

From Entrepreneurship to Entrepreneurial Education in Lower Secondary School: Pedagogising by Means of the Pedagogic Device

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Abstract

This study is part of a school improvement programme on entrepreneurial education and investigates teachers' understanding and transmission of entrepreneurial education in two Swedish lower secondary schools, through interviews and observations. Entrepreneurship is a well-established concept within capitalist society, but the interest here is to investigate the transmission of it into pedagogic discourse and communication. Bernstein's concept of the pedagogic device is used to reason on the process of what happens, and why, when the concept of entrepreneurship is transformed into entrepreneurial education. The results indicate different understandings and connotations on a deeper level, and also show that transmission to colleagues and pupils faces a series of challenges. In practise, the findings show different approaches to entrepreneurial education among individual teachers, but also between schools. This can be explained by gaps in the transmitting process, but also by different school cultures and diverse forms of collegial collaboration, which may affect transmission among colleagues and thus the transmission to pupils. Pupils' backgrounds may also have an impact on the differences.

Keywords: Transformation, Entrepreneurial education, Lower secondary school, Pedagogic device

1. Introduction

In everyday language, entrepreneurship brings businesses of different kinds, as well as the people starting and running them, to mind. Entrepreneurs are often seen as creative and innovative people with enough self-confidence and courage to start and run businesses. In the

last decades, and in the prevailing neoliberal time, states around the world have put forward a need for the future labour force to have skills and abilities to create work, either by starting their own enterprises or by being enterprising within existing workplaces (European Commission, 2002, 2010; OECD, 1998; Swedish National Agency for Education, 2015). In turn, entrepreneurship was to be introduced and implemented in educational systems. This has been done in different ways within different countries.

The concept of entrepreneurship has been transformed by the Swedish educational system into a subject (upper secondary school, 16–19 years) on the one hand, and into an overarching approach (from pre-school to upper secondary school, 1–16 years) on the other. The former type of transformation is often labelled as a narrow approach and the latter as a broad approach (Erkkilä, 2000; Jones & Iredale, 2012; Swedish National Agency for Education, 2015). According to this broad approach, learners are to incorporate attitudes, skills and abilities, as well as undergo personal development, to establish entrepreneurial acting and thinking. This is supposed to run like a thread throughout their education (Government Office of Sweden, 2009). In 2011, entrepreneurship was inscribed into the curriculum throughout Swedish compulsory and upper secondary school. This means that every single teacher the pupils encounter is to contribute to their entrepreneurial mind-set, which in turn means that every teacher in the Swedish school system is expected to embody and teach by means of entrepreneurial education.

The transmission of knowledge from policy text to education practise can be explained as movement through different forms of phases. It is only when knowledge in policy documents is enacted that it “acquires meaning and significance” (Freeman & Sturdy, 2014). One way of transforming knowledge is through organising continuing professional development (CPD) programmes. In Sweden, different CPD programmes on entrepreneurial education are directed by the National Agency for Education, but also by external actors. The basis for this study is a programme initiated by an independent institute (Ifous (Note 1)) combining school improvement and research. The programme lasted for three years and aimed to provide a better understanding and development, as well as to encourage enactment, of entrepreneurial education. Six lower secondary, and 21 upper secondary schools took part in the programme, and each school sent several teachers and their principals to take part in three seminars a year.

When transmitting a concept into school practise, the overall societal context is important to bear in mind. Society is in many ways undergoing a fundamental transformation, or even a paradigm shift (Kuhn, 1962), which in turn influences people’s, not the least teachers’, and nations’ perceptions or consciousness (Bernstein, 1996). There are now

(...) major shifts in many things: in what counts as legitimate knowledge and legitimate teaching; in how such knowledge and teaching are to be evaluated; in the dominance of new managerial emphases; in the role that economic realities, as defined by the powerful, play in all this; and what these changes mean in term of the actual experiences of people working in school (...) (Apple, 2009, Foreword)

This study aims to further investigate the process from policy to practise, with the ambition to add the dimension of policies’ impacts on consciousness. Bernstein (1996) has explained this

process using the concept of the pedagogic device, which he states provides a symbolic ruler of consciousness. The interest here is on the movement of a concept from its “natural” discourse into a pedagogic discourse, i.e., when knowledge is converted into pedagogic communication. In other words, *this study aims to understand how teachers in two lower secondary schools transmit entrepreneurial education into their school practise*. To understand this, the first interest is to explore how teachers perceive and understand entrepreneurial education. The teachers understanding will influence the transmission to colleagues and pupils, therefore the second interest is to explore how the transmission works in their practise. This article wants to provide an understanding for the amount of variables at different levels that have influence on how a concept is realized in school practise. It will start with an overview of research on teachers’ understanding of entrepreneurial education, particularly in a Nordic setting. It will be followed by a review of research on transmitting entrepreneurial education in particular, but also the role of collaboration among colleagues in transmitting processes in general. The pedagogic device will be thoroughly explained, as well as this study’s methodology. The findings will be presented and analysed, and finally some conclusions will be made.

