

Chapter 9

Innovation and Knowledge Management

Recognition of the key role of research and knowledge management in educational practice and policy-making is in general recent. In many countries, there has been only weak capacity to develop and exploit the knowledge base on which improved practice and effective policies can be based. The volume of relevant educational R&D tends generally to be low, despite education being so explicitly about knowledge. Similarly, a great deal of educational change is still shaped by short-term considerations despite education's fundamental long-term mission and nature. Educational R&D systems, knowledge management, futures thinking, and evidence-informed policy and practice, have all been prominent aspects of the OECD work done primarily through the Centre for Educational Research and Innovation.


9.1. Key findings and conclusions

The growing focus on educational outcomes has resulted in both an explosion of evidence of different kinds and a policy thirst for the results of educational research: There is a mounting preoccupation with what happens as a result of educational investments and participation, rather than the primary focus being on these inputs. Outcomes cover not only course completion and qualifications, but also skills and competences (as with the PISA surveys), access to and success in the labour market, and wider social outcomes such as health and citizenship attributable to education. There has been a huge expansion of evidence resulting from the growing volume of testing and assessment activities. As policy increasingly focuses on what education actually delivers, so is there interest in the information coming from research, but we know too little about how this evidence is used and whether it is used effectively.

 *Evidence in Education: Linking Research and Policy*, 2007, Chapter 1.

Educational R&D is not given the support it needs to effect change and promote innovation: Despite the key role of knowledge-based innovation in education, the country reviews of educational R&D have confirmed the following features as commonly (though not universally) characterising OECD systems:

- Low levels of investment in educational research.
- Generally low levels of research capacity, especially in quantitative research.
- Weak links between research, policy and innovation.


 *New Challenges for Educational Research*, 2003, Chapter 1.

Schools are conventionally poor at using the key motors of innovation – research knowledge, networking, modular restructuring, technological advance: OECD work on knowledge management has identified four key “pumps of innovation”:


- The “science-based” innovation pump: education has not traditionally made enough direct use of research knowledge, and there is often cultural resistance to doing so. This is increasingly being targeted in reform.
- The “horizontally-organised” innovation pump: there are obvious benefits in terms of teachers pooling their knowledge through networks, but incentives to do so remain underdeveloped. There is need to tighten the “loose coupling”

between the single teachers, individual classrooms, and individual schools that so characterises school systems.

- The “modular structures” pump: this is about building complex processes from smaller subsystems that are designed independently but function together. Education is accustomed to working in modules, but much of it involves schools or teachers operating separately from each other.
- The “information and communication technologies” pump: there is a powerful potential for ICT to transform education, but its use in schools remains underdeveloped, partly because the main *modus operandi* of school administration and instruction are resistant to change.

 *Innovation in the Knowledge Economy: Implications for Education and Learning*, 2004, Chapter 2.


Too much of educational decision-making is preoccupied by the short term: Today’s world is increasingly complex and uncertain, with a growing number of stakeholders making new demands on education. Yet, so much of education is still determined by short-term thinking – preoccupation with pressing immediate problems or simply seeking more efficient ways of maintaining established practice. Neglect of the long term is increasingly problematic in meeting the challenges of complexity and change. Futures thinking can stimulate reflection on the major changes taking place in education and its wider environment. It helps to clarify visions of what schooling should be and how to get there, and the undesirable futures to avoid. As well as clarifying values and options, it provides tools to engage in strategic dialogue.

 *Think Scenarios, Rethink Education*, 2006, Foreword and Part 2.

9.2. Orientations for policy

The “Schooling for Tomorrow” Rotterdam conference included policy orientations on “Fostering and Disseminating Innovation”. Among the orientations for policy were:

- **Bold experimentation, evaluation, and dissemination:** A climate of experimentation should be fostered within the broad frameworks of national goals, with imaginative solutions devised for the real challenges being confronted on the ground. Evaluation and feedback are critical... We lack good dissemination strategies, and these are a priority.
- **Sustaining innovation and improvement:** There should be high levels of support for successful innovation and experimentation to ensure that the benefits are sustainable. Those facing the greatest challenges, in situations of compound disadvantages, most need that support.

