Learning culture at the compulsory level as preparation for transition to upper secondary schools: An Icelandic example

Introduction
Educational transition, where students move from one educational context to another, e.g. across school stages, is of international interest (Jindal-Snape, 2010). In Iceland there is growing interest in the transition from the lower secondary stage of the ten year compulsory school to upper secondary schools, not least because of long standing concerns about high dropout rates in the upper secondary sector (Jónasson & Blöndal, 2002). A number of researchers have focused on the impact of various student attributes, such as self-efficacy, self-esteem and resilience, on successful educational transition. They recognise that even though transition between educational settings is an interesting and satisfying step for some it is stressful and challenging for others (Jindal-Snape, 2010).

This paper outlines several attributes considered to be an integral part of the learning competences of students and therefore to support successful transition between school stages. These are: 1) thinking skills, such as higher order thinking and metacognition (McGregor, 2007); 2) deep learning as opposed to surface learning (Entwistle, 2001); 3) self-theories of self-efficacy (Bandura, 2005) and incremental as opposed to entity theories of own intelligence (Dweck, 2000); and 4) motivation for learning (Harlen & Deakin Crick, 2003). According to the authors cited above, these attributes, while relatively stable over time, are by no means fixed or innate, but shaped through students’ encounters with their environment, not least by their schooling and the learning experiences and learning culture of the implemented curriculum of their schools (Sigþórsson, 2008).

The aim of this paper
The aim of this paper is: 1) to give an insight into the learning culture and students’ learning experiences in two subjects Icelandic and Science at the lower secondary level of four Icelandic compulsory schools, 2) to draw conclusions about the impact of that culture on some important learning outcomes that might have implications for successful transition from compulsory to secondary schools, and 3) to draw the attention to implications, regarding teacher effectiveness and professional learning needs, for the political level, where curricula and other policy documents are written and their implementation planned.
The Icelandic school system
The Icelandic compulsory school is a ten year school from pupils aged 6–16. Upper secondary education is four years for students from the age of 16–20. There are several different types of secondary schools. The two most common types are:

- Grammar schools that offer four-years academic programmes of study, leading to a matriculation examination.
- Comprehensive schools that provide academic programmes comparable to those of the grammar schools, and also a variety of vocational programmes and vocational training.

There are also specialised vocational schools that offer specialised vocational or practical programmes of study in preparation for specialised employment (Ministry of Education; Science and Culture, 2002)

There are varied admission requirements to different programmes of study. However all students are entitled to upper secondary education, and therefore most schools offer a general programme of study for students who enrol without the required attainment to be accepted into regular academic or vocational programmes of study.

There is long standing concern about high drop-out rate in the upper secondary sector in Iceland and there is a growing interest in the transition from the compulsory stage to upper secondary schools. According to an OECD document 45% of Icelandic students complete upper secondary education within the general time frame of upper secondary schools, while the OECD average is 68% (OECD, 2012a). An indication of the concern about this situation in Iceland is an on-going cooperation between the Icelandic Ministry of Education and Culture, and OECD on developing strategies to reduce dropout rates in Icelandic upper secondary schools. The cooperation is based on international evidence and practices that address upper secondary student dropout across different OECD countries, and efforts to support countries in the design and implementation of their education reforms (OECD, 2012b).

Both compulsory and upper secondary schools operate according to National Curriculum Guide, and a new education policy for the Icelandic school system was issued in 2011 (Ministry of Education, Science and Culture, 2012a, 2012b). Common to these school stages are six fundamental pillars of education that are intended to guide all teaching and learning. These are:

- Literacy
- Sustainability
- Health and welfare
- Democracy and human rights
- Equality
- Creativity

The outcomes of education are built around knowledge, skills and competences as core concepts, and several key competences – derived from the six fundamental pillars – are described. The key competences are similar to both the compulsory and upper secondary stages, which underlines the necessity to address these competences at both levels.