2. Entrepreneurial Education

The need for an employable and flexible workforce has been a concern due to the globalisation and marketization of, at least, the Western countries. This, in turn, has influenced national and international educational policy since the beginning of the 1990s (Lindster Norberg, Leffler, & From, 2015; Mahieu, 2006; Olofsson, 2009). In policy, entrepreneurial competences are described as being creative, innovative, curious and risk-taking, and being able to, individually and together with others, put ideas into action—skills seen as key competences for each individual (European Commission, 2006). The European Commission, the Swedish National Agency for Education and other organisations often offer project grants and teacher training courses for school projects regarding entrepreneurial education, provided they include specific criteria (Holmgren, 2012; Svedberg, 2010). Many teachers and principals seek means to develop their practise towards more coherent teaching, and to increase pupils’ motivation, which the broad approach of entrepreneurial education is seen to provide (Holmgren, 2012; Svedberg, 2010). Teachers throughout the education system are responsible for promoting entrepreneurial mind-sets and behaviours, and are thus challenged to be more entrepreneurial in their practise (European Commission, 2013; Peltonen, 2014). In practise, entrepreneurial education is understood and expressed in different ways; hence, the transmission also differs. It can be enacted through activities, in the form of occasional events or through pedagogy, as a fundamental idea of how teaching and learning are to be practised (Berglund & Holmgren, 2007).

2.1 Teachers and Entrepreneurial Education

Teachers are struggling both to ascribe meaning to and to integrate entrepreneurial education into pedagogical settings. Many teachers are reluctant due to the strong connection to the economic aspects of entrepreneurship (Backström-Wijdeskog, 2008; Holmgren, 2012; Leffler, 2009; Riese, 2010). Some teachers have a strong feeling that entrepreneurial education is

something that has been decided from “above” (the state, policy makers) and that it is yet another trend and buzzword within education (Berglund & Holmgren, 2007; Wallin, 2014). Even so, the broad approach has increased the acceptance of the concept (Berglund & Holmgren, 2007; Lackéus, 2015). Entrepreneurial education is thus about “not serving” pupils with fixed solutions and lectures but to provide the prerequisites for them to take initiatives of their own. A need for authenticity and concreteness, for example through interaction with the surrounding society, is also expressed as an important aspect (Backström-Widjeskog, 2010; Svedberg, 2010). It is seen as necessary for pupils to gain this approach, as it will be essential in their future work life and life in general (Berglund & Holmgren, 2007; Erkkilä, 2000; Svedberg, 2010). This means an initiative shift from teachers to pupils, which also means a need for teachers to let go of control (Svedberg, 2009). Handing over control and power to pupils, as well as the means of interdisciplinary work, worries teachers, as they fear not attaining results and that it challenges their predetermined ideas about teaching and learning (Deuchar, 2006).

Researchers have gotten rather different answers when they have asked teachers to describe their entrepreneurial education and how they transmit it into practise. Different understandings and enactments may be due to individual teachers, and engagement, personal characteristics and perceptions of changes seem to be of importance (Diehl, Lindgren, & Leffler, 2015; Sagar, 2013). An attempt to define entrepreneurial teachers shows that they have good self-awareness, are relational and responsive and have strong motivation for their actions (Leffler, Lindster Norberg, Diehl, & Näsström, 2013).

2.2 Transmission into Practise and the Role of Collegial Collaboration

To transmit a concept from one sector, where it is institutionalised and brings about certain associations, and impose it to another is a complex process. To translate entrepreneurship into a pedagogical practise offers challenges for actors, such as politicians, researchers, external actors, teachers and pupils (Backström-Widjeskog, 2010; Gibb, 2008; Holmgren, 2012). Holmgren (2012) argues that teachers, together with external actors, are “involved in a discursive battle about ascribing meaning to the concept of entrepreneurship in the pedagogical setting” (p. 228) and that they challenge but can also enrich each other. Another transmission challenge in pedagogical practise is that of school culture as change means the need for teachers to create new meanings, new schemas and new content in their work (Römer-Paakkanen, 2015).

To teach “entrepreneurially” is very much about changing school culture. Entrepreneurial education can be seen as a way of restructuring education on a fundamental level, but it is also about incorporating a national and international mind-set, or consciousness.

Teachers mention organisational issues as difficulties when establishing entrepreneurial education. It is about timetables, premises, management issues and time, finding or getting assigned time for planning and cooperating in order to realise interdisciplinary work and projects. Lack of flexibility and teachers’ ability to cooperate are other important questions that are raised (Røe Ødegård, 2014; Rae, 2000; Sagar, 2013).

