Qualitative Transformation in Learning and Work:
the Innovation Imperative

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Themes

1. Change and Globalization
2. The Innovation Mantra
3. Change: universities and business
4. Best Practice: Looking at Europe (and Ireland)
5. Asserting Vision and Values

1. Change and Globalization

- Globalization – accelerating and pervasive
- Crisis and re-structuring since 2008
- Devaluation of the public sphere
- Stratification and inequity – raising social justice
- Labor market transformation
- Mobile capital and global investment linkage
- Rights and inclusion – token or real?
- Who owns what? And why?
- Access, quality and innovation in education

Globalized realities

- Patterns of constant change
- Permanent migration mobility
- Outsourcing
- Flexible structures and modalities
- Obsolescence of job norms
- Knowledge economy
- Ecological pressures
- Diversity as the norm
- Impact of pervasive ICT and instantaneous communications

Shaping enterprise dimensions

- Decreasing employee share in national income in all countries
- Labor productivity - up 85% since 1980
- Not reflected in wages - up 35%
- Declining social mobility
- Rising income inequality reflects declining equality of opportunity

Global Wage Report 2012/13, ILO
Prof. Miles Corak, *Journal of Economic Perspectives 2013*

We are increasingly becoming a winner takes all economy… over recent decades, technological change, globalization and erosion of the institutions and practices that support shared prosperity have put the middle class under increasing stress

Dr. Alan Krueger
Council of Economic Advisers & Princeton (2013)

Implications for business

- Less than 10% of SMEs in developing countries well prepared for new conditions and increased competition in global markets.
- An emerging opportunity to reap potential benefits of global trade is establishment of business linkages between SMEs and transnational corporations (TNCs).
- These linkages represent one of the best ways for SMEs to enhance competitiveness and acquire a series of critical missing assets: access to international markets, finance, technology, management skills and specialized knowledge
- However, specific linkages promotion programs only have a chance to succeed if a conducive *policy environment* is set up.

UNCTAD Information Economy Report, 2006

2. The Innovation Mantra

- Innovation supporting learning
- Innovation supporting work
- Re-evaluation of traditional methods and structures
- Changing needs
- Analyzing and responding to impact of globalization
- Change without changing – ‘innovation with precedents’
- Facing new realities – using evidence, connecting issues, thinking outside the box

Innovation imperatives

- Transformational learning and the sociology of innovation
- Educational systems as networks of actors who reinforce each other in stable configurations: but stable configurations prevent change
- Vested interest acts against innovation and inclusion - seen as threat
- It is possible to have incremental change
- Systems react to change even if they do not initiate it
- The promising path is through disruptive innovation which produces irreversible change (Christensen, *Disrupting Class*, 2008)

Directions and trends

- Acceleration
- Collaboration and networks
- Collaboration with knowledge production centers
- Increasing domination by market realities
- Towards competence
- Integrated learning for integrated learners

Global Innovation Index 2014 Edition

- Understanding human aspects behind innovation essential for design of policies to promote economic development and richer innovation-prone environments locally.
- Recognizing key role of innovation as a driver of economic growth and prosperity, and a broad horizontal vision of innovation applicable to emerging economies: GII includes indicators that go beyond the traditional measures of innovation (e.g. R&D)
- Rankings:

Switzerland	1
Finland	4
USA	6
Ireland	11
Norway	14

Innovation: critical factors

* Entrepreneurship
* Education standards – critical reflection
* Venture capital
* Alternative thinking – autonomous acting
* Risk-taking
* Global reach
* Confidence and authenticity
* Evaluative capacity and self-correction

Making innovation work

- Identification of what is unique
- Fostering critical reflection competence
- Democratic accountability and transparency
- Identification of real best practice
- Playing to identified strengths: food, agriculture, technology, community, services, arts
- Letting go - the stranglehold of bureaucratic thinking: innovation by diktat

Irish innovation policy

Challenges:

- Weak venture fund network
- Excessive power in State agencies
- Total stagnation in start-ups since 2000 - over reliance on MNCs
- Poor indigenous company engagement (OECD 2013)
- Poor independent research record
- Lack of strategic shared goal setting

