Chapter 6

Education system evaluation

The Ministry of Education, Science and Sport holds overall responsibility for ensuring the quality of the education system, although it delegates the evaluation of different aspects of the education system to the Slovak State Schools Inspectorate (ŠŠI) and the National Institute for Certified Educational Measurements (NÚCEM). This chapter details the information base and reporting systems and notes considerable efforts to compile a broad set of evidence on the education system. However, it also identifies some important information gaps, in particular for monitoring equity, and sees room to build analytical and research capacity to make better use of existing information for policy development.

Context and features

Responsibilities for education system evaluation

Major bodies responsible for conducting education system evaluation

The Ministry of Education, Science and Sport holds overall responsibility for ensuring the quality of the education system, although it delegates the evaluation of the overall performance of the education system to the Slovak State Schools Inspectorate (ŠŠI) and the National Institute for Certified Educational Measurements (NÚCEM). The latter was established in 2008 and marks a move to strengthen national capacity in monitoring student performance. The NÚCEM is responsible for developing and conducting national examinations (the *Maturita* at the end of ISCED 3) and national summative assessments (*Testovanie* 9 in ISCED 2 and the proposed new equivalent assessment at Year 5 in ISCED 1, *Testovanie* 5), as well as international assessments. The ŠŠI (in addition to a verification of the actual educational outcomes in schools) monitors processes, management and conditions at the school level (NÚCEM, 2012a). The ŠŠI's monitoring of school compliance with legally binding regulations is highlighted as one of the most important reasons for conducting education system evaluation (NÚCEM, 2012a). Further, the ŠŠI has played an important role in establishing confidence in the reliability of national assessments, with random inspections of how individual schools administer these.

Compiling information on the education system

At the time of the OECD review visit, a specific body had responsibility for compiling information on the education system (the Institute for Information and Prognoses of Education, ÚIPŠ). In early 2014, the ÚIPŠ was merged with the Centre of Scientific and Technical Information of the Slovak Republic (CVTI SR), which deals with a broader set of public sector statistical information. Such bodies indirectly participate in the evaluation of overall performance of the Slovak school system (NÚCEM, 2012a). The ÚIPŠ managed a significant part of the information collected on the education system and was "the core information centre of the Ministry of Education" (NÚCEM, 2012a), working on methodological aspects of information collection and co-ordinating the national information system on the education system, including the connection to other national databases and school information systems. The ÚIPŠ was paying increasing attention to implementing more efficient and electronic systems for information collection and compliancy reporting.

Regional evaluation

There are eight regional education sub-systems in the Slovak Republic. The role of regional authorities is restricted to a check of school administrative and financial requirements. The ŠŠI is the only body with the authority to check school processes, and the general view communicated by representatives of regional authorities during the OECD review was that there is limited room for the ŠŠI to engage in evaluation activities, in terms of human and financial resources and established culture. However, the 2009 Act on Vocational Education and Training gives regional authorities more influence in vocational education and training. Regional authorities, as well as regional labour offices, employers and professional organisations, are able to participate in the co-ordination of vocational education and training to meet regional labour market needs. The

OECD review team learned of initiatives in some regions that reflected the region's self-assessment of educational priorities, for example the co-organisation of educational activities with schools or the promotion of sponsorship from particular industries or employers in the region. This indicates the possibility for regions to be more actively involved in system evaluation.

A new approach to reporting external school evaluation results by the ŠŠI holds potential to further stimulate system evaluation at the regional level. Since 2009/10, the ŠŠI annual inspection report includes a presentation of major findings for each region.

Goals for the education system

In 2001, the Slovak government approved a long-term programme for educational reform. The "Millennium" plan specifies reform priorities over a 15-20 year period. The plan contains many procedural aspects, such as establishing a quality assurance management system, but it also sets expectations that the content of education will fit the needs of a knowledge society. The 2008 School Act aimed to concretise the aspiration on content by specifying a competency-based national education programmes that cover content and performance standards. This sets both minimal and optimal performance standards for different competencies within each subject taught in Slovak schools.[1]

Major tools to monitor the performance of the education system

Participation in international student assessment surveys

The Slovak Republic participates in several international surveys that provide benchmarking information against other education systems internationally. In 1995, the Slovak Republic participated in the International Association for the Study of Educational Achievement's (IEA) Trends in Mathematics and Science Study (TIMSS) and tested students in Grade 8 (but did not choose to test students in Grade 4). This testing of Grade 8 students was repeated in TIMSS 1999 and 2003. A decision to participate in IEA's Progress in International Reading Literacy Study (PIRLS) in 2001 and 2006 provided international benchmark information at Grade 4 for the first time. This was reinforced by the decision to test students in Grade 4 for the first time in the TIMSS 2007 study, but not to test students in Grade 8. At the same time, the Slovak Republic decided to participate in the OECD's Programme for International Student Assessment (PISA) from 2003 onwards (it did not participate in first PISA survey in 2000). This provides international benchmark measures of student performance in reading, mathematics and science at age 15.

The Slovak Republic is also participating in the IEA's International Computer and Information Literacy Study (ICILS 2013), which is a computer-based assessment using software simulations of generic applications and requiring students to use "live" computer software applications. For the PISA 2012 survey, the Slovak Republic also chose the option of a computer-based assessment of problem solving, reading and mathematical literacy, as well as an additional survey on student financial literacy. Finally, 1200 schools in the Slovak Republic will participate in the European Commission's European Survey of Schools: ICT in Education.

