

Measuring Quality and Labour Market Results in Education – Case of Poland

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The document offers a brief overview of the indicators used for measuring the quality of particular (primary secondary and tertiary education) schools and academia or their pupils and students in Poland. Further, it includes information on how the results impact the financing of particular schools. It also offers an overview of tools informing the public about the results with major focus on published school reports, and previous school rankings. Finally, the document lists some lessons learnt in measuring the quality and labour market results in education and the key challenges in this respect discussed in the country.

Summary

In Poland, like in the case of other Visegrad Countries, there is rather long tradition in measuring the results of pupils and students by means of standardized national testing at the end of primary and secondary education. The results of standardized testing were, however “processed” mainly by the private agents, specialized in providing collective information. There are no links between the results and financing the schools and academia from the state budget. However, a public access to information about the pre-tertiary school performance in the particular field (i.e. in science) impact the school management, as there exists a financial allocation to school “per pupil” (the amount depending on the level of education, the region, and the type of school: i.e. the public one or not, the type of pupil: i.e. with some disabilities or not). Similarly, to some extent the alike mechanism function in regard to the tertiary education system.

The quality of education in pre-tertiary level basically is assessed by the *kuratoria*, which are local supervisory units (highest - voivodship level). The system of measurement (or maintenance) of quality and labour market results in (notably public) tertiary education is a bit more complex. It consists of the Polish Accreditation Committee (in Polish: *Polska Komisja Akredytacyjna*), but also includes by the law a self-assessment of the academia. The tertiary schools are funded based on a complex formula with most emphasis on their academic results and number of students. But the academia’s funds may come from the private donations, and this might encourage the academia to improve the quality of the education, notably in the context of labour market conditions.

The problem with a clear assessment of the overall quality of the education system arises from the fact that the data is dispersed and not collected in one easily accessible set of indicators. In order to secure a better oversight of the system (as well as the particular unit) it is important to create such a database, at best by any of the Ministries or by any of their agencies.

Introduction

Since the beginning of the 21st century the education system in Poland has considerably changed. First of all the pre-tertiary education was divided into three stages (excluding pre-school level): lower primary schools (in Polish: *szkoły podstawowe*) which consist of six grades, upper primary schools (in Polish: *gimnazja*) which consist of three grades. Afterwards there are secondary schools (including general or specialised *licea*, *technika* for technicians and vocational schools) which consist of three or four grades, depending on type of class. This raised the opportunity to increase the number of the national testing of pupils (at the end of each stage of education). Prior to this change, there were only two stages of pre-tertiary education: *szkoły podstawowe* and *licea/technika/vocational schools*.

In fact, the system of pre-tertiary education is in constant reform. But the most important change is implemented recently – a decrease of compulsory starting age of primary education. In 2015 it is the end of phasing-in period of this reform: this year each child goes to the primary school at the age of six (previously at the age of seven).

Interestingly, the supervision system (and indirectly a financing system) of pre-tertiary schools is relatively decentralised. Put simply, the primary schools are supervised by local authority units called *gminy* (lower administrative units), while secondary schools are supervised by *powiaty* (medium administrative units). These changes are expected to be positive, however the overall result is unknown and requires time to verify.

The spending on education system in Poland is moderate: the pre-tertiary system costs around 3.9% of GDP in 2011¹ (paid by *gminy* or *powiaty*). Surprisingly, the biggest part of these money (33%) go to the primary stage of education (*szkoły podstawowe*). The state expenses on tertiary education reached 15 billion PLN.²