The key competences listed in the National Curriculum Guide for the compulsory school relate to:
• Literacy and communication of thoughts, feelings, opinions and knowledge, both orally and in writing.
• Creative thinking, and the ability to draw conclusions and seek new solutions, and use critical thinking and reasoning.
• Working independently and in cooperation with others.
• Responsible, creative and critical handling of knowledge and information

The Curriculum Guides seem to be in line with a number of international policy documents, such as the European Communities Key competences for lifelong learning (European Communities, 2007), the OECD’s Definition and selection of the competences (DeSeCo) (OECD, 2002), and the United Nations Convention of right of the child (UNICEF, 2012). In that sense they are international.

The study
The study that generated the data on which this paper is built was a qualitative case study of the implemented curriculum in Icelandic and Science at the lower secondary level of four Icelandic compulsory schools. Data was gathered with 28 individual interviews with 14 teachers of the two subjects, classroom observations in 32 lessons taught by the interviewees, and 12 focus group interviews with students.

Learning culture
The term learning culture is borrowed from an American scholar Lorrie Shepard (2000). She has described her vision of the learning culture of the 21st century as a braid of three interwoven key ideas:

2. Curriculum based on the notion that all students can learn, and deserve challenging learning activities, and equal learning opportunities that foster important dispositions and habits of mind. In this paper the term differentiation is used to refer to that kind of curriculum (see Tomlinson & Imbeau, 2010).
3. Classroom assessment that is an on-going process, integrated with teaching and learning, and nurtures deep learning, higher order thinking, self-assessment and metacognition.

Three facets of learning culture
In line with Shepard’s (2000) vision of the learning culture of the 21st century I analysed my data through her glasses to tease out what they told me about:

1. The kind of teaching and learning took place in the two subjects.
2. In what way teaching and learning was differentiated to provide all students with worthwhile and equal learning opportunities.
3. How assessment was carried out.

Teachers as informers
To analyse the teaching and learning arrangements I applied the typology used by Hacker and Rowe (1997) in their study of teaching behaviours of 60 English science teachers in 34 schools, where they classified the teachers as informers, problem-solvers or inquirers:
• **Informers**, where the teaching is characterised by relatively infrequent use of teachers' questions — excepting those demanding recall and application of facts and principles to problem-solving. There is high incidence of teachers' statements of fact and of teachers' directives to sources of information for fact-finding.

• **Problem-solvers**, where the initiative is held by the teacher, who challenges pupils with an array of questions — observational, problem-solving and speculative, in both practical and theoretical contexts. Teacher statements also reflect orientation towards science as a speculative, problem-solving activity.

• **Inquirers**, where there is a pupil-directed approach, and initiatives taken by pupils occur more frequently. The work has as practical bias, and the level of intellectual engagement is high.

The prominent teaching style of 8 out of the 14 teachers in my study was what Hacker and Rowe (1997) described as informers. Additional two used the teaching style of problem-solvers to some extent, but the teaching arrangements of the remaining four were a mixture of informers and problem-solvers. None of the teachers fell into the inquirers category.

In addition to the above description the informers in my study tried to encourage discussion or dialogue with the class along with their presentations. Most of them managed to generate dialogue with a part of the class, but in every classroom I observed, there was a silent group of students that neither took part in the discussion nor asked questions.

**Students as receivers**
The student's main role was to receive what the teachers transmitted, take notes and memorise facts and definitions to use in seatwork that followed. The seatwork had similar characteristics as the teaching; generally there was only one right answer to questions, and most of the tasks required the application of concepts and facts, explaining words, filling in gaps and answering multiple choice or right/wrong questions.

Generally students were required to finish at home what they did not complete during the lesson and prepare for the next lesson. At the beginning of the next lesson the teacher would go through the solutions on the board, before presenting the task of the day and the same process started.

**Differentiation**
Even though most of the teachers endorsed the idea of differentiation in line with Shepard’s (2000) and Tomlinson and Imbeau’s (2010) notion, there was little scope for it within the teaching arrangements of the informers. Most of the students were assigned the same tasks. They could take their own time to complete them, and take home with them what they did not finish at school – but at the end of the day most of them had to finish the same.

In some cases, however, less was required of struggling students when it came to written assignments and workbook coverage and in some cases the teacher would read difficult parts of the textbooks to the class (e.g. the science books that contained quite long and complicated texts) or let the students read to each other. One teacher had taken some copies of the science books and highlighted parts of the text for students with reading difficulties.