Peltonen (2014) suggests collaborative learning for teachers to support, reflect on and exchange ideas in order to conduct and develop entrepreneurial education. A high degree of collegial coherence seems to be crucial and compensates for a lack of school management support on an organisational level (Sagar, 2013). Often, any kind of collaboration and collegiality is said to mean skills enhancement, critical thinking and continuous development, but Hargreaves (1994) argues that only certain forms of it actually works. He distinguishes between a collaborative culture—where the relationship between teachers is characterised by them tending to be spontaneous, voluntary, development-orientated, pervasive across time and space and unpredictable—and the features of a contrived collegiality—which is administratively regulated, compulsory, implementation-oriented, fixed in time and space and predictable. In many ways, this can be linked to Bernstein's (1975, 1996) concepts of integrated code, where “teachers are more likely to discuss and establish a shared approach based on their views of knowledge” and integrated code, which means strong isolation between subjects and thus weak relationships between teachers on educational issues (Diehl et al., 2015).

3. The Pedagogic Device

The pedagogic device is not about what is relayed in pedagogic practise; rather, it is the relay itself that is explored and described. Bernstein (1996) aims to investigate what he calls the social grammar of pedagogical messages. To seize on the analogy of (language) grammar, there are rules to be followed. These can be seen as relatively stable, but with the potential to change over time. The internal rules of the device regulate the pedagogic communication that comes out of it. What comes out does so in a context, which encounters contextual rules. So, if you have the discourse of entrepreneurship and want to pedagogise it, it is processed through the pedagogic device, the device regulates and selects what is to be available for pedagogic communication and the

...device continuously regulates the ideal universe of potential meanings in such a way as to restrict or enhance their realisations. (Bernstein, 1996, p. 27)

The rules of the pedagogic device are not ideologically free; rather, they are essentially implicated in the constraints upon and distribution of various forms of consciousness. The pedagogic device becomes a site for appropriation as well as conflict and control, and there is a possibility that the outcome—the communication—subverts the fundamental rules of the device.

3.1 The Rules of the Pedagogic Device

The pedagogic device regulates the production of the school curriculum and its transmission into pedagogy through three interrelated rules: *distributive, recontextualising and evaluative rules*. There are power relations between them and they are hierarchically related. The recontextualising rules are derived from the distributive rules, and the evaluative rules are derived from the recontextualising rules (Bernstein, 1996).

3.1.1 Distributive Rules Active in the Field of Distribution

The distributive rules regulate and distribute different forms of knowledge and practise to different social groups, leading to different forms of consciousness. It distributes “who may transmit what to whom and under what conditions” (Bernstein, 1996, p. 31). It also tries to set the limits of legitimate discourse. Bernstein (1996) suggests that in spite of the distributing field’s efforts and ambitions to regulate and control the outcome of a discourse by selecting legitimately pedagogised agents, there is a possibility of a gap between what is meant to be distributed and the realisation of it. The potential of this gap is due to the difficulty of totally suppressing contradictions and dilemmas as well as to the pedagogical process itself.

The power relations, for which the distributive rules are a relay, are then necessarily subject to change. (Bernstein, 1996, p. 31)

3.1.2 Recontextualisation Rules Active in the Field of Recontextualisation

These rules regulate the formation of specific pedagogic discourse. Bernstein (1996) describes it as *one* discourse that, at first sight, appears to include two discourses. The *instructional discourse* (ID) creates specialised skills and their relations to each other, while the *regulative discourse* (RD) is a moral or social discourse that creates order, relations and identity. RD is the dominant discourse, as ID is embedded within it. Education is not about values on the one hand and competence on the other—it is always merged (Bernstein, 1996). Pedagogic discourse is a principle for delocating, relocating and refocusing other discourses. It takes a discourse (for example, entrepreneurship) from its original site of effectiveness and moves it to a pedagogic site (for example, entrepreneurial education). As this transformation process takes place, a gap is created and, in this space, ideology always comes to play. The original discourse transforms from an unmediated discourse into a mediated, virtual or imaginary discourse. Through this recontextualisation, the original discourse is abstracted from its social base, position and power. Pedagogic discourse is a recontextualising principle and can never be identified with the discourse it has recontextualised.

The recontextualising principle creates recontextualisation fields; it creates agents with recontextualising functions. The recontextualising functions then become the means whereby a specific pedagogic discourse is created. Formally, we move from a recontextualising principle to a recontextualising field with agents with practicing ideologies. (Bernstein, 1996, p. 33)

The recontextualising field consists of an *Official Recontextualising Field* (ORF) and a *Pedagogic Recontextualisation Field* (PRF). The ORF is created and dominated by the state and selected agents and ministries. The PRF consists of, for example, teacher educations, CPD programmes (such as Ifous in this case), specialised journals, private research foundations and authors of textbooks. If there is only ORF, there is no autonomy, but if the PRF can have an impact on pedagogic discourse independently of ORF, there is both some autonomy and a struggle over pedagogic discourse and its practise (Bernstein, 1996).

