



OECD Centre for Educational Research and Innovation (CERI)

Workshop – 11 June 2010

Summary Report

MEASURING INNOVATION IN EDUCATION: TOWARDS A SURVEY INSTRUMENT

Reliable data are essential for developing sound educational policies that enhance learning outcomes, equity or cost-efficiency in education. In the frame of its Innovation Strategy for Education and Training, CERI is developing an instrument and a methodology for an international survey on innovation in education. The survey intends to:

- Document changes in specific practices implemented at the school and classroom levels;
- Link changes to subjective perception and, when possible, objective measurement of their impact;
- Cover innovation in teaching, in administration and school external relations;
- Include contextual factors to detect drivers and barriers for innovation in education;
- Be complementary to other ongoing initiatives aiming at measuring innovation in the public sector.

The OECD/CERI Innovation Strategy for Education and Training project aims to develop a questionnaire for a survey on innovation in education and to conduct related pilot studies in co-operation with interested countries. Ideally, the survey instrument will be flexible enough to be used by interested countries, regions and cities on a voluntary basis.

To this end, an OECD/CERI Workshop on “Measuring Innovation in Education” was held in Paris on 11 June 2010. It convened a small group of OECD country representatives and experts to develop a strategy and a statistical instrument for measuring innovation in education. Denmark, France and the Netherlands have expressed their interest to work with the Secretariat on the development of the instrument, and to possibly pilot it.

Specifically, the workshop aimed to select an approach to measure innovation in education, formulate a preliminary structure for (a) draft questionnaire(s), take stock of what can be adapted from other ongoing initiatives and define the next steps for developing an instrument to measure innovation in education.

Measurement approach

Some basic principles to measure innovation in education were agreed upon during the meeting. The survey on innovation in education will focus on asking about implementation of specific practices at the school and classroom levels, instead of asking directly about innovation. Contextual factors will be

collected in order to detect drivers and barriers for innovation in education. Changes in school and classroom practices will eventually be linked to stakeholders' subjective perception and, when possible, objective measures of their positive or negative impact. The survey will cover different functions of schools, not limiting itself only to pedagogical innovation, but also covering organisational and administrative innovation as well as external relations of schools. The proposed approach would be complementary to other ongoing initiatives to measure innovation in the public sector, including education.

It was agreed that measuring innovation in education should look at both (1) concrete innovations in education and (2) contextual factors for those innovations. While the choice to focus the measurement exercise to practices implemented at school and classroom levels was welcomed, it was also seen as important to maintain a connection between the school and the decision-making level for the system. This would allow linking innovations back to specific policies and system characteristics and getting a grasp of innovation processes in education.

Adding lower-administrative levels to the survey was seen as challenging due to the large differences in administrative structures among countries. In some countries it may be feasible and meaningful to add this administration level to the survey. At the same time, one could expect principals to be able to deliver much of the information concerning lower levels of administration.

Addressing the impact of change in the exercise of measuring innovation in education was seen as essential. This could be done through linked questions to different stakeholders – such as teachers, students and principals – that would allow comparison of different stakeholder perceptions of the impact of educational changes.

Level of education for the measurement exercise

Another part of the discussion focused on the education levels that would be most relevant or convenient to survey. Secondary education emerged as the preferred level although several arguments for different levels of education were heard:

- The secondary education was preferred by many because its conditions for innovation can be expected to be the most difficult. This would especially apply to the lower-secondary level, while regarding the upper-secondary level, little is known about innovations taking place. In addition, secondary education holds a foremost place in determining students' labour market orientation and more resources per student are spent in secondary education than in primary education. Regarding feasibility, secondary education would not require a larger sample than primary education, since at the country level sample sizes would be large enough to make meaningful comparisons across subject disciplines. It also appears possible to design generic questions applicable to teachers across subject-disciplines.
- Primary education would best address the different purposes of education as the entire population goes through at least primary level of education. Due to its overall length, primary education also takes up most of the total resources invested in education. As to feasibility, primary education – that is more homogeneous by nature than secondary education – could make piloting the measuring innovation in education survey easier.
- Much change could be also expected to be going on at pre-primary level of education.