National tests of student performance

There are no specific assessments to monitor the performance of the education system. However, there are tests in Year 9 (*Testovanie* 9) and at the end of upper

secondary education (*Maturita*) that are summative in nature and are used to inform students' future educational or labour market pathway. The *Maturita* includes an externally tested component and along with teacher assessments on an internal component, this contributes to student certification. The testing papers used each year are published on NÚCEM's website.

Testovanie 9 has been conducted annually since 2008. The format of the test has evolved gradually. For example, in 2008 and 2009 the testing time was 45 minutes each for mathematics and the Slovak language and literature. However, in 2012 the testing time for mathematics was 70 minutes and for Slovak language and literature was 60 minutes. The mathematics test has always included 20 questions, of which 10 are multiple choice and 10 require closed-format short calculation answers. 2010 saw the inclusion of more contextualised questions in the mathematics test and tests from 2011 include a short page giving an overview of basic units used in calculations and mathematical relationship rules. All questions in the Slovak language and literature test are multiple choice. From 2008 to 2011 there were 20 questions in total, but this was increased to 25 questions in 2012. More recent tests see the inclusion of different types of texts such as informational tables, and not only poems or short literary paragraphs.

At the time of the OECD review, NÚCEM was working on developing an additional test at an earlier stage of schooling (in Year 5). An initial pilot was carried out in October and November 2012. 1 887 Year 5 students in 49 different basic schools participated (36 schools with instruction in the Slovak language; 13 schools with instruction in Hungarian). This gave feedback on the technical reliability of the tests and found high reliability for testing tasks in mathematics and the Hungarian language, and acceptable to good reliability for testing tasks in the Slovak language. NÚCEM plans to further pilot *Testovanie* 5 in November 2014, with regular testing expected to start in 2015.[2]

Statistics on student progression through schooling and basic information on schools

At the time of the OECD review, basic school compliancy reporting was undertaken using paper questionnaires. This includes information on student enrolment (but not on their socio-economic background) and teaching staff. Schools complete the information sheets, send them to regional offices and these are then sent to the central body (ÚIPŠ at the time of the review). The reporting of information is already aggregated at the school level. Therefore, there are no statistics on the progression of individual students through schooling.

However, during the OECD review the ÚIPŠ reported that 95% of schools use electronic databases. As such, the ÚIPŠ envisaged the possibility of introducing an electronic system for school compliancy reporting, seeing potential in reporting data at the individual student level and in introducing a student identification number. However, this would require legislation to support the collection of individual student data.

Information from external school evaluations

The Slovak State Schools Inspectorate (ŠŠI) conducts different types of inspections each year. The information gathered from these inspections provides valuable evidence for system evaluation. In addition to complex inspections of individual school quality, the ŠŠI conducts "thematic inspections" which are specifically designed to collect evidence on identified policy priorities within the school system. Inspections will focus on specific topics or themes in a sample of schools, such as: the implementation of reading literacy

skills in the educational process in school activities; the professionalism of teaching and teachers; classroom atmosphere; the use of teaching aids and methods; the prevention of drug addictions as part of the educational process; and the development of ICT competencies of teachers. Such thematic inspections represented a significant proportion of the total inspections conducted in 2010/11: 45% in basic schools and 82% in gymnasia (see Table 5.2 in Chapter 5). In addition, in basic schools many "information inspections" or compliancy checks have been conducted. These have been dominated in recent years by a check on schools' implementation of the new curriculum, i.e. checking that the school education programme complies with the national education programmes.

National research

Since the 1990s, the Slovak Republic does not have a specialised research institute for pedagogical sciences (NÚCEM, 2012a). There are ad hoc research projects conducted by employees in the Ministry of education or other major bodies, but there is no established mechanism for systematic research on the quality of the education system as a whole (NÚCEM, 2012a). Although, part of the mandate of the National Institute for Education is to conduct applied educational research, this is very rarely undertaken (NÚCEM, 2012a). There is a specialised team in the NÚCEM that prepares international student assessment data for use by educational researchers.

Reporting results of system evaluation

There is not a central data portal presenting education system evaluation results or related information (NÚCEM, 2012a). However, the various bodies with responsibility for system evaluation publish specific reports on their websites (and the Ministry provides links to all these sites). Examples of major reporting from the ŠŠI, the NÚCEM and the ÚIPŠ are given below.

The ŠŠI delivers an annual inspection report with the analysis of all its inspection work (e.g. ŠŠI, 2011). The report gives a summary evaluation for the education system as a whole based on inspection analysis about all schools that have been inspected and evidence from other sources. The report presents information in a series of tables and graphs showing how schools have developed in certain quality domains over a few years and aggregates information by school type (e.g. basic schools, *gymnázium*, etc.). The 2010/2011 annual inspection report contains the results of the thematic inspections about the quality of citizenship education and the use of information and communication technology in schools. There is also a paragraph about the thematic inspection concerning the teaching of foreign languages.