The recontextualising principle recontextualises *what* discourse (for example, entrepreneurship) is to become the subject and content of pedagogic practise (for example,

entrepreneurial education), and it also recontextualises *how*, i.e., the theory of instruction. The theory of instruction is not entirely instrumental; it also contains ideological elements. Thus, what and how are elements of the regulative discourse. The pedagogic discourse can be understood as instructional discourse embedded in regulative discourse.

Now, the final problem is to transform the pedagogic discourse into a pedagogic practise, which Bernstein (1996) elaborates upon in the third type of rules within the pedagogic device: *evaluative rules*.

3.1.3 Evaluative Rules Active in the Field of Reproduction

The evaluative rules constitute specific pedagogic practises and “are concerned with recognising what counts as valid realisations of instructional (curricula content) and regulative (social conduct, character and manner) texts” (Singh, 2002, p. 573). Pedagogic discourse specialises meanings to time and space, and may construct fundamental category relations, with implications for the deepest cultural level and cognitive, social and cultural consequences (Bernstein, 1996). Pedagogic texts, such as about entrepreneurial education, created in the field of recontextualisation are transformed again when they are appropriated and converted “into modes and common shared classroom knowledge in interaction with students” (Singh, 2002, p. 577). Bernstein distinguishes between two types of transformation: the first is about converting knowledge that is distributed from the field of production and appropriated by the recontextualisation field (ORF and PRF), and the second is about the translation of this pedagogised knowledge made by teachers and students in the recontextualisation field of schools and classrooms (Singh, 2002).

In the process of constructing modes of classroom knowledge, teachers may recontextualise discourses from the family/community/peer groups of students for purpose of social control, in order to make regulative and moral discourses of the school/classroom more effective (Singh, 2010, p. 577). [...] Conversely, the family/community/peer relations can exert their own influence upon the recontextualisation field of the school and in this way affect the latter's. (Bernstein, 1990, quoted in Singh, 2002, p. 576)

The pedagogic device is a condition for the construction of the production, reproduction and transformation of culture. But even so, the effectiveness of the device is not deterministic due to limits. The device cannot control what it has been set up to control, and the device itself creates an arena of struggle for those who are to appropriate it (Bernstein, 1996).

4. Data and Methodology

4.1 Context

The schools participating in the school improvement programme sent teachers and their principals to seminars that took part three times a year over a three-year period (2013–2015). They were to function as “transmitters” at their schools, and their task was to transmit knowledge and enable the enactment of entrepreneurial education. Even though an external independent institute initiated the programme, the Swedish National Agency of Education followed it with interest. To organise the seminars, the institute had employed researchers

and university teachers, some of whom also give courses on entrepreneurial learning for the Agency of Education or have written textbooks about entrepreneurial education.

4.2 Schools, Informants and Data Collection

Six of the participating schools were lower secondary schools; out of these, two were chosen for data gathering due to their similarities concerning geographical location, with both situated in suburbs of major Swedish cities, and differences in to pupils, with all ethnic Swedes in school 1 and 1/3 with other ethnic backgrounds in school 2.

School 1 is situated in a rather wealthy, middle-class white area where housing mainly consists of villas. It had about 150 pupils (grades 7–9, ages 13–16). The school had tried different interdisciplinary working methods, which resulted in schedule merging that made it possible to have longer class periods than is typical in Swedish schools (90–120 minutes instead of 40–60). At the time of data gathering, though, the schoolwork was primarily conducted within subjects. The school had been taking part in several contests that encouraged what can be defined as entrepreneurial education.

School 2 is situated in a suburban community with mixed housing. It had around 300 pupils (grades 6–9, ages 12–16). The work was organised with subjects as a base, and the lessons lasted for 40–60 minutes. The school regularly featured activities and thematic work during the year, lasting from one day up to a week.

The data collection was guided by the theoretical framework of Bernstein (1975, 1996), and after discussions with knowledgeable colleagues, designed and performed by the author of this article. It included both observations in classrooms and interviews with teachers and went on for three weeks at each school. The aim was to interview the teachers whose lessons were observed; in addition, two teachers asked to be interviewed. Five out of 8 informants were teachers who actively took part in the school improvement programme (marked with *).

