

ANDREJ NOVIK

[www.scio.cz](http://www.scio.cz), s.r.o.

Prague, CZ

[anovik@scio.cz](mailto:anovik@scio.cz)

## Introduction

This paper will present a brief overview of the existing use of educational assessment in the Czech Republic. External assessment of educational outcomes in the form of tests was first introduced in the mid-1990s and has been growing and developing since. In this text we will strive to sum up the role which assessment played following the establishment of the independent Czech Republic, especially in relation to large international assessment projects.

Before the collapse of communism, there was practically no objective information on the results of the education system as a whole in the Czech Republic. Within the socialist countries prior to the dissolution of the eastern bloc, comparisons were not conducted and monitoring of results was not common. At the local level of schools, only information on the results of individuals in national or international competitions was available (Straková, 2009). In this sense the Czech Republic, or the then Czechoslovakia, was at a similar starting line as other Eastern European countries. Since that time, of course, development in individual countries has diversified, particularly in the direction of greater autonomy of schools and introduction of nation-wide testing systems.

A significant impetus for development of the area of assessment was the Czech Republic's participation in international surveys, among the first of which was IEA RLS (Reading Literacy Study) in 1995. This was soon followed by a full range of other studies:

## Participation of the Czech Republic in international studies

1995	TIMSS
1998	SITES (Second Information Technology in Education Study)
1999	TIMSS TIMSS video study

1999	CIVED (Civic Education Study)
2000	PISA
2001	PIRLS (Progress in International Reading Literacy Study)
2003	PISA
2006	PISA
2009	PISA ICCS (International Civic and Citizenship Education Study)
2011	PIRLS TIMSS

Besides international comparisons, studies were also conducted at the national level. Of these, the most significant was a project called SONDA MATURANT in 1999, which tested all fourth-year students of secondary schools (18 years of age).

### **Impacts of international comparisons on education policy**

As is well known, in a number of countries the results of international assessment projects, especially PISA, were the impetus for immediate changes in education policy, which some critics dubbed PISA-driven education. These changes are generally known and it is not necessary to describe them here.

It is important to mention that the first international studies were conducted in the Czech Republic roughly at the time when a nationwide discussion was being held on the further direction of the education policy and it is thus appropriate to assume that the results of these comparisons contributed to the initiation of curricular reform. For the Czech Republic, it is possible to see the benefit of international studies on two basic levels:

- *implementation of concepts of literacy (reading, natural sciences, etc.) and the shift from knowledge to competencies*
- *increase of interest in testing and assessment as such*

At the same time, we obtained the initial data and statistical indicators pertaining to education in the Czech Republic. It was possible to use these as input information for the planned curricular reform.

### **Testing and assessment in the Czech Republic**

During the times around the turn of the millennium, there was increasingly frequent demand for creating a system of monitoring and assessing education as a basic tool for successful realisation of curricular reform. Another reason for that was the fact that schools became obligated to conduct

self-assessment and to demonstrate that they have information on the development of the results of their students' education.

The absence of a culture of testing and knowledge in the area of educational measurement in the Czech Republic led to the fact that the requirements on the system for measuring the results of education and assessment of schools has been encumbered with numerous uncertainties, misconceptions and errors, the results of which can still be seen today.

### **Tradition of acceptance procedures**

As mentioned in the introduction, prior to 1989 the Czech Republic lacked a tradition of assessment and regular nation-wide testing. Of course, most schools had experience with various types of procedures for accepting students into secondary schools and universities. These mostly contained multiple-choice with the objective of selecting students with the highest degree of primarily factographic knowledge from the given field and thus resolving incongruence between supply and demand in education. The result of this was very early selection, which can be viewed as one of the possible causes of the current inequality in the education system. (High degree of selectivity can be still regarded as one of the aching points of the Czech education system).

Admission tests were formulated by the schools themselves, mostly by teachers without any knowledge in the field of educational measurement. The results of acceptance procedures were thus very non-transparent, non-objective and mutually non-comparable.

Growing criticism from the professional public thus led to the establishment of several companies which began to professionally engage in testing and to offer new, validated tools for selecting applicants.

Due to tradition and the needs of schools, these tools were almost exclusively of the multiple-choice – pen-and-paper type. Outputs were processed only according to the Classical Test Theory with the results divided according to percentile placement.

A significant role was played by the introduction of a test of general study prerequisites, which enables schools to select students not only according to their factographic knowledge, but also according their anticipated study potential (based on a test of verbal, analytical and quantitative reasoning).