Advantages:

- Ireland is ranked first in Europe for highest degree of SME participation of the 28 EU Member States in FP7 funding programs
- ICT, nanotechnology, health, ecology
- Changing education systems
- Creativity: music, animation, drama

Resourcing Innovation

- Talent management initiatives
- Accurate forecasting of future skill needs
- Linkage with leading universities
- Human Capital
- Organizational Capital
- Network Capital

Transfers of economically useful scientific knowledge from universities to industry generates substantial economic growth as the experiences of classical high technology regions (e.g. Silicon Valley) and emerging new technology centers around the world demonstrate

Listening
Linkage
Leading

3. Change: Universities and Business

- Education both structure and process
- Aims and goals vary considerably
- Education systems mirror world, society and relationship-matrix of which they are part
- Education systems as constraining as liberating
- Forum for ideas or market for products? Or both….?
- Commodification of knowledge
- *Impact on education systems (Freire, Illich, Field)*
- *Impact on work (Braverman, Haraszti, Davis)*
- *Impact on community*
- Knowledge and learning centrally linked as product and process dimensions

From Newman to Kerr

John Henry Newman (1873) *The Idea of the University*

1. Primary purpose of a University is intellectual and pedagogical
2. Range of teaching within University is universal; it encompasses all branches of knowledge, and is inconsistent with restrictions of any kind.
3. The University prepares students by allowing them to learn about "the ways and principles and maxims" of the world
4. True education requires personal influence of teachers on students.

Clark Kerr (1963) *The Uses of the University*

1. Modern university is diversified – a multiversity
2. Serves needs of society, economic and cultural
3. Think tank – essential to progress
4. *Master Plan for Higher Education* (1960) in California

The triple helix

- Concept: Industry/University/Government
- How does learning sustain innovation?
- Access to and validation of knowledge central concerns
- Changes in governance: autonomy; budgets; performance based practice
- Shift to external accreditation away from Ministries
- Emergence of more complex processes of innovation and commercialization of research
- **Triple Helix Systems of Innovation** (*Ranga & Etzkowitz 2013*)
- What is now the role of the University?

Outlook for partnership

- Miller (2003) fundamentally optimistic about transformational potential of new knowledge architectures

- Carneiro (2007) identifies
  - *Paradigm shifts (industry-globalization-utopia)*
  - *Delivery modes (role-access-customized)*
  - *Driving forces (State-market-community)*

- Intangible assets are the core economic competencies on which strategy depends and a key feature of Europe's knowledge economy

- For businesses this includes intellectual property components (licenses, patents, copyrights, trademarks, etc.) and more subtle intangible capacities embedded in strategic, differentiating competencies.

University: changing roles and expectations

- Stakeholders expect universities to respond to needs beyond classic education, teaching and research
- Strengthening the knowledge economy
- Restructuring basic institutions
- Assimilating new populations
- Democratization, access, social mobility, critical thinking and sustainability
- Embedding complexity of modern societies in a dynamic socio-economic-learning matrix
- Industry/corporate linkage occurs in this context
- Best practice is multidimensional depending on these needs

