INNOVATIVE LEARNING ENVIRONMENTS – A leading OECD/CERI project

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Centre for Educational Research and Innovation (CERI)
WHY SUCH FOCUS ON LEARNING AND ON INNOVATION?
Why such interest in learning?

- Our societies and economies have transformed with knowledge central. Therefore, learning is also central.
- Strong focus and advance in measuring learning outcomes, including through PISA. But then how to change outcomes? Focus back on learning environments
- Education has been reformed endlessly - the sense of reaching the limits of educational reform invites a fresh focus on learning itself
- The rapid development and ubiquity of ICT are re-setting the boundaries of educational possibilities but not yet revolutionised learning environments
- The research base on learning grows but so far a “great disconnect” to policy and practice.

Hence, the need to focus on learning and the ‘micro’ level.
Hence also the focus on innovation

- If traditional schooling not delivering well on 21st century agendas what new learning models promise more success?

- Meeting the evidence-based criteria of effective learning – ‘The Nature of Learning’ - will call for a substantial endeavour of innovation and change.
ILE aims to inform practice, leadership and reform through generating analysis of innovative and inspiring configurations of learning for children and young people, by:

1. The Lessons of Research for Redesigning Learning Environments ("Learning Research" Strand)
2. Compiling & Analysing Innovative Configurations of Learning ("Innovative Cases" Strand)
3. Facing the Challenge of Implementation ("Implementation and Change" Strand)

ABSORBING THE LESSONS OF LEARNING RESEARCH
“The Nature of Learning: Using Research to Inspire Practice”
1. **Analysing & Designing Learning Environments for the 21st Century**  
   OECD (Hanna Dumont & David Istance)

2. **Historical Developments in the Understanding of Learning**  
   Erik De Corte

3. **The Cognitive Perspective on Learning**  
   Elsbeth Stern & Michael Schneider

4. **The Crucial Role of Emotions & Motivation in Learning**  
   Monique Boekaerts

5. **Developmental & Biological Bases of Learning**  
   Cristina Hinton & Kurt Fischer

6. **Formative Assessment**  
   Dylan Wiliam

7. **Technology and Learning**  
   Richard Mayer

8. **Cooperative Learning & Group-work**  
   Robert Slavin

9. **Inquiry-based Learning**  
   Brigid Barron & Linda Darling-Hammond,

10. **The Community and Academic Service Learning**  
    Andrew Furco

11. **The Effects of Family on Learning**  
    Barbara Schneider, Keesler & Morlock

12. **Implementing Innovation: from visions to everyday practice**  
    Lauren Resnick, James Spillane, Goldman & Rangel

13. **Future Directions**  
    OECD (Istance & Dumont)
To promote learning, environments should:

- Make learning central, encourage engagement, and be where learners come to understand themselves as learners
- Ensure that learning is social and often collaborative
- Be highly attuned to learners’ motivations and the importance of emotions
- Be acutely sensitive to individual differences including in prior knowledge
- Be demanding for each learner but without excessive overload
- Use assessments consistent with its aims, with strong emphasis on formative feedback
- Promote horizontal connectedness across activities and subjects, in-and out-of-school
Expressed in educational terms…

The ‘principles’ mean that learning environments should be:

- **Learner-centred**: highly focused on learning but not as an alternative to the key role for teachers
- **Structured and well-designed**: needs careful design and high professionalism alongside inquiry & autonomous learning
- **Profoundly personalised**: acutely sensitive to individual and group differences and offering tailored feedback
- **Inclusive**: such sensitivity to individual and group differences means they are fundamentally inclusive
- **Social**: learning is effective in group settings, when learners collaborate, and when there is a connection to community.
CONCEPTUAL AND EMPIRICAL WORK ON ‘INNOVATIVE LEARNING ENVIRONMENTS’
“Innovative Cases” Strand

The ILE project is building:

- A **Universe** of ILEs from as many countries and sources as possible (120+ cases so far, aiming at 160+) – 2009 to 2011
- An **Inventory** (around 35-40) from those submitted by participating systems – given more detailed analysis (2010 and 2011)
- An on-line **knowledge base** based on these plus the other ILE analyses (2011 and 2012)
- [plus 2012 publication]
Substantial international interest and participation

Many countries/regions/organisations have “joined” - taking an active role in the ‘Innovation’ and ‘Implementation’ strands

| Austria, Chile, Denmark, Finland, Hungary, Israel, Korea, Mexico, Norway, Portugal, Sweden, Slovenia, Spain | Belgium (French community), Victoria, South Australia, Australian Capital Territory (Australia), Alberta, British Columbia (Canada), Thüringen (Germany), Nuevo Leon (Mexico), Berne & Ticino (Switzerland), Scotland (UK), Ohio (US); Hong Kong, China | ENSI (Environment and School Initiatives), Cognition Institute (New Zealand), Stupski and Nellie Mae Educational Foundations (US), Innovation Unit (England) |
ILEs in the OECD Compilation are:

• **Reconfigured learning arrangements** at the micro level – formal or non-formal or mixes; real cases not general initiatives

• Departures from most general or vocational education – they are *innovative*

• Serving the learning needs of *children and/or adolescents*

• ‘**Full-time, over time’ mix of learning opportunities and activities**, replicated across different groups in same circumstances - not partial learning episodes or very part-time arrangements.