All in all, 52 lessons were observed: 21 observations in school 1 and 31 in school 2. A structured observation schedule (Cohen, Manion, & Morison, 2011) with fixed categories was created that was based on Bernsteinian categories to distinguish the degrees of teachers and students' control of communication, criteria, time, pace, sequencing and order in the classroom. In addition, the observation schedule included Swedish (and international) policy documents (OECD, 1989, 1998; European Commission, 2002, 2006, 2010), the Swedish curriculum and course syllabi, which describe the required abilities for “entrepreneurship” (Swedish National Agency for Education, 2011). Additional field notes were made to absorb the situation and to observe events and behaviours not covered by the structured part of the schedule. Overall, the method can be described as a form of participant observation (Cohen et al., 2011; Kvale, 1997). The interviews were semi-structured and were thus prepared for with pre-set questions that matched the observation protocol, while allowing scope for open-ended answers (Hannan, 2007). The interview guide was changed to some extent. Questions were added and reformulated due to what had been observed during the time spent at the schools. The interviews lasted for 40 to 90 minutes and were recorded.

4.3 Data Analyses

As well as data collection, the analyses were based on Bernsteins' (1975, 1996) theoretical framework. The observations gave a good picture of the field of evaluation whereas the teachers' statements, by means of thorough and incremental analysis, allowed a delineation within all fields of the pedagogic device.

All transcriptions were made by the author and gave an opportunity to relive and remember, sometimes important, details in the context and situations in which the observations and interviews took place (Kvale, 1997). The analysis of the observation data was made in Excel (Note 2) and was based on who was in control of communication, criteria, time, pace, sequencing and order in the classroom. The field notes were transcribed and categorised using a "grid" of entrepreneurial keywords such as pupils getting the opportunity to be curious, creative, innovative, work in peers or groups, analyse and reflect. The data was analysed by school, which enabled a crystallizing of similarities and differences between them. The field notes increased the data's accuracy and provided a more complete picture of the phenomenon (Cohen et al., 2011).

The interviews were listened to and transcribed verbatim. With the research question in mind, at first the material was read through, and general patterns, regardless school, were searched for (generating natural units of meaning). The next step was to discern to which level in the educational field, or more precisely the pedagogic device, the teachers' statements could have bearing. Which meant organising data into feasible and adequate categories (classifying categorising and ordering the units of meaning). A search for similarities and differences in the teachers' statements identified differences between the schools and formulated new variables and recognised sub-categories and themes. Notes and colour markings in the transcripts formed an organised text (structuring narratives to describe the interview contents). Finally, the interviews were interpreted (interpreting interview data) to create meaning, together with the observation protocols and field notes taken (Cohen et al., 2011; Watt Boolsen, 2007).

5. From Entrepreneurship to Entrepreneurial Learning

In the following, the transmission of the concept of entrepreneurship from the field of production and its "journey" through the pedagogic device to become entrepreneurial education will be analysed. The teachers' statements as well as the observations of classroom practise will underpin the analyses, especially in the field of reproduction.

5.1 Entrepreneurship in Education: The Field of Distribution

After decades of international and national policy writings (European Commission, 2002, 2010; Government Office of Sweden, 2009; OECD, 1998) on the urge to implement entrepreneurship in education systems, the concept was inscribed into the Swedish curriculum in 2011. The interviews show that most of the teachers were struggling with the concept and some with its origin.

I think the concept is confusing (...) it is silly that it is called entrepreneurial (...) it makes me think of politics, and it was inscribed during their (the liberals') mandate period. It makes you almost a little scared (Teacher 7).*

Another teacher says that even if elementary school focuses its broad perspective, the political discussion always emphasises the need for pupils to get employed and economic growth. The connotations to the natural discourse (Bernstein, 1996) of entrepreneurship are obvious when the teachers reflect on their understandings of entrepreneurship and entrepreneurial education. One teacher refers to her father being an entrepreneur, and then thinks of entrepreneurial education:

Sometimes his business went well, other times not. A desire to be curious, to create and have the courage to try things out—that is entrepreneurship. If you then think of entrepreneurial learning ... what I think of then is that the pupils are to regard learning as fun. I think that is a bit misplaced because that is what school is about all together. (Teacher 5)*

Altogether, mistrust in the concept of entrepreneurship making its way into education can be seen among some of the teachers. They think another concept could be used for the same purpose and that entrepreneurial education and its connotations with politics, enterprising and marketization are unfortunate, misleading and more of a reason for confusion than its actual content. One teacher thinks the concept is being introduced far too early in school and that pupils in elementary school are too young to understand it. She says:

Does this have to be like a revival movement? (Teacher 4)*

The teachers had a feeling that the implementation of entrepreneurship in education is a top-down initiative and that it is yet another buzzword within education, and therefore are reluctant to implement the concept is confirmed in other studies (Backström-Widjeskog, 2008; Holmgren, 2012; Leffler, 2009; Svedberg, 2010).