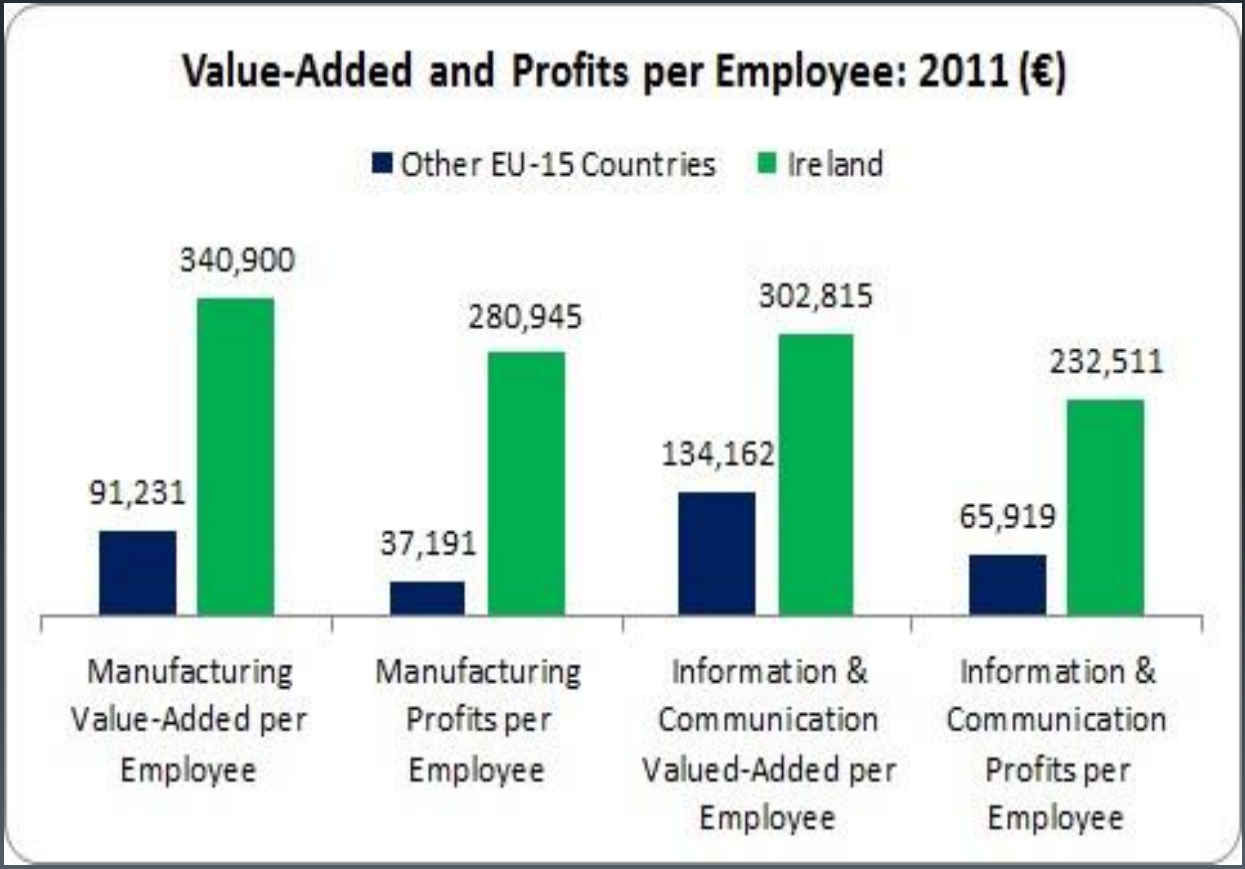
EU thematic Objectives (2014-20)

- Research and innovation
- Competitiveness for SMEs
- Employment and labour mobility support
- Social inclusion and combating poverty
- Education, skills and lifelong learning
- Institutional capacity building.

The Irish example

- The net effect of Ireland's policy of targeting mobile foreign investment is seen in the locating in Ireland of 24% of all available US manufacturing investments in Europe, and close to 14% of all FDI projects locating in Europe
- Since 1980, 40 per cent of all new US inward investment in European electronics has come to Ireland
- The quality of the Irish education system and the existence of a high skills labor pool recognized as being critically important to the attraction of inward investment
- In contrast to the leading US Universities, Irish universities not seen as providing such "cutting edge" graduates as might be required for specialist research and product development work.

Another reason?



Policy framework in Ireland

“Ireland by 2013 will be internationally renowned for the excellence of its research, and will be to the forefront in generating and using new knowledge for economic and social progress, within an innovation-driven culture.”