This test gradually became the basis for acceptance procedures at approximately 40 universities in the Czech Republic. It is also used for purposes of evaluation at primary and secondary schools.

In recent years, tests based in the Item Response Theory or Measurement Decision Theory have become increasingly common, particularly in the area of measuring reading literacy and English as a foreign language. However, such tests are provided only by private companies, not the state. Tests are provided in both printed form as well as in the form of computer-based tests.

### **Studies at the national level organised by the state**

The so-called White Book – considered to be the opening shot of curricular reform in the Czech Republic – contains the requirement for establishment of a central institution for monitoring and assessing the results of education. For this purpose, the Centre for Determining Results in Education

was established. Thanks to temporary financing from European Structural Funds the Centre has completed several rounds of verification of education results in the fifth and ninth grades of primary school.

Testing was first offered to selected regions and later to all regions with the exception of Prague (due to the impossibility of financing testing in Prague with European funding). Testing was designed to be administered nation-wide, though participation in it was voluntary. The rate of participation ranged from 50% to 65% of ninth-grade students and 58% of fifth-grade students.

2004

Assessment of the results of education of ninth-grade primary-school students (one region)

2005

Assessment of the results of education of fifth-grade primary-school students (one region)

Assessment of the results of education of ninth-grade primary-school students (three regions)

2006

Assessment of the results of education of fifth-grade primary-school students (three regions)

Assessment of the results of education of ninth-grade primary-school students (twelve regions)

2007

Assessment of the results of education of fifth-grade primary-school students (thirteen regions)

Assessment of the results of education of ninth-grade primary-school students (thirteen regions)

2008

Assessment of the results of education of ninth-grade primary-school students (thirteen regions)

The tested areas comprised the Czech language, mathematics and study skills. Most of the items were multiple-choice and assessment was again conducted according to the CTT method.

Within the formation of the project in 2004, the final vision consisted in introduction of National Assessment Test as mandatory verification of the results of education of all students finishing the first and second levels of primary education. Separate projects in individual years were intended to serve for the preparation of the National Assessment Test in the content and organisational aspects. The intention of the Ministry of Education, Youth and Sport (MEYS) was later reassessed and planning of the National Assessment Test was suspended. Here it is worth mentioning that the Czech Republic has seen 12 ministers of education since 1993, i.e. an average minister served only for 18 months.

Two years later, in 2010, there was a change of leadership at the MEYS and new preparations for testing in the fifth and ninth grades. This testing was simultaneously intended to fulfil several diverse purposes – evaluation of schools, pedagogical diagnostics of students, monitoring of the system, selection of students – which could be combined only with difficulty.

It can thus be expected that a hybrid will arise which will not properly perform even one of the above-mentioned functions.

The reasons that led to this situation are stated below:

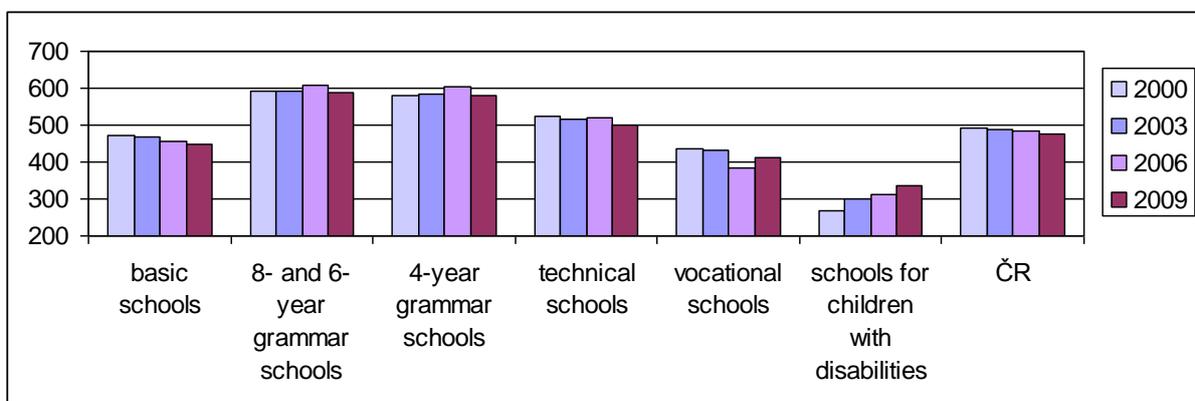
- insufficient culture of testing and regular assessment
- insufficient training of key actors in the system (minister, inspectorate, teachers)
- lack of specialists in the area of educational measurement
- failure to overcome the tradition of summative high-stakes multiple-choice testing
- excessively frequent changes in the leadership of the education department

All upper secondary schools organise their own final examination. The *maturitní zkouška* certificate is the minimum entrance qualification for all tertiary education. Traditionally schools were responsible for the content of their *maturitní zkouška*. This year MEYS finally launched a project imposing state controlled content of the examination. Critiques argue that the results of the final examination may be used to produce league tables based on only one result.