The reporting of results from national assessments takes several different formats. Via NÚCEM's website, the public can consult:

- Tables of student results (in either *Testovanie* 9 or *Maturita*) aggregated to the school level. The user is presented with a map of the Slovak Republic and can filter results and select a particular region, type of school, language of instruction and subject tested. If a user selects a specific region, there is then a further possibility to select results for a particular district within the selected region. However, no aggregate information is given on results for a particular region or district – simply a list of aggregate results for each school within that region or district. In addition, for *Testovanie* 9 results, there is a list of the top eight performing Slovak-language schools and the top eight performing Hungarian-language schools (the number of students tested and the school's percentile

ranking in mathematics and Slovak language and literature). There is basic information on what the columns of each table contain to help the user read the results (http://dataportal.nucem.sk/vysledky/vysvetlivkymaturita.php).

- Annual summary reports of the aggregate results for all subjects tested in the *Maturita*. One report on the administration of the *Maturita*, plus a written summary of major results in each subject; and a second report presenting tables and graphs with major results. There is also an accompanying presentation highlighting the major results. This includes a presentation of aggregate results for each region, by school founder and by school type (including a breakdown for four year and eight year gymnasia and vocational schools).[3]
- An analytical report on the development and perspectives of the *Maturita* (www.nucem.sk/documents//25/subory_mimo_dokumentacnej_casti/V%C3%BDvoj_a_perspekt%C3%ADvy_MS.pdf).
- Specific reports on student performance in each subject tested in the *Maturita*. Such reports present aggregate student results for each region, by school founder (public, private, church) and by school type (academic "*Gymnázium*" and secondary schools). There is also deeper analysis on student responses to the test items. For example, the mathematics report from the *Maturita* 2012 includes aggregate results in different major topics tested within the subject and the average percentage of students providing a given answer on the item, with comment on the type of competencies tested and typical errors committed.
- Overview of results from the *Testovanie* 9, for example presentation of major results in 2013 (www.nucem.sk/documents//26/testovanie_9_2013/vysledky/Vysledky_T9-2013_F.pdf).
- Results from recent EU-funded work to develop national assessments of numeracy and reading literacy. One report presents ten sample items from the numeracy assessments and 10 sample items from the literacy assessment, with answers provided and then an analytical section on what the task involves. This report aims to be a useful resource for teachers and to further promote the development of students' numeracy and reading literacy (foreword of NÚCEM, 2012b).

The NÚCEM also publishes reports highlighting the results for students in the Slovak Republic from their participation in international assessments.

The CVTI SR website provides statistical reports on compliancy information collected from schools, plus other reports on specific issues, for example, employment and unemployment reports for graduates. Since the OECD review, the former ÚIPŠ developed a school reporting portal, called the "regional education map" (mapaskol.iedu.sk/). This new feature on the CVTI SR website aims to allow the public to more easily find any centrally available information for a particular school. The public can consult an overview of information for a selected school and the information includes, for example, school average results in the relevant national assessment, as well as links to the NÚCEM website. The site also presents basic demographic information on student enrolment (including number of disadvantaged students) and number of teaching staff, as well as school funding information.

Strengths

Investment in specialised bodies to establish capacity for education system evaluation

The Ministry can draw on the specialised capacity of three major bodies, NÚCEM, ŠŠI and ÚIPŠ, to conduct and implement system evaluation. Notably, by establishing the NÚCEM as an independent agency, the Slovak Republic significantly increased its capacity to provide key student outcome measures that can feed into system monitoring.

Policy makers have increasingly drawn on the potential of the ŠŠI to provide more qualitative information on the school system. In addition to an annual overview of the quality of schools inspected that year, the ŠŠI provides evidence on priority thematic areas. The existence of the ŠŠI is a mechanism for providing complementary information to the results from standardised assessments on a broader set of outcomes and in priority areas. This potential and body of competent professionals is a clear strength. Although, there may be some tension in reducing the ŠŠI's overall capacity to conduct its core work: evaluating the quality of individual schools in the "complex inspections" (see Chapter 5).

The former ÚIPŠ was an institution dedicated to the collection and compilation of education system information that underpins its evaluation. The ÚIPŠ – and now the CVTI SR - has the potential to further simplify a regular and systematic collection of key information from schools and also to efficiently compile existing information from other sectors. The OECD review team strongly supports the ambition to move to an electronic system to collect regular compliancy information from schools.

Information available on outcomes at different points of schooling

The Slovak Republic has access to an increasingly rich set of measures of student outcomes at different stages of schooling. This reflects the heightened recognition of the need for regular monitoring of key outcomes in the education system as a way of underpinning policy making. Currently, the Slovak Republic can draw on three major sources for evidence on education system performance: international assessments; national assessments and examinations; and evidence from school inspections (see below).

The strategic decision to participate in the IEA's international assessments conducted at Grade 4 provides international benchmarks for Slovak students in basic education. At the same time, the Slovak Republic's participation in the OECD's PISA provides international benchmarks on outcomes at age 15 nearing the end of compulsory schooling (which is typically at age 16). With this approach, the Slovak Republic has internationally comparable measures on system performance at two key stages of compulsory education.

Further, there are centrally collected national measures of student performance in compulsory schooling. These include the *Testovanie 9* national summative assessments and the *Maturita* examination results. While the major purpose of national outcome measures is to provide a summative measure of individual student performance, the annual results provide information on average performance for the system and allow the potential to compare performance across different sub-national groups, including regions and schools. As point in time measures, they can offer insight to average quality in measured areas, as well as the equity of outcomes. The potential of these measures has increased due to the heightened confidence in the reliability of the results.