**Assessment**
There were mainly two types of assessment: 1) Pencil and paper exams at the end of terms, and 2) continuous assessment based on written exams when a book or a book chapter had been covered,
markings of written assignments, homework etc. Both types were summative – and that applied to the continuous assessment no less than the exams – and students were given grades from 1–10, either separately for each type of assessment or an average grade for both types.

The teachers and students expressed quite opposite views on the purpose and effects of the assessment. Many of the teachers described their assessment as a tool to motivate students and keep them on task, while many of the students described the assessment as intimidating rather than motivating, and many struggling students described repeated defeats in the struggle with written exams and assignments.

What Shepard (2000) has termed as the “exchange value” of assessment was quite evident as most of the student valued their grades as an entrance ticket into the secondary school, rather than as reward for their learning efforts.

Conclusions: Three facets of learning outcomes
From these three facets of learning culture I draw the following conclusions of learning outcomes that students were likely to take with them into the upper secondary school. These outcomes relate to:

1. Construction of knowledge, metacognition and the depth of learning.
2. Self-theories of efficacy and mindsets.

Even though these are highlighted here as learning outcomes, it needs to be emphasised that what they stand for is as much a part of a learning culture as it is of learning outcomes. These cannot be separated: To take motivation or metacognition as examples they are as much a pre-requisite for learning as they are outcomes of learning.

I. Construction of higher-order knowledge, metacognition and depth of learning
The learning culture created by the informers did not have much scope for the construction of higher order knowledge (McGregor, 2007), and seemed to create surface rather than deep learning (Entwistle, 2001) with few opportunities for the development of meta-cognitive skills (McGregor, 2007).

More problem-solving and inquiry-based teaching would have changed this and created more opportunities for knowledge construction and the development of metacognitive skills that are involved in deep learning.

II. Self-theories of efficacy and mindsets
The emphasis on tests and other summative assessments did not do much service to students’ motivation. This is in line with the findings of Harlen and Deakin-Crick (2003), where they studied the relationship between assessment and motivation for learning. Many of the students, not least those who struggled with their learning, also reported that their encounter with written tests and assignments seemed to undermine rather than support their self-efficacy as described by Bandura (2005), and incremental / growth mindsets described by Dweck (2000).

Teachers also seemed to struggle with differentiation as described by Shepard (2000) and Tomlinson and Imbeau (2010), both in terms of meeting the needs of struggling students and no less providing able students with more challenging tasks.
More emphasis on formative assessment (assessment FOR learning and AS learning) with constructive feedback and more effective means of differentiation would have created the conditions for nurturing students’ self-efficacy, and motivation.

III. Motivation for learning
Both teachers and students agreed that the general learning culture I have described here was not motivating. Observations supported this. However, both students and teachers agreed that what sparked students’ motivation was most often related to hands on tasks, encounters with the living nature, experiments in science, and literature texts that gripped the students. The teachers talked about the “gleam that came to the students’ eyes”, and that the “class came to life” on those occasions.

Assessment seemed to have the “exchange value” (Shepard, 2000) of the key to upper secondary schools rather than motivating students to engage in deep and meaningful learning

More varied teaching methods and tasks, more connection to students’ areas of interests and more emphasis on active engagement in learning (e.g. in science) might have changed this

Final words and implications
If we revisit the key competences referred to earlier in this presentation, and put them against the conclusions I have just drawn about students’ learning outcomes, there seems to be some way to go in changing the learning culture that created them. That should have implications for the political level, and might lead to the argument that publishing curriculum guidelines is a futile enterprise if it is supposed to fly on auto-pilot into schools and classrooms without addressing the conceptions and professional learning needs of teachers. What seems to be needed is what Fullan (2007) has termed as reculturing that transforms teaching and learning, as opposed to restructuring that leads to structural changes that have marginal effects on culture and behaviour. According to Fullan such transformation of culture will only be accomplished by a tri level reform where the state, districts and schools join forces to address teachers’ needs and help them build their professional capacity.

References


OECD. (2002). *Definition and selection of the competences (DeSeCo): Theoretical and conceptual foundations*.


