**Workshop on "Measuring Innovation in Education"- The way forward**

OECD, Paris, 11 June 2009

Public services have an "innovative imperative" in order to improve their quality, relevance and equity. Public organisations experience high restructuring pressures that can be comparable to those experienced in the private sector, such as the introduction and use of ICT, budget constraints, aging of the workforce or changing needs of the citizens. The Public Sector must react to these pressures introducing the changes that are required to add higher value to society.

In the case of education, innovations can improve the learning outcomes and the quality of the provision, improve efficiency maximising the "bang for the buck", and enhance equity and the relevance to society and the national economy. It must be noted that innovation in education is a complex phenomenon that can touch upon several layers of the system. In this respect, the administration of education and the manner on how the education system is organised can be subject to innovative approaches that can, for example, have positive impacts on increasing the efficiency of the procedures and communication among stakeholders. Moreover, pedagogic changes in teaching and learning, which could be regarded as the core of the education "business", could also yield positive results increasing the quality of the education provision, the learning outcomes of students or their satisfaction.

Policies supporting innovation need reliable data to monitor the progress and evaluate the success of policies, provide evidence on the driving forces at different levels, identify future challenges and plan potential policy responses.

A **brainstorming workshop** was organised on **11 June 2009** to advance our understanding on how to measure innovation in Education. This workshop counted on the intervention of a reduced number of policy makers, experts and practitioners who presented recent initiatives to move beyond the traditional R&D, patent and scientific publications indicators, which may not be well suited to measure innovations in education.

During this workshop, a number of general issues were raised regarding innovation in education:

- The difficulty of defining innovation ("what is "innovation" in education?) and the potential risks associated with different interpretations by respondents. As a way to overcome these challenges, a list of key specific innovations could be asked.

- The relevance of the knowledge management approach to understand the innovation process in education (knowledge generation, diffusion and use)

- The need to define and measure multiple outcomes, as education has multiple objectives: learning outcomes, learning satisfaction, efficiency, equity.

- The difficulty of measuring outcomes in an objective manner, and the potential risks of relying on self-reported data.

Moreover, in addition to these discussion questions, two concrete examples of data collection were presented to move the agenda forward: (1) the adaptation of the Community Innovation Survey to the

public sector (including education), and (2) the analysis of organisation changes through employer-employee surveys. These two alternatives are presented here-after.

The Nordic Initiative[1] initiated by the Danish Ministry of Science, Technology and Innovation in collaboration with the Nordic Innovation Centre, the Research Council of Norway, Innovation Norway, VINNOVA, SALAR and the Finish Ministry of Enterprise and Employment has recently launched a pilot project aimed at measuring innovation in the public sector. The project aims at developing a conceptual framework and a questionnaire to collect internationally comparable data on innovation in the public sector. In order to do so, it intends to develop a "generic" survey that can be applicable across government levels and includes main public sector activities. This initial survey will take as a starting point the Oslo manual definition of innovation inputs, outputs and process, and define "cross-cutting themes", such as Human Resources, Information and Communication Technologies or Procurement. It will mirror the Community Innovation Survey by inquiring on the sources of innovation, their outputs, and the outcomes accruing.

Moreover, the project is examining the option of adding sector-specific modules, e.g. education, that can provide more detailed information about sector-specific needs. A small scale testing questionnaire will be administered in Fall 2009, and pilot test studies in 2010.

The second initiative is the MEADOW project[2]. This project aims at setting out guidelines for collecting and interpreting harmonised data at the European level on organisational changes as well as their social and economic impacts. The reason behind this approach is that innovations occur within organisations that allow for knowledge generation, diffusion and use. In other words, innovation occurs in "learning organisations", which are categorised by flexible organisational arrangements.

In order to do so, this project develops a survey that inquires about the state and change of the organisation and the work experience to both the employer and the employee. In particular, the survey asks about the drivers, the strategy or policy of the organisation, the use of management practices and ICT, the structure of the organisation, the employer and employee outcome, the work organisation and the working conditions.

In the case of education, this survey could ask questions to both employers and employees on the changes in legislation, in the pupil population, number of classes, competition with other schools in the neighbourhood, investment in new teaching equipment, participation of employees in (pedagogical, management) conferences, participation in training and retraining courses, relationships with students, parents, local government, other academic institutions, learning and social outcome. In addition, questions on (1) the work organisation; such as collective work, social support, use of ICT, the learning of new (pedagogical, management) things, the support for the introduction of new ideas and practices, (2) the working conditions, such as work rhythm, repetitiveness, class size, working in noise, and (3) employee outcomes, such as satisfaction, well being, accidents or wages, could also add to the knowledge of education centres as learning organisations.

The definition of who are the employer and the employee is linked to the definition of the unit of analysis, which maybe contingent to the specificities and governance of each education system. In this sense, in some countries part of the questions related to the employer may need to be answered by members of the ministry of education, e.g. education supervisors, municipality counsellors or head

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[1] www.mepin.eu

[2] http://www.meadow-project.eu

teachers.  What it seems clear is that in all cases, education centres should be regarded as the principal unit of analysis, as they are the units where the education service is being provided, and therefore the views of the head teachers, teachers and students should be at least collected

In terms of data collection, ideally this would be done through observations rather than self-reported responses that are subject for discretionary interpretation. However, the cost of implementing direct observations may be too high and make the exercise not worthwhile. One of the benefits of the employer-employee surveys is that they collect similar data from both the employer and the employee, therefore allowing for comparisons in the answers. Although the question of subjectivity cannot be totally accounted for, it can be tamed by the multiple inputs obtained through different sources.

Both approaches, the adaptation of the CIS to the public sector and the adaptation of the employer-employee surveys to the education sector, can provide complementary views on both pedagogical and administrative innovations in education. The Nordic initiative will start piloting a new questionnaire in autumn 2009. INES may want to explore the interest of a group of selected countries to equally design and implement a pilot survey using the employer-employee approach.