Within educational research, for example, From (2010) argues that the introduction of entrepreneurial education is an expression of the economic field side-lining the educational field in educational restructuring policy. This, in turn, means radical changes in teachers' work conditions and is due to the world spread of neoliberal ideology involving changes in "what counts as legitimate knowledge and legitimate teaching" (Apple, 2009, Foreword). This is what Bernstein (1996) wants to show by the rules of the pedagogic device, as they are not free of ideology, but rather implicated in limiting and distributing various forms of consciousness. In its aim to regulate and control the outcome of a discourse (entrepreneurship, in this case), the field of distribution selects legitimate agents for the task. A transmission will take place and there is potential for a gap due to contradictions and dilemmas (Bernstein, 1996). The next level in the transmission process, from policy to classroom practise, is the recontextualisation field.

5.2 Entrepreneurship and Entrepreneurial Education: The Field of Recontextualisation

The recontextualisation rules regulate the formation of specific pedagogic discourse, as the original discourse is abstracted from its social base, position and power. Thus, the pedagogic

discourse is a recontextualising principle and can never be identified with the discourse it has recontextualised. The recontextualising principle creates a recontextualisation field with agents that have recontextualising functions (Bernstein, 1996).

When it comes to the concept of entrepreneurship and its transformation to entrepreneurial education, there are a range of agents in the field of recontextualisation claiming the “right interpretation” of its means in an educational context. In the official recontextualisation field (ORF), the Swedish National Agency for Education can be seen as the main agent selected by the field of distribution (the state, in this case). Hence, the agency selects other agents to formulate texts, guidelines and educational programmes for the field of reproduction (practise). Research on entrepreneurship is multidisciplinary, but the two disciplines that are mainly engaged in educational issues concerning how to transmit the concept of entrepreneurship into entrepreneurial education are the economic and the educational disciplines, which can be assumed to be practising different ideologies (Bernstein, 1996). The economic discipline sees the traditional entrepreneurship discourse as being challenged by the educational, but argues it might contribute to creative development of pedagogy (Holmgren, 2012). The educational discipline, on the other hand, argues that the economic field’s rationale for entrepreneurial education appears to be an uncomplicated input–output model that does not take into account the “complexity of processes in educational practices, and the recontextualisation that characterizes educational practice” (From, 2010, e-journal), and can be seen as deeply disrespectful of the labour of love, care and solidarity (Apple, 2013) that underpins educational activities.

Now, before going into the “battles” in the pedagogic recontextualisation field (PRF), let’s listen to what the teachers said about how entrepreneurial education was introduced to them. Most of them took part of the school improvement programme from which this study emerged. However, one informant was a teacher trainee who had never heard of either entrepreneurship or entrepreneurial learning in a school setting. In school 1, there had been a discussion among the teachers taking part in the programme. Some of them questioned the need and use of it, whilst others, urging for a more holistic view on education, felt it meant a lot to them in their everyday practise. Thus, taking part in the programme had different impacts on different teachers. Many said they would have—and have—worked according to the same ideas, even before entrepreneurial education was introduced. But maybe it is good to have a word for it, one said. Another compared her own schooling, which was more characterised by obedience, with today’s schooling, where teachers need to build relations and earn the pupils’ trust and respect. Maybe entrepreneurial education is an answer to that, the teacher wonders. In both schools, the principals encouraged the teachers to teach entrepreneurially, and in both schools, it—at times and by some—was perceived as an order. In school 2, even the school head of the municipality came to the school and told them they had to work entrepreneurially, in order to gain better results among the pupils. In school 1, data gathering was mainly assigned to the two teachers who were seen as most interested in the concept of entrepreneurial education. Both believed that the best way to undertake the task was to take part in different school-suited competitions that were designed by different companies and institutions, and had clear criteria, goals and purposes. For many teachers,

entrepreneurial education was seen as yet another thing that they were supposed to do.

Many regard it as ... "Are we supposed to do this too?" ... now we are not only to teach our subjects, now we are supposed to be entrepreneurial too...and sent pupils out to do things ... they (the teachers) perceive it as something in addition to everything else and they don't know what it means in practise (Teacher 1)*

Another worry was the perceived contradiction between working entrepreneurially and at the same time being sure to reach the goals in the course plans.