• Defined by the dynamic *interaction between learners, ‘teachers’, content, resources, organisation* (next slide)
CERI/ILE understanding of the ‘micro’ environment level

- **Who learns?** Profile of the learner
- **With whom?** those engaged in teaching and orchestrating learning
- **Learning what?** competences, knowledge, values; formal and non-formal
- **Learning where?** facilities, space and technology

**How?** Leadership, scheduling, groupings, pedagogies, assessments

**Content**

**Resources**

**Organisation**

**Learners**

**‘Teachers’**
Organisation as the ‘black box’ within the ‘black box’ – the engine room

Relationships between learners, ‘teachers’, content and resources through...

...structured learning activities (& pedagogies), leadership, and the use of information - all about the learning that takes place

Learners

‘Teachers’

Content

Resources

Organisation
Context is critical: we see it as embedded (cultures, climates, conditions & conventions)

- Institutional setting, teacher & assessment cultures
- Particular social, family, community backgrounds & beliefs
- ‘Teachers’
- Rules about who can teach. Desirability of location, status of teachers
- Content
- Curriculum regulations
  Conventions about legitimate knowledge
- Organisation
- Resource availability
- Initiatives for refurbishment
- Resources
Using the LE framework to understand innovations

- **Learners**: Innovations in the profile of the learners
- **Content**: Innovative approaches to scheduling, groupings, pedagogies, assessment, guidance
- **‘Teachers’**: Innovations regarding those engaged in teaching and orchestrating learning
- **Resources**: Innovative uses of infrastructure, space and technology
- **Organisation**: Offering new foci for content, competences and knowledge
Innovations focused on the ‘learner’

- New groupings or profiles of learners (e.g. novel age mixes)
- Targeted approaches for specific groups of learners (e.g. populations on the move)

- e.g. all-age learners in single classroom (Lindenthal, Switzerland)
  or mix of mixed-age and homogeneous age (JenaPlan, Thuringen)
- Circus children (Moving School, Portugal)

Innovations in the profile of the learner
Innovations focused on ‘the teacher’

e.g. artisans and artists, Fiskars, Finland
“Itinerant pedagogical advisers’, Mexico (Conafe)
Community expertise, Unlimited, New Zealand

Innovations in how teaching resources are combined or organised (e.g. team or multi-disciplinary teachers). Bringing in different experts or adults or peers to work with or instead of teachers (e.g. from the community or non-school specialists).
Innovations in content

- Shifting focus of what is the primary objective of the learning (e.g. values, multi-disciplinary approaches, creative expression, 21st century competences)
- Innovations in who defines legitimate knowledge (e.g. co-constructed “curricula”, learner or other group definitions of content).

Offering new foci for content, competences and knowledge

- e.g. Many ILEs focus on 21st competences and/or sustainability curricula
- Mix of non-fictional writing and students producing daily radio & TV shows (Courtney Gardens, Victoria)
- Pedagogical Platform, Denmark focus on 4 types of knowledge
Innovations in resources

- Innovative use of educational space and infrastructure
- Novel facilities, pedagogical materials and sources of knowledge
- Additional forms of non-traditional resource applied in the learning environment (e.g. community resources of different kinds)

Content

Resources

- Innovative forms/uses of infrastructure, space and technology
- e.g. Culture Path, Kuopio (cultural resources), or 2nd Life (technological resources), Salpaus, both Finland
- Environmental resources (e.g. ENSI)
- Innovative uses of learning spaces, Victorian cases.
Organisational innovation

Digital Roadmap, CEDIM, Nuevo Leon, Mexico
3 ‘schools within schools’ with different learning approaches in single school (Breidebbek, Norway)
Many ILEs with strong personalised reorganisation

Innovative approaches to scheduling, groupings, pedagogies, assessment, guidance

- New forms of scheduling over the learning day, week, month or other unit
- Innovative mixes of groupings e.g. abilities or size of working groups (use of lectures, tutorials etc.)
- Non-traditional pedagogical approaches
- Innovative uses of assessment
- Particular approaches to individualization, guidance etc.
How far-reaching the innovation?

• Are the ILE innovations mainly in one or two of the dimensions? Or in all of these?

• Comprehensive (change on 4 or 5 dimensions) – changing many factors at once?

• Broad (3 dimensions)? Or

• Targeted (1-2 dimensions)?
Targeted innovation – one or two dimensions

Commonly-occurring innovation involving two of the five dimensions

e.g. New content (e.g. values, 21st century competence) + organisational innovation

Offering new foci for content, competences and knowledge

Innovative approaches to scheduling, groupings, pedagogies, assessment, guidance
Broader innovation – three dimensions

The most common combination of the Universe cases as ‘broader innovation’:
• Content innovation +
• Resource innovation +
• Organisational innovation

i.e. same teachers and learners but other factors all subject to innovation
A non-negligible minority of the ILEs in the Universe seek to change all dimensions at once.