Quick response to change

Social partnership and dialogue

Learning/enterprise linkage

Response to crisis of 2008

University/corporate linkage measures

1. Strategic Research Clusters
2. Centers for Science, Engineering and Technology
3. Competence Centers
4. Technology Transfer Offices
5. Industry-Led Networks Pilot program
6. Innovation Partnerships Innovation Partnerships
7. Applied Research Enhancement
8. Skillnets
9. Fusion

Irish university/business innovation centers

1. *Nexus Innovation Centre*: University of Limerick
2. *Ignite Business Innovation Centre*: NUI Galway
3. *Centre for Excellence in Learning and Teaching*: Galway
4. *Nova*: University College Dublin
5. *Invent*: Dublin City University
6. *National Institute for Digital Learning*: DCU
7. *Digital Hub*: Dublin
8. *Trinity Research & Innovation*: Trinity College Dublin
9. *Centre for Investment Research*: University College Cork

5. Asserting Vision and Values

- Stakeholders in corporate learning are wide-ranging, both internal and external
- Pressures on corporate and academic worlds are similar, if different in detail
- Universities to survive must be relevant and visionary
- Universities are now expected:

  - To be more outward looking
  - To provide leadership and service
  - To make efficiency gains
  - To maintain standards and quality
  - To obtain new and additional revenue sources

Shaping Trends

- Ubiquity and access
- Innovation – the new imperative
- Universities, Companies, Customers, Communities
- Quality, standards and assessment
- Curriculum or competence: institutional crisis of European educational systems
- Freedom, openness and creativity in the digital economy
- Openness as global logic based on free and open-source software
- Battles over digital rights management and IPR
- Links between open content, open science and open collaboration make collaborative creativity sustainable
- Move from Information Age to Conceptual Age (*Daniel Pink 2005*)

Anticipating the future

- Excellence goes beyond mechanical quality measurement systems
- Ethics are now central to good business
- Critical role of diversity and equality approaches
- Gender and inclusion – the centrality of women
- Demographics and youth intervention
- Competitiveness and sustainability
- Universities as business or a place apart?
- Offering critical space and alternative perspectives

Imaginative discourses of change

- Skillbeck Report (2001)
  - Challenges and changes are within institutions
  - Changes are ubiquitous
  - Changes are systemic
  - Changes are radical

- *Evolving Corporate Universities* Forum (Istanbul 2012)
  - attract, retain and enhance highly skilled employees
  - invest in developing a culture of learning throughout the organization
  - spread a common culture as engines of strategic change
  - ability to promote importance, value and contribution of a learning culture
  - ensure integration of HRM systems and policies with learning initiatives
  - build genuine partnerships with world-class learning institutions