### What we learned over ten years of testing

Based on the results of repeated international studies, it is apparent that the results of education in the Czech Republic declined.

PISA example:



As can be seen in the graph, the results show various trends in various types of school and the declining level of the Czech Republic as a whole. Czech education policy used this information in a noteworthy manner.

### Example 1: How participation in international studies influences the content and assessment of education (reading literacy)

The Czech Republic has participated in a range of studies focused on reading literacy (PIRLS, PISA). This fact gives rise to the impression that education policy could place great emphasis on reading

literacy. The Czech Republic's results in reading literacy are continually declining. In comparison with 2009, the Czech Republic is the only post-communist country which has experienced a decline in this area, and that decline was significant (by 13 points). At the same time, the share of students below the second level of competence also grew (from 17.5% to 23.1%). Boys in particular account for the declining results: 31% of boys did not achieve the second level of competence (vs. 14% of girls) (Palečková, Tomášek, Basl 2010).

The declining results in reading literacy are not surprising, as results have continually worsened since 2003. In spite of this, Czech education policy has not responded. The term "reading literacy" does not appear in either the new curriculum, which came into effect in 2005, or any amendments of the thereof (the latest from 1 September 2010). Schools thus have not received from the state any requirement that they should develop their students' reading literacy.

For the 2009/2010 academic year, the phrase "evaluation of support for the development of reading literacy" appeared for the first time in the criteria for evaluating schools issued annually by the Czech School Inspectorate. This process can be presented as a very illustrative example of how international studies are used: schools and teachers do not receive an official order that they must develop reading literacy, but the inspectorate checks whether and how they are developing it.

### **Example 2: What we have learned about testing from international studies**

Despite experience with participation in many international studies in the Czech Republic, not many nation-wide studies have been realised at the national level and the education policy draws basic information about the education system from international studies.

Despite participation in the preparation of international studies, which use IRT models for assessment, all national tests organised by the state are derived from CTT. No changes are being prepared for testing of the fifth and ninth grades, which is to take place in 2013.

The currently prepared nation-wide testing is intended to fulfil the role of high-stakes tests at both the student level and school level. At the student level, the testing should decide the student's transition to a higher level of education (hitherto it is not clear whether as a single criterion or as one of several criteria). In addition, the testing should have a diagnostic function, even though it is taking place at the end of the relevant level of education. On the school level, the testing is intended to decide the school's financing – those schools which have worse results will receive less money, according to the ministry's latest pronouncements.

No accompanying or supporting measures are being prepared. The ministry's current leadership (and many teachers) expect that testing in and of itself will represent a sufficient threat and force students and schools to work harder than they have thus far.

### **Conclusion**

Despite having participated in the preparation and realisation of numerous international studies, it seems that we have learned very little about testing. Even though we want to use tests to monitor

the development of the level of education over the course of years, we are preparing to henceforth administer tests using CTT. Even though we could find out that nation-wide high-stakes tests can have numerous unexpected consequences, we are not preparing any measures that could mitigate such consequences. At the same time, representatives of the Czech education policy are unable to monitor the development of methods in the area of evaluating the results of education and in the area of using the results of evaluation for improvement. Neither are we able to draw inspiration and instruction from this. Thus, there is a great opportunity for international cooperation here. At the same time, it is possible to use the experience from the Czech Republic in countries which are planning to introduce or fundamentally change educational assessment so that they can avoid the mistakes that have been made in the Czech Republic.

#### **References:**

Straková, Jana. (2009). Vzdělávací politika a mezinárodní výzkumy výsledků vzdělávání v ČR. *Orbis scholae*, 2009, 3, 3, 103-118.

Palečková, J.-Tomášek, V.- Basl, J. (2010) : Hlavní zjištění výzkumu PISA 2009, ÚIV Praha 2010.