Efforts to provide a broader set of measures on the education system

As noted above, the ŠŠI collects much valuable evidence on an annual basis as part of its work inspecting individual schools. This provides broader measures on key aspects of schooling as defined in the school inspection framework, plus a more in-depth examination of specific priority themes. Having a mechanism for external school evaluation provides the potential to gather rich evidence on the quality of teaching and learning – to the extent that school inspections go beyond a focus on compliancy. Further, the Slovak Republic actively participates in many international surveys that go beyond a measure of student performance in basic skills. These provide internationally comparative measures on various aspects such as student computing and financial literacy, and teacher and school evaluation. Participation in the current OECD review is also an example of a commitment to gathering qualitative information on the school system. The CVTI SR also compiles and reports information on graduate employment or unemployment. This aims to better inform students on their choice of studies.

Transparency in reporting key results of education system evaluation and attempts to promote their use

In the Slovak Republic there is a clear commitment to reporting the major results from national assessments and school evaluations at the system level. The regular reporting schedule, for example, the release of the ŠŠI annual report every November, also adds credibility to the reporting of system level results. NÚCEM has a commitment to transparency and all results are systematically reported and made available to the public on NÚCEM's website. NÚCEM's reporting approach is linked to specific assessments, and specific reports are available both for the annual results from the *Maturita* and the *Testovanie 9* assessments. The reporting seeks to optimise the value of the results for teachers and schools. There is a series of in-depth reports for each subject examined in the *Maturita*, with full information on how students responded to different tasks and an accompanying analysis. Such information can be a rich resource to help teachers better understanding common miscomprehensions by students on certain tasks, and how to better address these in future. The EU-funded project has also resulted in similar reports presenting useful analysis of tasks developed to assess numeracy and reading literacy. These can be important tools to further promote the competency-based curriculum.

The ŠŠI annual report provides valuable information on a system-wide basis that can inform national and regional policy makers about specific aspects of schools' work. It can be used to examine trends over time in specific features as information from several years is reported. It summarises the state of all quality indicators in the types of schools (preschool, basic school, *gymnázium* and other secondary school types). It also sheds light on identified priority areas within the school system and can form a basis for the development or refinement of policy to address these priorities. The ŠŠI also publishes specific reports on the results of thematic inspections conducted in a sample of schools throughout the system. All reports are available on the ŠŠI website under distinct sections for basic schools, secondary schools etc.

There are efforts to stimulate the use of national assessment and school evaluation results for evaluation at the regional level. NÚCEM has held conferences and workshops in different regions to promote the use and relevance of results at the regional level, and since 2009/2010 the ŠŠI has started to organise conferences on a regional basis to present the key findings in the annual report. The conferences allow the opportunity to focus on

results for a particular region in comparison to others. This holds potential to inform regional authorities and larger school founders on necessary improvement and development actions. Such activities to promote results for use at the regional level hold promise to further stimulate and develop a culture of evaluation at the regional level.

Growing support to strengthen evaluation role at the regional level

The OECD review team formed the impression that there is a growing support for strengthening the role of regional actors in the evaluation of school systems, to complement the work of the ŠŠI. The regular evaluation of sub-systems of schools could cover specific quality aspects that reflect regional needs and priorities. While some local officials are content with the current division of responsibilities and would not like to interfere with evaluative tasks that are in the hands of school leaders, school founders, the national government and the ŠŠI, others support the idea that schools belong to the local or regional structure and that it is good for local people to take more responsibility for their quality. The OECD review team perceived that while officials from self-governing regions, regional state authorities, local authorities and other larger school founders accepted that their current evaluative responsibilities were restricted to financial, technical and maintenance issues, a wish to take more responsibility was also expressed. For example, the OECD review team learned about a couple of examples where regional authorities or self-governing regions had used their restricted powers and "soft influence" to ensure the replacement of school leaders, although responsibility for this task lies with school founders.

Challenges

Lack of clear goals for schooling in the Slovak Republic

The OECD review team identified that an important strategic challenge to education system evaluation is to ensure some stability of long-term policy aims for the school system, as well as to specify clearer goals. Although the "Millennium plan" set broad strategic policy lines on priorities for educational reform over the past ten years, there is a need to renew and strengthen commitment to longer term reform programmes. Such a longer term vision for schooling is extremely important given the short political cycles in the Slovak government. There is also a need to clarify concrete goals for the school system in terms of both quality and equity as there is currently a lack of clarity in overall priorities for schooling. As in many other countries, there are a set of different measures that feed into evaluating the performance of the Slovak school system (e.g. *Maturita*, *Testovanie* 9, evaluations conducted by the ŠŠI, compliancy checks by regional authorities), but "no recognised national understanding of the 'quality' of education" (NÚCEM, 2012a). This results in an array of evaluation and assessment activities at the national and regional levels, and the aims of these activities may not be mutually compatible (NÚCEM, 2012a).

Need to address basic information needs for education system monitoring

The OECD review revealed that there are some concerns on the quality of the available statistics on the education system in terms of reliability and coverage, as well as some important information gaps.

In part, concerns about the quality of available statistics are related to the data collection process. The major example is the reporting of aggregated information at the

school level as part of the annual school compliance reporting procedure. The collection of individual student data would address these reliability concerns. Also, the initial results from national assessments and the external part of the *Maturita* were not reliable as there were concerns with the administration of the assessments/examinations by schools. Although such basic concerns have been largely addressed by ad hoc and targeted inspections by the ŠŠI, there appears to be a need to continue to monitor assessment/examination administration in some schools. Therefore, the challenge to ensure reliability of the core data used in system monitoring is significant.

