Innovation policy discourse translated to innovation education

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This paper is about official discourses in Iceland:
- innovation
- education

and how these discourses are realized in schools as innovation education

• What sort of pedagogic discourses are revealed in the official discourse about innovation and how do they (re)appear as innovation education?
Innovation is
- Important in modern societies
- Found in speeches of ministers and business leaders – EU policy for education
- Innovation education (similar to design and technology education)
  - in the official curriculum of compulsory schools in Iceland since 1999 – seems to be a good fit between the official innovation discourse and its location in the curriculum
Basil Bernstein’s theories

- Pedagogic device that uses language carrying social messages
- Reveal the underlying principles
- General knowledge is transformed into pedagogic knowledge.
- The rules of the device are relatively stable
- Contextually regulated (Bernstein, 2000).
Official discourse

Relocation – official recontextualizing field
(education authorities, syllabus writers)
pedagogic discourse
The pedagogic discourse

• The regulative discourse (RD)

  - A moral discourse creates social order, relations and identity
  - This is who we are – traditions in a subject or school – this is what we emphasize – these are the kind of students we want – the culture of a subject or a school (Geirsdóttir, 2008).

• The instructional discourse (ID)

  - Discourses of skills - that creates specialized skills and their relationship to each other
  - These are the kind of skills and knowledge our students should acquire – that is the way we arrange teaching to get this knowledge and skills across – in this order/sequence and this is how we evaluate the knowledge and skills. (Geirsdóttir, 2008).

The regulative discourse is the dominant discourse
The RD produces the order in the instructional discourse.
Classification in the curriculum

Classification – strong or weak

– defines the construction of a social space (i.e. school subjects)

Weak classification

– an integrated curriculum where the boundaries between subjects are blurred.

Strong classification

a curriculum that is highly differentiated and separated into traditional subjects
Framing – strong or weak

Who controls: the selection of communication, sequencing, pacing, the criteria and control over the social space.

Framing is strong when the teacher has explicit control e.g. the pedagogic practice is visible, weak framing gives the student more control and tends to have less visible pedagogic practice.
Discourses in Iceland for the past decade were analyzed

- Policy documents of the Ministry of Industry and Finance
- The policy of the Science and Technology Policy Council
  - The Compulsory School Act
  - Policy documents from the Ministry of Education, Science and Culture
  - The general compulsory school curriculum of 1999
- The curriculum for information and technology
  - The arts curriculum

Knowledge and needs from work life and modern life

Recontextualized
Findings
Positive official discourse

Policy and official discourses positive towards innovation

- Minister of Industry, official ceremony, speech March 2008:
  - Innovation is the prerequisite for diversity in Icelandic business and the foundation for its strong competitive status
  - The possibilities inherent in Icelandic ingenuity are inexhaustible and are Iceland’s largest untapped energy source
Relocation of the innovation discourse

The policy document of the minister of education in 1998: *Even better schools*.

- The main views of the new policy are about an independent modern individual with strong roots in traditions with possibilities for faster progression through the system or for meeting other special needs.
- A combination of competition and compassion.
- A discourse of creating the modern, international and globally competent individual, able to compete with others.
Meet the needs of modern Iceland
From Even better schools

- The new general curriculum also responds to technological progression and the computer revolution by mandating teaching in the so called **information and technology area** which among others includes learning to use computers, information technology, innovation and technology education (p. 16).

- If we are to secure the competitive status of the nation in development and innovation in industry, education and technology we must be on the lookout for international demands within this subject (science, p. 35).

- In all areas of work in our society we need individuals that have the qualities that are developed within arts education; initiative and innovation (p. 39)
The area of ´woodwork´/ slojd
- a new classification

• A new name Design and “woodwork” /slojd
• A new definition (first time defined outside the arts and crafts) – a combination of the old world and the new:
  – In design and woodwork/slojd in compulsory school there is a focused progression towards linking the old handcrafts tradition to the high technology of the modern world and is therefore both: an important link to the work history of the nation and a good foundation for an active participation in the work life of the 21st century (p. 47).
Introduction of innovation education links with “woodwork”/slojd

The minister’s policy document:

• In the compulsory school a new vocational subject will be founded *Innovation and the practical use of knowledge*. In this subject the students will gain a practical insight and skills in producing practical products from the knowledge they gain in other subjects (such as grammar, arts, mathematics, science, languages, social subjects and physical education) (p.48)

• New approaches to woodwork teaching are in the new curriculum area of information and technology education, since the new curriculum the traditional woodwork/slojd teaching will be linked to technology and innovation (p. 16)
Innovation education

• weakly classified subject (integrates knowledge from many subjects and life)
• weak framing - student have a lot to say about topics they are the “specialists” in their own ideas
The arts curriculum
(visual arts, textile, dance, theatre)

Innovation education not evident in the arts even though creativity is at the core of both.

Arts curriculum with detailed aims of
• *Creation, analysis and expression - perception, analysis and evaluation*
• Strongly influenced by DBAE (discipline-based arts education) (Aðalbjörg Ólafsdóttir, 2007)
• A strongly classified subject with strong framing
Discourses of innovation education in schools

• The discourse of innovation is not prominent in the enacted curriculum as innovation education.
  – Intentions and Reality – research on science (and technology and innovation) lessons in Icelandic schools (2006-2007) (Jónsdóttir & Macdonald, 2008)
  – Rare instances of focused (as a special subject) innovation education (Jónsdóttir, 2007)
  – Where it is to be found teachers seem to adopt it mostly as a special subject (Jónsdóttir, 2008) – a strong to fairly strong classification
Innovation education is a weak discourse that struggles for survival

- Arts: strongly classified – no “open arms” to IE neither as a special task nor as a tool to use.
- Woodwork teachers have officially relocated themselves in the old handicraft tradition
  - a new free-standing curriculum in 2007, neither with arts nor with technology
  - strong elements of innovation and technology education remain however in this revised curriculum
The actual regulative discourse

• The instructional discourse takes its nature from a regulative discourse in schools that is contradictory to the official social and economic discourse which promotes innovation.

• Explanations may lie in the weak framing and classification of innovation education versus the tendency to strong classification and framing embedded in the school system.
Relocating the official innovation discourse

The translation of the official innovation discourse into education is rare and weak.

- The cultivation of innovation seems to be expected to happen by itself without removing the obstacles that work against its flourishing.
  - Can it ever be a school ‘subject’?

- Educational policy and official discourses may need to address more directly
  - the expectations of society (what sort of individuals do we want) and
  - the ability of the current educational system to implement changes which are at odds with tradition in the school system (strong classification and framing).
Removing obstacles

To make a structure in education that supports innovation education (and other similar experiments in education), schools (teachers and administrators) and other influential parties (students and parents) need to address and to understand the changes in the modern curriculum:

- Acknowledge the need for innovation education
- Know the nature (properties) of IE and its potential
- Understand the impact of classification and framing (make it visible)
- Choose suitable framing deliberately, that is, mixed pedagogy (Morais & Neves, 2001)