The bottom line…

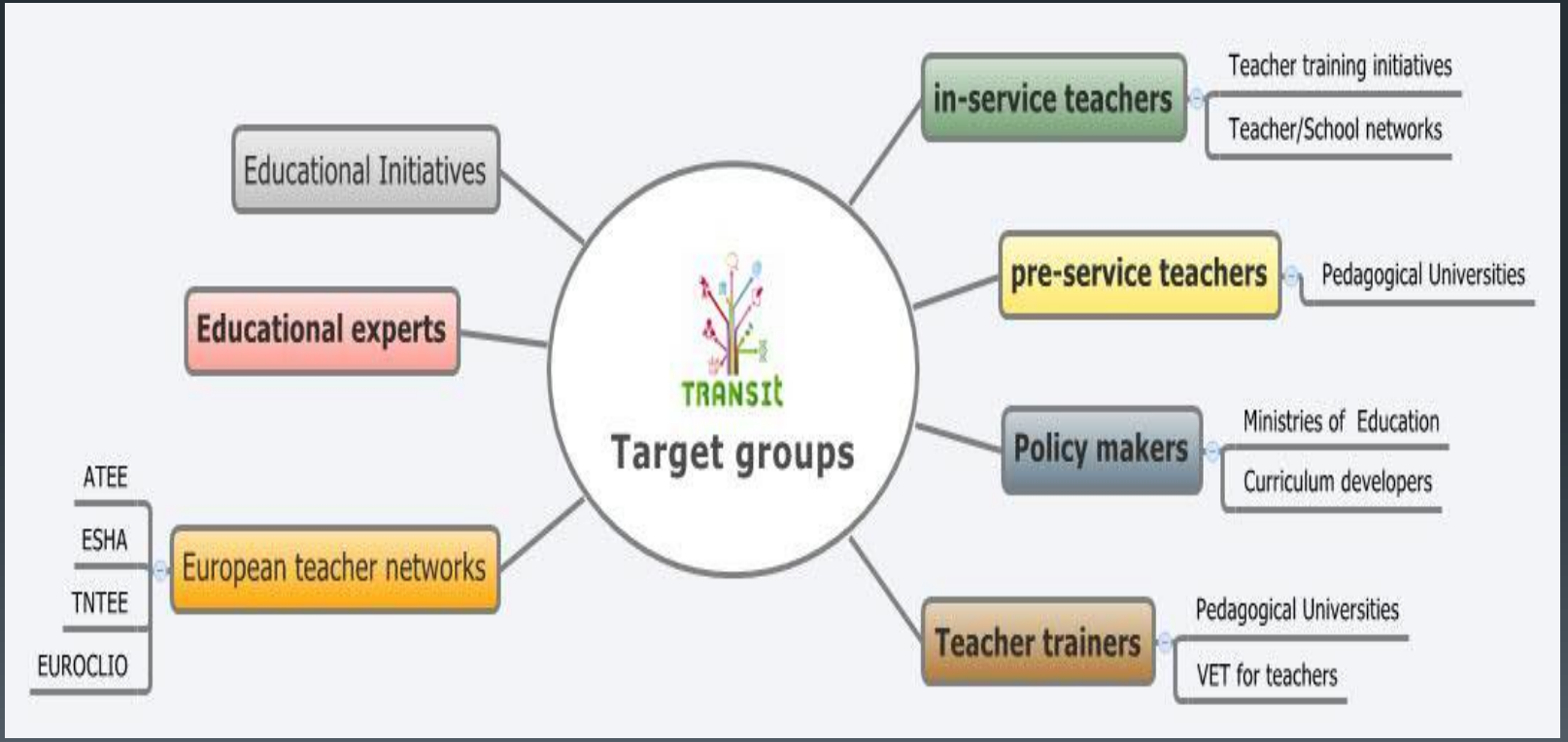
An assumption of stable work patterns and linear economic development is no longer possible

Learning systems must innovate and respond accordingly

Future directions

- Training of trainers
- Multilingualism
- Developing skills – competence transmission
- Developing attitudes – securing motivation
- Developing buy-in – loyalty and commitment
- Autonomous learning
- Review, evaluation and research
- Developing competence

Competence: the example of TRANSIt



Education and Culture DG
Lifelong Learning Programme

TRANSIt: focuses on five competences.

TRANSIt

The five competences mentioned here are transversal. They are cross curricular and pervasive.
They also support acquisition of all key competencies

- *Digital competence*
- *Learning to learn*
- *Social and civic competences*
- *Sense of initiative and entrepreneurship*
- *Cultural awareness and expression.*

TRANSIt: Main Objectives

- To help teachers acquire and reinforce skills and knowledge so that they can design ***cross-curricular*** activities that support key competencies acquisition (**KCA)** of their students.

- To support teachers in the process of ***assessing competences*** with the use of e-portfolios.

- To ***raise awareness*** of the administrative staff of schools to support teachers in bridging the gap between policy and practice (e.g. curricular reforms in order to support cross-curricular competence driven activities).

- Aimed at **teachers' collaboration** with colleagues, in order ultimately to become innovation leaders in their institutions.

Transformative learning

* Planning for sustainable outcomes
* Planning for equal access - UDL
* Avoiding tokenism - systemic approaches
* Mainstream - destination or challenge?
* Learning from difference
* Learning to learn and un-learn (Toffler)
* Fostering innovation and equality
* Moving beyond econometric targets

Conclusions

- Schooling and education at a crossroads: both structure and process
- Labor market and education increasingly connected
- Planetary focus is on mobility, skills and innovation
- Huge impact of increasing inequality of access and of resources
- Crisis as the norm
- Performance, standards, quality, reproducibility and added value at the heart of competence
- Innovative learning demands imagination and vision

Thank you

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