In the statement above, the impact of different agents in the PRF is visible. Teacher education is one agent, and the teacher trainee had never heard of the concepts in an educational setting. This is a rather common reality in a Swedish context. Earlier research has confirmed that few of the universities with teacher training programmes give courses on entrepreneurial education (Otterborg, 2011). The Swedish National Agency for Education (ORF) has procured training courses given by universities (PRF) as CPD programmes, which are given by representatives from both the economic and educational disciplines. These are believed to give teachers the competences so that they, in turn, can guide pupils to achieve entrepreneurial abilities (Otterborg, 2011). The teachers in this study indicated different understandings and a great deal of uncertainty in how to put entrepreneurial education into practise. This can of course be due to teachers' different engagement, personal characteristics and perceptions of change, as well a lack of understanding about why it is important (Leffler, 2014; Sagar, 2013) A further explanation may be the discursive battles about the meaning of entrepreneurship in an educational setting. Is it about taking part in well-packaged competitions from external actors (Holmgren, 2012)? Is it about doing what the principals and school head tell you to do? Is it to be transmitted to pupils as an activity or an approach (Berglund and Holmgren, 2007)? How can entrepreneurial education be combined with the imperative goals in the course plans (Holmgren, 2012; Leffler, 2014)? These diverse messages and interpretations are due to a power and control struggle between and within the ORF and the PRF. The struggles, in turn, are derived from the gaps that occur in the transmission (translation) process and create a scope for autonomy, because without both ORF and PRF within the recontextualisation field, there would be no autonomy in the pedagogic discourse and its practise (Bernstein, 1996). Now, how is this autonomy expressed by the agents in school practise (in this study, primarily the teachers and more indirectly the principals)?

5.3 Entrepreneurial Education: The Field of Reproduction

On a hierarchical level, the evaluative rules—active, in practise—are the last, which also means that teachers and pupils are those with the least access to the form of consciousness that the distributing field aims to implement (Bernstein, 1996). On the other hand, the evaluative rules mean that the outcome in the reproduction field has the possibility to subvert the fundamental rules of the device. The evaluative rules are the key, meaning and purpose of the whole device (Bernstein, 1996). Therefore, the most interesting thing is to see what teachers say and how they transmit entrepreneurial education to their colleagues and pupils.

The interviews will give a picture of how the teachers perceived the transmission of entrepreneurial education among colleagues. The interviews will also provide information about the teachers' thoughts about what should be transmitted to pupils, as well as observations on how the transmission is converted "into modes and common shared classroom knowledge in interaction with students" (Singh, 2002, p. 577).

5.3.1 Transmission to Colleagues

In *school 1*, the teacher who was not taking part in the school improvement programme did not think that she got to take part in what was going on in the programme. The teachers who were taking part in it, on the other hand, found it difficult to transmit their knowledge, reach a common view and bring about united actions with their colleagues, even though their principal was very concerned about it and sometimes more or less had to instruct everyone to take part in joint themes.

(...) we look very different on what it (entrepreneurial education) actually is about, and I think we have difficulties in this school to actually understand WHAT Ifous is supposed to contribute, [or] what it means to us in the long run. (Teacher 1)*

The teachers claimed that many teachers are afraid that the pupils will not manage to work in "entrepreneurial" ways, find the idea of entrepreneurial education to be something in addition to their ordinary teaching and are concerned about not having enough time to pursue their own subject planning. One of the teachers said that it is better to actually carry a project through and in that way show colleagues what it is about. But in the end, the two most engaged teachers often ended up alone during these activities, which meant too few teachers to handle it, as well as uncertainty for the pupils. Time was extremely difficult to agree on and handle with colleagues, as was the question of how to assess pupils when working in groups in bigger projects. Other issues included the need for changes in planning, timetables and access to premises.

School 2 had sent its team leaders to take part in the programme. They put a lot of effort and time into discussions, where they interpreted and tried to include the meaning of entrepreneurial education. They were then to transmit their knowledge within their teams. These teachers found that they had a structure around informing their colleagues in regular subject area meetings. But one teacher thought that their principal did not always respond to the ideas coming from these meetings. The teacher not taking part in the programme found that she got good information from the ones who were taking part. In spite of this organisation, the teachers did not find that there was a joint view of the concept among the colleagues.

Do you think all [of your] colleagues have a common view on entrepreneurial education? (Researcher)

No, I don't think so. I think we agree that it is about increasing pupils' desire for learning and creativity and that it is NOT about starting ventures. Those things I think we agree on, but otherwise not. (Teacher 7)

When it came to the question of cooperation with other teachers and subjects, one teacher said:

To work with someone else requires a lot of work. You have to do planning together, and it is mostly not good for me if someone else tells me to do so and so., I want to do as I please; there is no time for joint planning. (Teacher 4)*

The teacher believed that like-mindedness is needed to be able to work together and that this was not the case in the school, which is why it is better to work alone. This teacher refers to the Swedish expression “*Jante*” (Note 3) and thinks that the most important thing for each teacher is to reach out to the pupils. In general, the teachers recognised a lack of opportunities for cooperation and interdisciplinary work due to timetables and access to classrooms. Instead, the teachers suggested shorter periods for themes, as a way to work more entrepreneurially. During the interview, one teacher realised that she actually had no idea about how other teachers teach, even though they had been working at the same school with the same subjects for many years.

