Innovation in Education
Connecting How we Learn to Educational Practice and Policy: Research Evidence and Implications

Paris, OECD Conference Centre – 23-24 January 2012

An International Conference jointly organised by the **Centre for Educational Research and Innovation** of the OECD (OECD/CERI) and the U.S. **National Science Foundation** (NSF).

Conference Objectives

The objectives of the conference are threefold:

- High-level dissemination of recent research on how people learn, by promoting dialogue among researchers, practitioners, and policy makers;
- To foster the development of an international network on the broad theme of learning, so as to continue the dialogue among research, policy and practice communities on overcoming key challenges; and,
- To globalize and mobilize the field of an integrative, multidisciplinary Science of Learning by strengthening and exploring new collaborations among US researchers and their international counterparts.

Rationale

The OECD Conference will allow an international group of scientists from many disciplines to share their findings and ideas in an interactive forum that includes educational practitioners and policy-makers. Scientists representing different disciplines—education, psychology, neuroscience, computer science—do not attend the same meetings, nor publish their findings in the same kinds of scientific journals. However, there is increasing interest in connecting a broad array of scientists and practitioners at an international level, because individual countries have made significant progress in developing educational approaches that are highly successful. The OECD Conference will allow countries to share their successful practices and strategies. Bringing diverse scientists, policy makers and practitioners together in an international forum,

could encourage widespread innovation that integrates international discoveries and educational practices with an eye to inventive policy changes.

Background

As societies become progressively knowledge-intensive, they increasingly rely on human capabilities to learn and innovate. How each nation's education system prepares or fails to prepare its citizenry to meet these challenges are topics of global interest.

A primary driver of educational innovation is basic research focused on how humans learn. The challenge is how to more effectively use research about how people learn to inform educational practice, and conversely, how to use knowledge and experience gained from educational practice to raise questions that test and refine research being conducted on learning.

The US National Science Foundation has made significant investments in advancing fundamental knowledge about learning through its Science of Learning Centers (SLCs), and through its Programs in E&HR. For example, in the six SLCs of the SLC Program, learning is investigated through multiple levels of analysis (molecules, cells, brain systems, cognition, behavior), across multiple disciplinary perspectives, and across a wide range of learning domains – language, spatial understanding and STEM, and socio-cultural diversity has been integrated in this research. The understanding that learning is embedded in particular socio-cultural context is now clearer than in the past, and this understanding is increasing learning studies that take place in informal settings, and less traditional settings such as museums, clubs, and other venues that attract learners. It is clear that people's ability to learn can be improved through applying the knowledge gained from basic research on neuroscience, cognition, technology, and social interaction. The conference will provide an opportunity to discuss research advances and their implications for educational practice and policy.

New approaches to education depend on improved understanding of the brain mechanisms and cognitive processes underlying learning across the lifespan. In many cases, the cognitive processes underlying learning are outside of explicit conscious awareness and the instructors and developers who design learning curricula are often biased by explicit cognition—they experience the "expert blind spot." For example, there is a widespread assumption that word problems are the most difficult ones for students, but studies have shown that students actually perform best on word problems. Basic research on learning data will help elucidate student thinking and learning in informal and formal settings, and this knowledge can be used to design learning environments and experiences that adapt to students needs, capabilities, and interests.

Topics

Some of the topics that will be discussed during the conference include:

- The social foundations of learning;
- Stereotype threat and its affect on math learning;
- Media use and social well being in young teenaged children;
- Educational technology for STEM learning;
- CogSketch software and spatial learning;
- Interplay of emotion and cognition in math learning;
- Role of early gesture in spatial learning;
- Temporal processing and neuroplasticity
- Visual processing and diversity in learning;
- Innovative teaching based on learning research in math and science.

Organisers

The **U.S .National Science Foundation** supports research on learning through its core programs, including programs in the Education and Human Resources (E&HR) Directorate and a Foundation-wide activity, called the Science of Learning Centers program (SLC). The SLC Program offers awards for large-scale, long-term Centers that create the intellectual, organizational and physical infrastructure needed for the long-term advancement of Science of Learning research. It supports research that harnesses and integrates knowledge across multiple disciplines to create a common groundwork of conceptualization, experimentation and explanation that anchor new lines of thinking and inquiry towards a deeper understanding of learning.

The **OECD Centre for Educational Research and Innovation** (CERI) conducts research on innovation in education, innovative learning environments and innovative teaching practices. Its 'Innovative Teaching for Effective Learning' (ITEL) project looks into ways to improve teaching practices in STEM education by founding teachers' pedagogical knowledge into learning research. It disseminates this research through its networks of policy makers and government officials and into the educational research community. As part of the OECD Directorate for Education it also supports the development of data-collection, indicators and surveys on various aspects of education.

Registration

Participation to the Conference is free.Participants should inform their OECD national delegation in order to be registered on the OECD/EMS meeting site or email the OECD/CERI Secretariat, Dirk Van Damme, Head of CERI (dirk.vandamme@oecd.org), assisted by Cindy Luggery-Babic (cindy.luggery-babic@oecd.org) no later than **11 January 2012**.

Please find herewith the link about hotels near the OECD taken from the OECD website.
Directions to the OECD Conference Centre and containing a link to a map of the area.