- Innovations in the profile or role of the learner
- Offering new foci for content, competences and knowledge
- Innovative approaches to scheduling, groupings, pedagogies, assessment, guidance
- Innovations regarding those engaged in teaching and orchestrating learning
- Innovative uses of infrastructure, space and technology
Possible Outline of Next Publication

1 Rethinking the ‘micro level’ (literature review and conceptual analysis)
   • The ‘micro’ level, approaches to learning, learning environments

2 Innovative Learning Environments (Universe analysis)
   • Innovations in learners
   • Innovations in ‘teachers’
   • Innovations in content
   • Innovations in resource use
   • Innovation in organisation & as holistic arrangements

3 Dynamics and Effects of ILEs (Inventory analysis)
   • The origins and sustainability of innovation
   • The dynamics of ILEs in detail
   • The nature of learning
   • Impacts and effects

4 Key conclusions and lessons
   • Substantial conclusions including for implementation and policy
IMPLEMENTATION AND CHANGE
Implementing change using the learning environments framework

• Explicit recognition of the ‘learning environment’ provides a distinctive framework through which to address implementation...

• .... at the micro level and at the meso and macro levels

• As implementation requires human agency, appropriate concepts of leadership are needed in the framework
Learning leadership – creating and developing the learning environment

Learning leadership

The beliefs, expertise and design capacity to create and shape the learning activities

Not necessarily ‘principals’ nor hierarchical leadership
Learning activities as structured relations between the key components

Learning leadership

Learning activities

‘teachers’

learners

resources

content

Mix of learning activities and pedagogies as structured relations over time between learners, ‘teachers’, content and resources

Institutional leadership may be exercised on many decisions that are not directly about the learning itself
Learning as changes in the learners over a particular time period

Learning activities

- content
- learner(s)
- ‘teachers’
- resources

Change in knowledge, competences, values and attitudes among all or specific learners in the environment over a specific time frame

Learning leadership

May be measured in terms of the learning goals of the learning leadership or via other metrics, including those of wider system. Outcomes will be due to wider contextual factors beyond the LE’s control.
Creating relevant and usable knowledge about learning, with feedback

- Learning leadership
- Resources
- ‘Teachers’
- Learning activities
- Learners
- Content
- Evaluation and assessment: transforming learning information into usable knowledge
- Information about learning activities, learners, and outcomes

LEARNING
Growing and sustaining the learning environment – Reflective feedback to learning leadership

LEARNING LEADERSHIP

Learning activities

resources

content

learner

‘teachers’

Usable knowledge: evaluation and assessment

Information about learning

LEARNING
What might effectiveness depend on?

At the learning **environment level** we can suggest:

- A **mix** of pedagogical approaches and activities that together promote the ‘principles’ from *The Nature of Learning*

- Strong ‘learning leadership’, well distributed among all involved with key decision-making, teaching and learning

- High capacity to gather information on learning and to transform that into actionable formats (assessments)

- Well developed feedback getting assessment information to learners, teachers and the learning leadership, sustained over time
Learning environments in a wider systemic framework

- **Macro system level**
  - Policy steering and framework setting
  - Network ‘meso’ level

- **Micro level**
  - **Environments**
  - Classes/learning episodes
  - Individual learners
This framework offers distinctive insights on implementation and effectiveness

- Learning environments recognised as distinct from institutional environments
- The aim is to maximise mutual support and consistency between institutional leadership/functioning and learning leadership/functioning
- The aim is to meld the classes/learning episodes into a dynamic cohesive learning environment rather than weakly connected and fragmented
- The institutional environment may not be a school at all or for only part of the learning environment’s operation, hence governance structures should recognise that complexity
- Strong environments depend for support and development on other environments – the meso network level
Implementation Strand being built around:

- **Analysis of change strategies** to implement innovative learning environments and the “principles” from the Learning Research strand, building on the above frameworks

Plus

- **Discussion/dissemination events**, international and in different participating systems - promoting change and engaging different stakeholders

- Exploring the potential of “**laboratories of learning change**” in 1-2 volunteer systems, bringing in all the network of ILE systems as a peer group for mutual learning.
NEXT STEPS
ILE Banff Conference

• 2 1/2 days, 10-12 October 2011

• Joint OECD/Alberta conference, site host “Canadian Rockies Public Schools District”

• Covering all three strands of the ILE project

• Already-participating systems & coordinators, plus different policy players, innovators, social partners
Still to come…

- Publication analysing cases of innovative learning environments from around the world
- Knowledge base on innovative learning environments, plus user-friendly materials
- Theoretical advances on conceptualising the “micro” level and on learning research in other traditions
- Seminars and events in different ILE jurisdictions and work on ‘laboratories of learning change’
- Analyses of implementation issues – new contribution to the literature with focus on learning environments
- Report on implementation and change
- Main international conferences, 2011 (Banff, October 10-12), 2013 (Santiago, Chile?), after?
Thank you!

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