In other ways, the quality of available statistics is limited due to insufficient levels of detail or breakdown. Typically, a major added value of system evaluation, in contrast to other elements of the evaluation and assessment framework, is the attention to monitoring equity throughout the system, but currently, there is limited information available to adequately do this. For example, there is a lack of reliable data on student and school socio-economic background, including a concern on the definition of "learning disadvantage". Similarly, national statistics on student destination after leaving school and entrance to the labour market do not provide sufficient breakdown by school type. Specifically, technical and vocational streams are grouped together in youth unemployment statistics.

As yet, education system evaluation does not pay sufficient attention to the monitoring of the effectiveness and eligibility of spending within the school system (NÚCEM, 2012a). There is even room to collect qualitative data from stakeholders, for example, there is no coherent or systematic monitoring of parental satisfaction with the quality of schooling in the Slovak Republic (NÚCEM, 2012a). The Slovak Republic is one of eight OECD systems not administering any stakeholder surveys (OECD, 2013, Table 8.6). In 21 OECD systems, student surveys are used, and the use of parent and teacher surveys is also increasing.

Conceptualisation of national assessments does not allow tracking of improvement at the system or school levels

As in other school systems, the Slovak Republic sees the information from student certification at the end of schooling (the *Maturita* examinations and final grades) as key input to the system evaluation. Student examinations, however, have the primary aim of providing summative assessment for students, leading to a certification of their academic achievement. The content of such examinations changes every year as the full examination paper is typically published. This does not provide a stable measure of changes over time as the difficulty of the content of the *Maturita* may vary from year to year. National assessments, however, typically aim to provide measures to compare school and system performance. However, in the Slovak Republic the entire content of the *Testovanie 9* assessment is published each year, so there is no way to compare student performance over time on a stable proportion of test content. Further, the *Testovanie* 9 assessment is normative rather than being set against particular standards. This also poses a challenge to measuring improvement. For example, it is not possible to say that in Year X 50% of students were able to perform at a certain standard, but in Year Y this was 52% of students (see also Chapter 3). The OECD review team understood that there would be a similar approach in developing the new *Testovanie* 5.

Limited research on schooling and limited analysis of existing evidence

The lack of systematic research on the quality of the education system as a whole is a weakness in the current approach to system evaluation. During the OECD review, the review team learned that a lack of sufficient support to academic research was in part linked to the frequent political changes in the Slovak Republic. The Slovak Republic is one of eight OECD systems that does not ensure the collection of longitudinal information, whether that is research programmes or monitoring the progression of students or student cohorts through the school system and beyond (OECD, 2013).

As stated above, there is also a concern about the quality of available education statistics. The access to basic information for researchers is also a concern, although the former ÚIPŠ informed the OECD review team of ambitions to introduce a new information system with student-level data, which could provide a special research database with the student identification number removed. Current research activities are typically limited to the analysis of data from international surveys. However, there is room for much more exploitation and secondary analysis of these results.

Official bodies may have a mandate to conduct research, but their capacity to do so is limited due to other demands on their resources. For example, the Methodological and Pedagogical Centre only has around 10% of its resources available for research. There was a very limited analytical role for the former ÚIPŠ as its resources were almost entirely devoted to data collection and processing activities.

Fragmented reporting of key system-level results

Although there is a clear commitment to transparency and a regular reporting of key results from the two major pillars of system level information (national assessments and school inspections), it is difficult for the public to navigate through the different sets of results. It is also unclear how policy makers can get a balanced and authoritative overview of what available information on the system identifies as areas for improvement. The Ministry provides website links to where the public can find all key information, however, there is no attempt to summarise the information or to give a sense of the overall priorities for schooling in the Slovak Republic. The ŠŠI annual report is probably the most authoritative summary document, bringing together a wide set of evidence on the quality of schooling as gathered via school inspections conducted in that year. However, this report puts major emphasis on presenting results by different school types (e.g. basic schools, secondary schools). Other reporting of school inspection activities is also presented on the ŠŠI website by type of school.

It is not possible for policy makers or the general public to gain an immediate sense of the relative priorities in schooling based on the evidence collected via national assessments and examinations, as well as international assessments. The reporting is very fragmented and does not allow an overall sense of progress, strengths and areas for development. This may be in part due to the necessity to focus on increasing the objectivity and reliability of results in the *Maturita* and *Testovanie 9*, which has rightly taken priority. However, as the reliability of information improves (therefore allowing more confidence in comparing results among different regions and schools) there is room to make the information more useful for defining policy priorities.

Concerns about the reporting of system-level results as school performance measures

At the time of the OECD review, the review team noted several concerns with the reporting of national assessment results at the school level. On the NÚCEM website, school average results in national assessments are presented in static tables, with limited accompanying information to aid the interpretation of such results and no contextual information offered on the school or the participating students. The reporting format remains of a statistical nature and is not very accessible to a non-statistical public. The non-governmental organisation INEKO has developed an independent website and reported to the OECD review team that this would meet needs for school information that it had identified from many parents (see Chapter 5). There is a sense that national bodies are now in a reactive position in order to catch up with such unofficial initiatives. Indeed, one example of this was the development of a school reporting portal by the former ÚIPŠ (see above). This includes links to the INEKO website.

