and lower secondary schools (grade IX) in 2003 and only the students involved in the PISA 2006 survey had practical experience in using such assessment tools. Unlike the expectation that teaching for tests effects would yield results, in 2006 the improvement of Polish PISA results between 2003 and 2006 was not significant. Also, PISA results do not vary between students who take more tests at school, suggesting that the effects of test-taking are negligible. What is probably more important is that examinations shifted the focus towards student outcomes and created positive incentives for both teachers and students.

4 | PISA AS A SOURCE OF EVIDENCE INFORMING FURTHER EDUCATION REFORMS

PISA not only offered an opportunity to monitor the effects of the 1998/99 reform; it also provided a rich set of data for more in-depth analysis which could be used to design and implement changes in the school education system.

When the results of PISA 2003 were released, experts in the Ministry of Education claimed that the improved results were due to the extension of comprehensive general education. In the light of this hypothesis, the Ministry of Education decided to use the so-called 'national option of PISA'. This meant that they applied a test aimed at assessing the competencies of first-grade students in upper secondary schools, i.e. students who were one year older than the standard target group of the PISA survey. This test, applied along with the main PISA study from 2006, revealed significant differences in achievement among students of various types of upper secondary school. Table 1 shows that in 2006 and 2009 students of upper secondary schools obtained on average slightly better results than those from lower secondary schools. However, it can also be observed that in 2012 younger pupils had similar results to the older group. Moreover, the table indicates that the students of the so-called basic vocational schools¹ obtained low results, thus confirming the underlying assumption that selection, although postponed by one year, still has a strong negative impact on student achievement. In any case, the results of students in vocational education were still considerably better than those of similar students in PISA 2000, demonstrating the long-lasting effects of an additional year of comprehensive education (see Jakubowski et al., 2016, for a more detailed analysis).

Average results in PISA give only a general picture of student outcomes and a more in-depth analysis of results can provide additional information that can be useful for policy makers. In Poland, researchers also looked at the items used for the numeracy part of the PISA study. They discovered that the Polish students dealt quite well with the problems that implied the application of standard, algorithmic procedures, whereas they experienced difficulties with non-typical problems which required them to think 'out of the box' and apply creative strategies to find the solution.

TABLE 1 Comparison of international PISA results for 15-year-olds and national PISA test for 16-year-olds

	2006			2009			2012		
	Maths	Reading	Science	Maths	Reading	Science	Maths	Reading	Science
General upper secondary	566	581	572	559	565	565	571	570	575
Technical upper secondary	495	503	496	495	487	505	506	502	507
Basic vocational	410	389	410	402	392	413	417	409	430
16-year-olds (average for the first grade of secondary schools)	514	520	516	506	503	514	519	516	524
15-year-olds (international PISA, 3 rd grade of lower secondary schools)	495	508	498	495	500	508	518	518	526
Difference between PISA score at 15 and at 16	19	12	18	11	3	6	1	-2	-2

Note: Results of the PISA international survey in Poland and national option for testing with the same PISA instruments first grade students of upper secondary schools. (MEN, 2014)

5 | A NEW CORE CURRICULUM IN 2009

These findings were among the reasons for reforming the national curriculum of general education. The new curriculum was implemented in 2009. It shifted the focus from narrow, subject-related requirements to the development of more general, transversal skills and competencies such as scientific inquiry, problem solving, reasoning, and collaboration. The curriculum defines learning outcomes for each level of schooling, thereby setting the standards of national assessments and examinations. The new regulations provided for further extension of school and teacher autonomy. These two actors in the educational process only have to ensure that the outcomes defined in the national curriculum are attained. In response to the findings of PISA, and more specifically the poor performance of students in basic vocational schools, Polish policy makers decided to extend the comprehensive general curriculum to the first grade of all upper secondary schools. The major rationale behind this decision was to overcome the negative effects of tracking and to broaden opportunities for the development of key competencies. This change not only aimed at increasing equity, but also at meeting the demands of employers who complained about the lack of so-called soft competencies among school graduates. In addition to introducing the new curriculum and providing greater autonomy to schools and teachers, the Ministry also modernised the system of quality assurance, evaluation and accountability. Three complementary functions of inspection (supervision) were defined: evaluation, control, and support, the first being particularly crucial. A new school evaluation system was established in 2009, based on external evaluation reports that were driven by school self-evaluation, but also the evidence gathered through the opinions of teachers, students, parents and other stakeholders, such as local employers, community and administration.

All these changes were introduced in 2009 and, once again, the PISA test in 2012 provided useful data for their assessment. The results were outstanding, as Polish students significantly improved their scores in all three PISA scales. It is of critical importance that all students, both low achievers and top performers, improved. Hence, the overall variation of the results remained at the OECD average level, as was the case in 2009. Table 1 also shows that, in 2012, PISA scores for 15-year-olds - the first age group that followed the modernised curriculum of 2009 - improved to the extent that they were statistically identical to the results of 16-year-olds. This suggests that the curriculum reform of 2009 contributed to the improvement of the results of Polish students in key areas by an equivalent of one year of education. One should add that the changes implemented in 2009 were also influenced by the recommendations of the EU concerning key competences (2006) and other major initiatives such as the adoption of a European Qualification Framework (EQF).