In general the quality of education in Poland is assessed positively abroad. Regarding the Global Competitiveness Report, Poland is ranked at 53rd position regarding quality of primary education, and 60th position regarding the overall quality of education (50th regarding math and science education).³ The Polish pupils perform well in PISA tests: in 2012 the 15 age old pupils reached 14th position in mathematics, 10th position in science and in reading. However their problem solving skills were average compared to the pupils from the other countries. In TIMSS/PIRLS for the younger pupils, the results are less positive: Poland holds 36th position in mathematics, 30th position in science and 28th position in reading. Regarding the tertiary education, the Polish universities are not in the top 100 in global rankings, and this is a challenge to the tertiary education to change this disadvantageous picture. However, several Poland's units prepare students to successfully compete in international contests in such fields as robotics (i.e. contest in 2015 organised by NASA,⁴ a contest University Rover Challenge in 2015,⁵ 3rd place in Robot Challenge in 2015,⁶ winners in BlackSea ROV

¹ http://men.gov.pl/wp-content/uploads/2013/08/dane_2011_2012.pdf

² <http://naukawpolsce.pap.pl/aktualnosci/news,401733,resort-nauki-w-2015-r-naklady-na-nauke-wyzsze-o-690-mln-zl.html>

³ <http://reports.weforum.org/global-competitiveness-report-2014-2015/economies/#economy=POL>

⁴ <http://www4.rp.pl/Edukacja/306309750-Polscy-studenci-wygrali-konkurs-NASA.html>

⁵ <http://urc.marssociety.org/home/about-urc/urc2015-scores>

⁶ <http://www.robotchallenge.org/robotchallenge/resultate-2015/>

competition)⁷ or in programming (i.e. finalists in contest organised by Microsoft in 2015,⁸ winners in Hello World Open in 2014)⁹ or online marketing (contest organised by Google in 2014),¹⁰ or in logical games (but this includes pupils as well).¹¹ Some of these trophies were won a consecutive time, showing that selected academic unit have an advantage in educating students in particular area.

The definition of quality of education and supervisory bodies

The quality of education has a broad meaning. In the discussions in Poland the experts refer to such definitions as: „compliance to standards”, „satisfaction of the needs and expectations of the clients”, „a process of improvement, an ability to find the best solutions”. But in legal reality, the quality of education is a compliance to the requirements included in the law. Regarding the pre-tertiary education these requirements are defined in the attachment to the Regulation on Requirements to the Schools and Other Units (last update entered into force in 1 September 2015).¹² The quality of education according to the Regulation is assessed in 11 dimensions:

- Schools work for the development of the students.
- The education processes help to learn.
- The student gain information and abilities described in the program basis.
- The students are active.
- The social norms are respected.
- Schools help the development of the students with the inclusion of their unique individual situation.
- Teachers cooperate in planning and implementing education process.
- The value of education is promoted.
- The parents are partners of the school.
- Local context is important.
- Schools adjust to the national exams.

The primary and secondary schools are audited by the *kuratorium*, which is the supervisory unit at the level of voivodship. The *kuratoria* basing on the Act on Education from 1997 have a set of measures to control the quality in the pre-tertiary education system. The Regulation on the Pedagogic Supervision from 7 October 2009 defines the supervision in three dimensions:

- evaluation (of the effects, of the process, of the general functioning of the school in the local environment, and of the management of the school), which takes place in a school. In the case of a negative assessment in one of the fields the director of the school is obliged to prepare an improvement programme.
- inspection, which is a more targeted form of supervision.
- support (which includes providing the information, best practices in the region, organization of the seminars to the directors of the schools).

⁷ <http://www.pw.edu.pl/engpw/News/WUT-Students-win-BlackSea-ROV-Competition>

⁸ https://www.imaginecup.com/Custom/Index/2015Finalists_Games

⁹ http://technologie.gazeta.pl/internet/1,104530,16148298,Bialo_czerwoni_Polska_znow_wygrala_konkurs_dla_programistow.html

¹⁰ <http://googlepolska.blogspot.com/2014/08/polscy-studenci-zdobyli-pierwsze.html>

¹¹ <http://scienceinpoland.pap.pl/en/news/news,397100,polish-triumph-in-the-logical-games-championship.html>

¹² <http://men.gov.pl/wp-content/uploads/2015/08/zalacznik.pdf>

Internally the quality of education is supervised by the directors of schools. The director supervises the teachers and supports them in improving the quality of education.