Raising the impact of the ŠŠI's reports on policy making

There is a clear challenge to raise the impact of the ŠŠI's annual, thematic and information reports on policy making. The OECD review team finds that the 2010/11 annual report contains much valuable information for politicians and civil servants in the national ministry and in the regional or local authorities; and also for school leaders. A major challenge for the ŠŠI is to improve its own impact by stimulating and helping all these "clients" to effectively use this information. Such reports can identify examples of good practice and promote improvement throughout the system. The recent introduction of regional presentations of the annual report is a good example of raising the impact of the ŠŠI's work. Furthering the use of results at the regional level is also one of the stated goals for the ŠŠI in the 2012/13 school year. However, the OECD review team gained the impression that more dissemination activities are needed. During the OECD review, school staff and authority officials were often not very familiar with the ŠŠI annual report, indicating that it has limited impact in some cases. Further, it was hard to assess the impact that the annual inspection report has on policy making at the Ministry.

Strengthening evaluation activities at the regional and local levels

Evaluation activities at regional and local levels are limited to a monitoring and checking of school administrative and funding requirements. Within a regular cycle of school inspection, schools would only be subject to an external evaluation of their quality every 5 years. While regional authorities monitor schools more regularly, the fact that the focus is purely on financial and compliancy-related aspects fails to promote that evaluation activities should be concerned with the quality of educational processes and teaching and learning. The challenge is to respect the carefully designed structure and balance of authority and power, while building on the willingness of regional or local authorities and other stakeholders to engage in evaluative discussions and decisions about their school(s).

Policy recommendations

Over recent years there has been significant investment in building capacity to conduct evaluation activities as a way of providing information for system evaluation. Notably, there have been moves to collect national measures of student performance and

recent attention to reporting information in a more accessible way. However, education system evaluation remains an underdeveloped component within the Slovak evaluation and assessment framework. Drawing on the analysis in this chapter, the OECD review team recommends the following approach to further strengthen the evaluation of the education system:

- Establish a framework for education system evaluation.
- Determine information needs and prioritise strengthening the national information system.
- Develop a strategy to monitor outcomes at the national level over time.
- Build analytical and research capacity.
- Further develop reporting systems to better mobilise evidence for policy making.
- Promote a greater role for municipal and regional authorities in system evaluation.

Establish a framework for education system evaluation

A first step in strengthening the current approach to the evaluation of the education system is to establish a framework for education system evaluation. This would start with a Ministry led exercise to better clarify the major objectives for the education system and, as far as possible, to develop these into specific goals. Such goals should be linked to the student learning objectives, as specified in the national education programmes. The value of such a framework is that it signals to all stakeholders the breadth of system evaluation and shows how education system evaluation draws on a varied set of components such as information systems with basic demographic, contextual and administrative information, as well as quantitative and qualitative measures of system performance, research and analysis. The Ministry can then conduct an exercise to map out existing information against the specified objectives and goals for the education system. Once established, this national framework can serve as a model for use at the regional level. It can also be complemented by specific goals and priorities at the regional and local levels. Importantly, it can promote an alignment of objectives in different national, regional and local evaluation and assessment activities.

Determine information needs and prioritise strengthening the national information system

Establishing a framework for education system evaluation will also allow a systematic mapping out of available information. In each case, any technical caveats or quality concerns with the data, research results or statistics can be noted down. This will make more transparent to policy makers the current concerns in terms of key information gaps and quality of information. In turn, such mapping will be a solid basis to underpin decisions to prioritise the collection of further evidence for education system evaluation.

Prioritise the improvement of the information base to monitor equity

The OECD review team identifies the improvement of measures on student and school socio-economic context as a priority, given the recent developments in reporting system-level information at the school level. For example, policy makers, the CVTI SR, the ŠŠI and the NÚCEM can use the framework for education system evaluation to determine the information needs for monitoring equity in the Slovak school system. A clear mapping of the availability, coverage and quality of different measures on student

socio-economic background can inform decisions on whether and how to improve existing measures and, if necessary, the most efficient way to collect more reliable measures.

Improve school compliancy reporting processes

The OECD review team also strongly supports the development of an electronic data collection system for annual school compliancy reporting. This is expected to generate efficiencies at the central collection level, the regional validation level, as well as to reduce the bureaucratic burden in reporting for schools. A more timely and accurate collection of key information will significantly strengthen the information base for policy making at a system level, notably in the core area of funding allocation. Many OECD systems have been capitalising on technology to improve the efficiency of school compliance reporting (OECD, 2013). In Northern Ireland, an electronic school reporting system is well established. To complement this and to make the information more useful to schools, analytical software has been developed to support the analysis of these and other data entered by the schools. In this way, the school compliancy reporting forms a part of core school self-evaluation activities (Shewbridge et al., 2014).

Develop a strategy to monitor outcomes at the national level over time

As noted above, the Slovak Republic has built up national capacity in student assessment and has adopted a policy to continue to strengthen this. There is, for example, the ongoing piloting of a national assessment in Year 5, as well as the focus on developing tasks to assess numeracy and literacy. However, as yet there has been little thinking on the development of more longitudinal measures or research programmes. During the OECD review, the former ÚIPŠ had voiced an ambition to introduce a unique student identifier in the data collection system. This holds strong potential for research and for informing policies, for example the allocation of funding. Among the OECD review countries, New Zealand demonstrates an example of how a student identifier can be implemented, while respecting student privacy (see Box 6.1).