 *Networks of Innovation: Towards New Models for Managing Schools and Systems*, 2003, Chapter 9.

Effective decision-making means to be informed as far as possible by evidence with educational professionals working in a “knowledge-rich” environment: There is need for better links between educational research, policy and practice and for further progress towards making education knowledge-rich for its professionals. Greater access to web-based information goes hand-in-hand with less quality control, alongside a shift in most OECD countries towards more decentralised decision-making in education. Given greater information, less quality control, a more informed public, and a greater diversity of policy makers, the need for clear, reliable, and easily available evidence on which to base decisions has become more important than ever before, as has the need to find mechanisms to obtain reliable answers to pressing policy questions.

 *Evidence in Education: Linking Research and Policy*, 2007, Chapter 1.

Create and encourage knowledge brokerage in education systems: Brokerage agencies are increasingly important to encourage dialogue between policy makers, researchers and educators and to build capacity to evaluate what does and does not work. An important first step is to create a database of quality research on key topics of interest to policy makers and to provide clear goals for conducting and evaluating educational research. A key component of these brokerage agencies is the transparent exchange of findings with their methodologies clearly defined, with commitment to update and maintain state-of-the-art syntheses on core topics. And, all agencies should seek to disseminate to as wide an audience as possible in order to effect both top-down and bottom-up change.


 *Evidence in Education: Linking Research and Policy*, 2007, Chapter 1.

A “template” to assess the adequacy of each system’s research and development in education has been developed and refined in the course of an OECD series of R&D reviews:

- **Defining aims and challenges for educational R&D:** What is the political, economic, social and cultural context of the country? What are the country’s aspirations and strategies for development? What is the nature of the country’s existing educational R&D? What are the major contemporary challenges to the country’s educational R&D?
- **Strategic awareness about R&D, system-wide and by key stakeholders:** What is the extent and quality of the country’s current knowledge about its own educational system? What provision is there for the accumulation and organisation of existing educational knowledge (basic, applied and developmental) in the country? How committed are the country’s key stakeholders to the introduction of a national system for managing the production and use of educational evidence and knowledge? Does the country

have a national policy or strategy for educational R&D, with a clear definition of what counts as basic and applied research and what counts as forms of development by practitioners and others?

- **A sound base of basic research:** Does the country have appropriate provisions and incentives for the production of high quality and innovative basic research?
- **Flourishing applied research:** Does the country have appropriate provisions and incentives for the production of high quality and relevant applied research? How are researchers, policy makers, practitioners and other appropriate stakeholders in the country engaged in the identification, development, application and evaluation of national priorities for applied research and for development?
- **Development and professional enquiry:** Does the country have appropriate provisions and incentives for the production of high quality and relevant development work, professional enquiry and improvement, and how is it embedded in the education and training of practitioners?
- **Systemic issues – co-ordination, connectedness, communication, dissemination, capacity building:** How are the country's various research and development activities distributed, networked and co-ordinated nationally? How is the country's research and development work linked to appropriate international networks, centres and activities? What quality assurance and accountability procedures are in place for the country's educational research and development? What provision is there for the communication and dissemination of research findings to the country's stakeholders, including the general public, and how effective is this knowledge transformation and transfer? Is there adequate capacity building to sustain the country's complementary forms of educational research and development?

 “National Reviews of Educational R&D Systems – Switzerland”, 2007.

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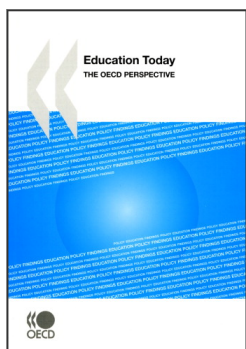


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