6 | CONTROVERSIES ABOUT THE RELEVANCE OF PISA TESTS TO EVALUATE POLISH EDUCATION

The PISA 2012 results were announced in Poland by the Prime Minister, who congratulated both teachers and students on their achievements. However, this did not alleviate widespread scepticism about PISA and, more generally, so-called test-driven education. On the contrary, it provoked political opposition that started claiming that PISA did not measure what was crucial for Polish education and was an example of 'just another test'. The discussion was not solely focused on the general objectives of school education and successful entry into the labour market, and, in consequence, guarantee wellbeing to young people and allow them to become active participants of a democratic, multicultural society, as well as responsible citizens taking care of the environment and social issues. Rather, this discussion was about the extent to which the tests, both national and PISA, could measure the students' competencies.

Student results in PISA 2015 are considerably lower than in PISA 2012; however, in all subjects Polish 15-year-olds still perform above the OECD average and are close to the top performing countries in Europe. Experts claim that the decrease might be related to the shift towards computer-based tests in PISA, as in PISA 2009 or PISA 2012 Polish students scored much less well in computer-based tests than in paper-and-pencil tests (Jakubowski, Konarzewski, Muszyński, Smulczyk, & Walicki, 2017). This argument has been developed in other countries like Japan for example

(see the article by Noritamo Tasaki in this issue, pp.). The results showed a good position of Polish lower secondary schools, although they also suggest that the digital competencies of Polish students are lagging behind.

7 | A SCEPTICAL PUBLIC OPINION ABOUT THE QUALITY OF THE POLISH EDUCATION SYSTEM

Surprisingly, the continuous improvement of the PISA results of Polish students did not affect a popular view that Polish schools offered poor education and that the education reforms introduced over the last 15 years were not successful. In particular, although PISA demonstrates very good outcomes of lower secondary schools attended by PISA test-takers, the general public believed that these schools introduced by the reform in 1999 were the most problematic part of the education system (in public opinion polls, 50% or more respondents support the elimination of lower secondary schools). This opinion strikingly runs counter to any evidence collected from international and national studies that suggests the opposite – that the lower secondary schools are probably the strongest part of the system. PISA and PIAAC, OECD study, show relatively better results of secondary schools as compared to achievement in primary schools as measured by PIRLS and TIMSS studies, and literacy levels among older cohorts in upper secondary and higher education. While in PISA Poland tops the European rankings and in PIAAC the results for the youngest cohorts are above the OECD average, primary school results are below or at the international average (Jakubowski, et al. 2017). This contradiction between evidence, expert views and the popular opinion is key to understanding the recent proposal for reforms of the present government.

8 | A NEW REFORM: BACK TO THE PAST?

The new government came to power in Poland in 2015 with a promise to reverse most of the previous education reforms and, most importantly, to bring back the old system with 8-year primary schools and no lower secondary schools. In 2016, the government pushed its proposal for reform through Parliament within a few weeks; it includes eliminating lower secondary schools and limiting school and local government autonomy. At the same time, a new national core curriculum was proposed; it is similar to the old-type curriculum with separate narrow subjects and a focus on knowledge acquisition rather than transversal competencies and problem solving skills. In this respect, this evolution is at the opposite of the ongoing reforms in many countries: Estonia, Finland, France, Ireland, Norway, Scotland, etc. (OECD, 2015) and the recommendations of the EU (European Commission, 2016) and OECD (Gurria, 2016; OECD, 2016a).

The government is pushing the reform using surveys of public opinion as the main arguments to support it. Before the reform was proposed, public opinion surveys were showing that most of the population supported the elimination of the lower secondary schools despite the positive evidence on student outcomes from PISA and other studies. Since then, extensive and vocal opposition from researchers, experts, trade union and parents has shifted the dynamic and recent polls suggest that a growing number of people are against the new changes. Young people who attended lower secondary schools, people from large cities and the better educated are against. It seems, however, that older people, most of whom support the current government, are still in favour of the idea of going back to the old system. These views are driven by feelings about the 'good old days' and a negative view of the reforms implemented in 1999. Evidence on student outcomes seem to be neglected.

Recent PISA 2015 results, which are slightly lower than in 2012 but still above the OECD average, are ignored or interpreted by ruling party politicians as an argument that lower secondary schools are not good. The lesson from Poland is complex and interesting. On the one hand, PISA was used by experts, researchers and policy makers to defend reforms and to propose new policies that seem to have been successful in further improving key competencies of Polish students. However, the reformers were not that successful in convincing the public that the changes were beneficial. In effect, a popular and nostalgic sentiment towards the old system and the forceful encouragement of

negative emotions about the way and the pace of 1999 reform introduction are in large part driving popular opinion supporting the reversal of the post-1999 changes.

NOTE

¹ Schools that offer short track training, ending with only a vocational qualification instead of full secondary education which provides access to studies at tertiary level.

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