Box 6.1 Approaches to longitudinal research in New Zealand

Unique student identifier

Since 1996, New Zealand uses a unique student identifier (the National Student Number, NSN) for longitudinal research studies. However, student privacy must be respected. This unique identifier facilitates the management and sharing of information about students across the education sector in a way that protects their privacy (Nusche et al., 2012). At the level of the Ministry of Education, almost all data collection from schools is set up in a way as to enable longitudinal analysis, using the NSN as a link. The existence of a widely applied unique identifier covering both schooling and the tertiary sector is a key strength of system monitoring in New Zealand. The NSN can be used by authorised users for the following five purposes:

- monitoring and ensuring a student's enrolment and attendance
- ensuring education providers and students receive appropriate resourcing
- statistical purposes
- research purposes
- ensuring that students' educational records are accurately maintained.

Among other things, the NSN is applied for reporting purposes by education agencies, analysis of student assessment data over time, moving data between software applications, and issuing documentation students need to present to other schools or education providers.

Box 6.1 Approaches to longitudinal research in New Zealand *(continued)*

Specific research on competencies

The "Competent Children, Competent Learners" longitudinal research programme specifically analyses the development of different competencies (knowledge, skills and attitudes) across a student cohort and identifies factors associated with this with the aim to identify promising directions for improving children's competency levels. See: www.nzcer.org.nz/research/competent-children-competent-learners

Regular monitoring of a broad set of student outcomes

Since 1993, the National Education Monitoring Project (NEMP) assesses students in primary education in two different year groups (Years 4 and 8) and follows a set four-year survey cycle. In this way the NEMP is conducted each year, but assesses a different set of disciplines. For example, in the second year of the survey cycle, music, technology, reading and speaking are assessed, and in the fourth year of the survey cycle, listening and viewing, health and physical education, and writing are assessed. These disciplines, therefore, will only be tested every four years. This allows monitoring of a broad coverage of the national curriculum. According to the NEMP website, the purpose of monitoring samples of students at successive points in time is to identify and report trends in educational performance, to provide good information for policy makers, curriculum specialists and educators for planning purposes and to inform the public on trends in educational achievement. See: http://nemp.otago.ac.nz.

Sources:

Nusche, D., D. Laveault, J. MacBeath, P. Santiago (2012), OECD Reviews of Evaluation and Assessment in Education: New Zealand 2011, OECD Reviews of Evaluation and Assessment in Education, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264116917-en

OECD (2013), *Synergies for Better Learning: An International Perspective on Evaluation and Assessment*, OECD Reviews of Evaluation and Assessment in Education, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264190658-en

Further develop reporting systems to better mobilise evidence for policy making

The OECD review team identifies a need for the Slovak Republic to further develop its reporting systems and to better promote the responsible use of results to inform improvements in policy making, as well as in school evaluation activities, by schools internally, by the ŠŠI and also by parents and the general public. In communicating education system evaluation results, it is of fundamental importance to ensure the accuracy of the data. As noted above, national agencies continue to pay attention to increasing the quality of national data: the former ÚIPŠ in its efforts to improve the timeliness of reporting, as well as the coverage of national statistics; the NÚCEM, aided by inspection activities of the ŠŠI, in giving priority attention to increasing the reliability of national assessments and examinations. Ensuring accuracy of data is the first, critical step in making sure the results are useful for policy making and other evaluation efforts. The next step to improve reporting is to ensure the "fitness of use" of the data in terms of user needs. Based on international best practice, the OECD promotes statistical quality by ensuring data are accurate and also (OECD, 2012):

- Relevant: This relates to the identification of user groups and their needs. User groups may change over time and their needs for data may evolve. This highlights the importance of having processes in place to determine the views of users and the uses they make of the data.

- Credible: This refers to trust in the objectivity of the data. This implies that data are perceived to be produced professionally in accordance with appropriate statistical standards with transparent policies and practices for their reporting and release, e.g. the release is not timed in response to political pressure.
- Timely: This refers to the length of time between the availability of data and the event or phenomenon they describe, but also to the punctuality and clarity of reporting schedules.
- Accessible: This includes the suitability of the form in which the data are available, the media of dissemination and the availability of metadata.
- Interpretable: This reflects the ease with which the user may understand and properly use and analyse data. This relates to definitions of concepts, terminology and information describing the limitations of the data.

These facets of statistical reporting quality help to promote the greater use of system results and to generate greater demand for the use of evidence in policy making and in public debates. The OECD review team underlines the need to continue to support existing efforts by national agencies to improve the credibility and timeliness of national statistics. Importantly, the facets of statistical quality outlined above also imply a strengthened analytical role for statistical and assessment bodies. The OECD review in Northern Ireland presents an example of how a more strategic approach to reporting is increasing the relevance of data (Box 6.2).

Box 6.2 Clear data reporting and efforts to increase the relevance of results: Northern Ireland

Clear data reporting

The United Kingdom Statistics Authority Code of Practice specifies a number of reporting guidelines. To be published as official statistics, statistical releases must:

- meet identified user needs
- be well explained and readily accessible
- be produced according to sound methods
- be managed impartially and objectively in the public interest.