The quality of tertiary education system is regulated relatively in a different way. First, the Regulation on Conditions to Conduct Studies in Particular Major and Level of Education updated in 3 October 2014¹³ specifies, that academies are required to have their internal self-evaluation systems (which includes as well the opinions of the students) in order to enable a school any functioning.

Second, the only statutory body to supervise the tertiary education units is the Polish Accreditation Committee (in Polish: *Polska Komisja Akredytacyjna*). It is independent institution, but established in 2002 by change of the Act of Law on Higher Education in 20 July 2001. It has powers to conduct an assessment of the studies (1st, 2nd and 3rd cycle, postgraduate programmes) in context of compliance to the requirement to provide education, the completeness of the studies programme, the relevance of the filed/major/faculty in the mission and the strategy of the academia, the effectiveness of the internal mechanisms improving the quality, the scientific activity, the level of “internalisation” of the studies and last but not least the adjustment of the study process to the labour market needs (internships; inquiries among the employers and graduates).

Evaluations conducted by this institution are obligatory and it is crucial to the academia to function. When the committee assesses negatively, the Minister of Higher Education may suspend or withdraw this academia the authorization to educate in the in a given field of study or in a programme and at a given level of study. The committee gives the Minister the conclusions and opinion arising from the assessment of the academia. It also may formulate its opinion on the changes in legal acts on higher education.

Key performance indicators

The most important key performance indicator in the pre-tertiary system is a standardised national testing at the end of each stage of education (at the end 6th grade of lower primary school, at the end of 3rd grade of *gimnazjum* and at the end of 3rd/4th grade of *liceum*).

The standardised 6th graders' test consists of two parts – polish language and maths as one part and foreign language as the second part. The results of the test are decisive recruitment made by the *gimnazja*. The better results, the bigger likelihood to be accepted by the chosen *gimnazjum*.

The *test gimnazjalisty* consists of three parts: subjects: humanities (altogether), science (altogether, including maths) and a foreign language. The results of the test are decisive recruitment made by the secondary schools. The better results, the bigger likelihood to be accepted by the chosen secondary school.

The *matura* (at the end of secondary school) consists of the set of exams. The set of exams is divided into two difficulty levels (i.e. Polish language basic test and the Polish language. Additionally some of them are obligatory (basic difficulty level of the Polish language, maths and foreign language), while the rest (including both difficulty levels of i.e. physics, geography, history etc.) are voluntary. The pupils however generally pick more exams than the obligatory ones. The reason for this is that the academia are obliged to use the test results as a decisive criterion of entry, they however may choose the results of which tests are considered during the recruitment process (for instance the economic faculties generally require: basic or advanced maths, basic or advanced geography or history and basic or advanced foreign language tests).

There exist rankings of the schools, which somehow reflects their quality of education. They are however private, but publicly available. The ranking of *gimnazja* is prepared by the local specialized

¹³ <http://isap.sejm.gov.pl/DetailsServlet?id=WDU20140001370+2014%2410%2410&min=1>

websites¹⁴ but also there are some specialized media portals assessing the *gimnazja*,¹⁵ however these ranking do not list all the *gimnazja* in Poland, abut only the top ones.

The rankings of *licea* are only published by the private media portals, the most recognizable one is available at www.perspektywy.pl.¹⁶ It mainly takes such criteria as:

- achievements in „Olimpiada”
- national tests results (obligatory subjects)
- national tests results (voluntary subjects).