An alternative to limiting the survey to one level of education would be to develop a generic core questionnaire applicable to different levels of education with specific, dove-tailed modules. This could be

all the more relevant when taking into account that boundaries between primary and secondary education have been blurring over recent years in many countries.

However, implementation cost could form a feasibility constraint for surveying several levels of education at the same time. Even if the actual questionnaire would be subject to minimal modifications, additional education levels would imply doubling or even tripling the sample size and therefore the cost, since each level would require its own representative survey sample.

Themes for the survey

While measuring innovation in education implies a trade-off between generalities and specificities, a limited and detailed enough approach gained support. This could be done by concentrating the survey instrument on specific topics or by relating it to the impact of a specific policy framework. Another alternative could be to focus on points where countries are known to be very different, such as the use of certain practices alternative to the mainstream. At the same time, the possibility of completely new practices should be taken into account in the survey design.

Prioritising and limiting the survey scope in a coherent manner is a challenge for measuring innovation in education: What specific topics would be included in the measurement exercise and how would those topics be grouped? A general framework with key research questions and overall objectives for the final survey exercise are to be clearly defined prior to deciding about the specific detailed topics for the survey. One way to formulate the framework questions would be to select and break down the outcomes against which the eventual innovation impact would be measured.

The proposed broad school functions for the survey to cover were teaching, administration and external relations. All three were seen as important functions to be included in the survey, with an emphasis on teaching.

Following a group brainstorming exercise and subsequent discussion, several specific topics were cited as particularly relevant:

- Educational content, especially sequence of topics
- Pedagogical techniques
- Assessment techniques
- Information technology applications
- Personalised learning
- Risk taking and entrepreneurship
- External and internal co-operation
- Sources and channels of innovation
- Stakeholder engagement, especially regarding families and communities
- Communications and marketing
- Procurement
- Time use

A combined survey-case study methodology was suggested as an option to increase both breadth and depth of the exercise. Another alternative could be to combine a closed-question questionnaire with an open-ended question, thus allowing better tracking of non-predetermined innovations. A useful approach for determining the most relevant topics for the final survey could be also a small pre-survey with open-ended questions.

Practical steps for the survey design

The workshop discussions highlighted several feasibility aspects to consider in the survey design and its eventual implementation. Prior to launching the actual survey, small scale cognitive testing would be for example very useful in order to refine the final questionnaire.

The final length of the questionnaire will depend on whether one opts for postal and/or electronic survey or phone interviews. Phone survey should be no more than 30-45 minutes in length, while the pen and paper or electronic format should limit itself to roughly 85 question points. An option could be to do a uni-mode survey that could be used both in paper and over the phone. This would also necessitate a simplification in the questionnaire design.

Synergies with other initiatives

Developing a specific survey instrument for innovation in education gained support among the workshop participants. The space for innovation and/or education specific questions within existing surveys may be very limited and the appropriate measurement of innovation in education requires more than a few questions.

At the same time, further exploring synergies with existing survey instruments was seen as beneficial. While this may allow reducing costs, in some countries schools and teachers are already suffering from “survey fatigue”. Synergies could be further explored with the existing survey instruments:

- TALIS survey addressing both teachers and principals emerged as the closest existing vehicle for measuring innovation in education, for example, through the introduction of some innovation specific questions. This could be particularly useful for paving the way for the development of a full-scale instrument specific to innovation in education.
- National school evaluations and existing national indicators can provide valuable avenues to explore for measuring innovation in education.
- Some parts of the MEADOW generic employee-employer questionnaires focusing on work conditions could also be applied to schools.

The ongoing work of the European Commission Joint Research Centre in Seville on Innovation in Education, and the Public Sector Innovation Measurement Initiative by the European Commission Directorate General for Enterprise and Industry are worthwhile for further exploration. KPC Groep in the Netherlands is currently conducting research on the innovation capacities of school that could be helpful for coming up with indicators for the eventual international measurement exercise.

Next steps

The next steps for the measuring innovation in education work are to:

- Further develop the agreed measurement approach;
- Reach out to all relevant partners and further explore the synergies with existing initiatives;
- Define the feasibility constraints for the survey.