The Northern Ireland Statistics and Research Agency (NISRA) publishes a number of statistical press releases, many of which follow a clear annual cycle. Each statistical release by NISRA includes sufficient commentary to enable users to meaningfully interpret the information. These usually take the form of a few introductory lines, major bullet points of key results and graphics showing trends. Importantly, these also include information on any caveats the reader much consider when interpreting the information. In addition, each statistical release includes the full set of results in tables. See for example: www.deni.gov.uk/year_12_and_year_14__examination_performance_at_post-primary_schools_in_northern_ireland_2012-13.pdf.

Box 6.2 Clear data reporting and efforts to increase the relevance of results: Northern Ireland *(continued)*

Mechanisms to increase the relevance of system information and promote its use

NISRA has progressively organised its structure and services around different major users and demands for education statistics. For example to ensure that official data are most effectively used in school inspection activities, NISRA includes a specific section that lends support to the Education and Training Inspectorate. NISRA provides regular focused briefings for policy makers. NISRA also identifies developing trends in data to highlight these in a timely way to policy makers, thus playing a more strategic role. This strategic approach to statistical reporting has heightened the relevance of data to policy making and there is sustained demand from policy makers for evidence when developing and monitoring policies. NISRA also provides a more tailored reporting service to people external to the Department of Education and answers requests for data from researchers, members of the public, the media and the Northern Ireland Assembly.

Source:

Shewbridge, C., M. Hulshof, D. Nusche, L. Stenius Staehr (2014),*OECD Reviews of Evaluation and Assessment in Education: Northern Ireland, United Kingdom*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264207707-en

The OECD review team recommends that the Ministry considers introducing a summative reporting mechanism to provide a periodic assessment of the education system performance against the education system evaluation framework. Among the 29 OECD systems in the OECD review of evaluation and assessment, 20 have an annual statistical publication and 19 produce an annual analytical report (OECD, 2013, Table 8.9). In fact the latter may be annual, biennial or triennial, but is an authoritative summary report on the school system. The periodicity should reflect the needs of the Ministry and other stakeholders. Such a report would draw on all available evidence on performance of the education system, e.g. from school inspections, national assessments and examinations, specific evaluations in priority areas and different research programmes. This would allow the tracking of progress against key system goals. Norway presents an interesting example in the way that it uses a common set of key system goals and reporting structure in both a physical annual summative publication on the school system and a web-based school portal. This allows a coherent national reporting aligned to the major goals and promotes those goals more effectively. For example, see Norwegian Directorate for Education and Training, 2012.

Build analytical and research capacity

There is considerable scope to expand the analytical role of national bodies. The former ÚIPŠ, the National Institute for Education and the Methodology and Pedagogical Centre all have an analytical mandate, but have limited resources dedicated to this analytical function. As outlined above, increasing analytical capacity in national bodies is expected to bring considerable benefits by: promoting a strong use of evidence throughout the system; better feeding existing results into other regional and school level evaluation efforts; ensuring a more systematic use of evidence in policy making (see Box 6.2).

However, it is equally important to plan to complement the use of existing system performance measures with more qualitative information on the school system. The

Slovak Republic can benefit considerably from the existing mechanism for school inspections to collect evidence on a broader set of outcomes within the school system – and also to more flexibly respond to emerging policy concerns. But this demands sufficient resources within the ŠŠI so as not to compromise its regular evaluation of individual schools (i.e. the complex inspection cycle). As such, the OECD review team sees benefit in developing a national research strategy. This would have a two-fold approach to both open up existing information to the research community, as well as to ensure that additional qualitative research is commissioned in priority areas. A strategic approach is important given the existing concerns with ensuring quality of national statistics and data collection in general. It will be prudent to plan future research programmes on a manageable scale, while also continuing to validate existing data collection.

Promote a greater role for municipal and regional authorities in system evaluation

The OECD review team noted some motivation for regional and municipal authorities to play a more substantive role in supporting school improvement. However, there is a need to clarify their possibility to do so within the current legal framework. The OECD review team sees room for an open discussion among key stakeholders to see how to promote a broader and more collaborative approach to the evaluation of educational quality. There may be ways to mobilise existing resources and experienced personnel at the regional and municipal levels to foster peer evaluation and collaboration among schools. This can be an important means of professional development for educators and managers within schools and also help to promote local and regional goals. Such initiatives to promote networking amongst schools can help develop and spread good practice.

Regional and municipal authorities can play a key role in providing opportunities to bring professionals together, for example for a day of collegial learning. All professionals are busy and it is difficult to organise such professional networks without some external stimulus. This could even be a mechanism to more concretely use the results from school inspections, by analysing results for schools at the municipal or regional levels and identifying common areas for improvement.

Notes

1. For example, in lower secondary education (ISCED 2) reading comprehension within the subject "Slovak language and literature" includes the competency "Distinguishing sentences and texts". Students at a minimum – with the help of teachers – are expected to list ways to introduce coherence to a text (e.g. interpunction and personal pronouns) and to judge the correct use of verb tenses according to the concept of time. However, the optimal performance standards require students to do these things independently, as well as to identify words or groups of words to establish a coherent text and to judge the appropriateness of these for different types and styles of text. Full content and performance standards can be found at www.statpedu.sk

2. For further details, see: www.nucem.sk/documents/46/tlacova_sprava_t5_2012/Spr%C3%A1va_z_pilotn%C3%A9hoTestovania_5-2012.pdf.

3. For example, see presentation of 2011/2012 *Maturita* results: www.nucem.sk/documents//25/maturita_2012/vysledky_analyzy/prezentacia_MS_2012_final.pdf.

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