The exceptional results, i.e. winners of the *Olimpiada* (in lower, upper primary and secondary schools) in a particular field only indirectly affects the schools approach towards quality of education.¹⁷ The award in *Olimpiada* (depending on the field) implies the maximum of points obtained by the pupil in a particular type of the standardized national test. In this context there exists a special ranking of *licea*, that “produce” Olimpiada winners (top 200 *licea* in Poland) and winners of the international olympic challenges.¹⁸

There exist national (but private) rankings of the academia and faculties (published in www.perspektywy.pl). The methodology of this ranking is much more complex and it consists of the following indicators:

- Innovativeness
- Scientific effectiveness
- Academic prestige
- Scientific publications
- Scientific potential
- Internationalisation
- Employers preferences
- Studying conditions

Public financing

¹⁴ For instance the ranking of Warsaw's *gimnazja*: <http://www.nauka.com.pl/gimnazja.htm> or http://egzaminy.edu.pl/index.php?option=com_content&view=article&id=1017.

¹⁵ For instance a ranking presented by the Dziennik Gazeta Prawna (<http://serwisy.gazetaprawna.pl/edukacja/artykuly/862629,sprawdzian-szostoklasisty-2015-ranking-najlepszych-gimnazjow-w-polsce-w-czolowce-szkoly-katolickie.html>) or a subjective and biased by the input of the internet users assessment on the webpage: <http://www.ocengimnazjum.pl/ranking>,

¹⁶ http://www.perspektywy.pl/portal/index.php?option=com_content&view=article&id=1948&catid=156&Itemid=319&strona=1

¹⁷ http://wyborcza.pl/1,75478,17485119,Olimpijczyk_teoretyczna_tylko_duma_szkoly_Nie_ma.html

¹⁸ http://www.perspektywy.pl/portal/index.php?option=com_content&view=article&id=1946&catid=156&Itemid=339&strona=1

In general the public financing is not linked with the quality or labour market results in primary and secondary education. It is more complex regarding the tertiary education. The Polish Accreditation Committee, when assessing the academia and faculties it gives one of four notes:

- Outstanding rate: This result is valid eight years and enables the academic unit to apply for special purpose funds to further improve quality for three years.¹⁹
- Positive rate: this result is generally “expected” and it is valid for six years.
- Conditional rate: the academic unit needs to apply corrective measures, with special regard to internal quality assurance system. The progress is verified usually in one year.
- Negative rate: the Minister responsible for Higher Education may suspend or withdraw a license for a specific field of studies. It thus loses money ringfenced for a specific field of study.

Less impact on financing have labour market results. In fact, the government is aware of the fact, that it is difficult to transpose the education on the performance of the graduates without considering the variety of the local and regional labour markets. Also, the Ministry of Higher Education cannot prioritise only current labour market results over the long-term effects. Thus including a labour market results into financing mechanism is not priority at the moment. But it somehow exists in a part of funding co-financed by the Structural Funds (higher employment of the young graduates as one of the goals to achieve).²⁰

Challenges and lessons learned

A general challenge for measuring the quality and labour market results of entire education system is the lack of one comprehensive database under auspices of the government (i.e. both the Ministry of Education or Ministry of Higher Education), which would consist of the extensive set of indicators. Currently, the data are fragmented, available in several sources instead of a comprehensive one.

Regarding the labour market there is still a potential to enhance a cooperation between the academia and employers. The students as well as the employers do not feel that the graduates are prepared to start jobs. The simplest way to do it is to encourage both to offer the students a real value added internships, domestically or abroad.

In this respect, regarding the secondary education, there should be more focus on reviving the vocational schools. The problem with it is that the potential teachers are not eager to work in a school, when they are better rewarded just by working in their specialisation (as i.e. car mechanic, electrician). Additionally, there is a problem in inspiring pupils towards entrepreneurship. One of solutions to this was an establishment of a “entrepreneurship” class, but it is only a halfway measure as many of the teachers of this particular major do not have any experience in practical entrepreneurship. The government should attract the entrepreneurs to give at least some occasional speeches or lecture or to invite the classes to the firms to show how the business is conducted.

¹⁹ <http://www.nauka.gov.pl/aktualnosci-ministerstwo/stawiamy-na-jakosc.html>

²⁰ <http://www.kapitalludzki.gov.pl/power/o-programie/>