The findings in this study confirm much of what has been seen in earlier research: that is, teachers perceiving a lack of time for planning their own subjects while also being involved in joint actions with colleagues, timetable issues, access to premises and organisational and managerial issues (Rae, 2000; Røe Ødegård, 2014; Sagar, 2013). Entrepreneurial education implies collaborative work among teachers (Diehl et al., 2015). In the findings, however, it is obvious that collaborative learning (Peltonen, 2014) and joint work among teachers are problems. In school 2, they do not seem to work at all, but in school 1, some teachers try. In school 2, the organisation for joint learning and pedagogic development in teams has been organised, yet teachers prefer to work on their own and do not know much about what is going on in other classrooms. This sort of collaboration can be described more as a contrived collegiality, in which the teachers seem obedient to the power and control mechanisms, fulfilling administrative purposes and implementing external mandates, but not spontaneously seeking each other to develop and find solutions to work entrepreneurially, as in a collaborative culture (Hargreaves, 1994). The strong isolation between subjects and teachers implies a collection code, rather than an integrated code, at the school (Bernstein, 1976, 1996). In school 1, the conditions are the same in general, but some teachers look each other up; try to cooperate, initiate and start projects; and try to involve their colleagues. They see possibilities regarding timetable issues and premises, and also feel quite supported in this by their principal. Hence, in this school, some teachers work according to a collaborative culture (Hargreaves, 1994) and towards an integrated code (Bernstein, 1975, 1996).

Referring to Bernstein, Singh (2002) explains the transmission from the distributing field in two steps: first, transforming and pedagogising knowledge in the ORF and PRF, and then a translation of this knowledge in the recontextualisation field of schools and classrooms. The recontextualisation in schools among colleagues has been discussed above; the next section discusses what teachers see as important and what they actually do in the classrooms.

5.3.2 Transmission to Pupils

The skills and abilities that the teachers expressed as being entrepreneurial included pupils being able to analyse and reason, take responsibility, be curious and cooperative and find solutions to things that the teacher does not have the answer to. The pupils are to be enterprising, active and creative; they must be able to take initiative, feel motivated, seek answers and have contact with the surrounding society. Teachers, on the other hand, are to find ways to and create environments and learning situations that motivate pupils, make them enjoy learning and make them feel safe to dare raise their voices in the classroom. They think teaching should be pupil focussed, based on pupils' situations and levels of knowledge. On a general level, there was somewhat of a consensus about these aspects among all of the teachers. Two teachers mentioned a new rhetoric, such as using knowledge control instead of a test, as a way to incorporate entrepreneurial education. Pupils making short films and taking photos as a part of assignments was also considered entrepreneurial by the same teachers. Some teachers struggled with a perceived duality in their teaching assignment, as pupils have to learn facts in each subject *and* learn to be entrepreneurial, whilst others viewed entrepreneurial education as a means of obtaining knowledge, which demands some courage to try new ways of teaching. All of the teachers mentioned having good relations with the pupils as essential for teaching and for reaching out to the pupils.

In practise, it was obvious that the teachers were keen to have good relations with their pupils—they made jokes with them and often showed great concern, even regarding personal issues, at times. Even so, most of the teachers often berated individual pupils, groups of pupils or the whole class; obedience was important. The interviews showed a rather joint view on the meaning of entrepreneurial education, but the observations revealed different practises. Much of this was due to individual teachers (Diehl et al., 2015), but different approaches could still be distinguished between the schools.

In *school 1*, the observed teachers seemed to think and act according to the means of entrepreneurial education, within their class periods and subjects. They trusted pupils with creative projects like making films, building things, and encouraged them to find their own solutions. Pupils were often organised to work in groups or pairs; the tasks had more of a trial, error and project nature; analysis and reasoning were often needed during their work and presentations/examinations; and knowledge from other subjects was occasionally required for the task. Even if very little interdisciplinary work was observed, the teachers did not hesitate to enter each other's classrooms, either to discuss something with the teacher or inform the pupils about something. One teacher who did not take part in the school improvement programme felt there was a lot of "*Jante*" and envy at the school. She had done many projects that emerged from the pupils' interests, took new turns over time and often included contact with the outside world. One project ended with a trip to an exhibition, which was financed through pupils selling cookies they baked in school. She was told by colleagues that entrepreneurial learning was not only about selling things.

Classroom work in most of the observed classrooms in *school 2* was mostly organised as, introduction/instruction/lecture, individual work while the teacher walked around supporting

and helping the pupils, and a short ending. Thus, the observations did not reveal much of what could be seen as entrepreneurial education. In general, there was little room for creativity and cooperation between pupils on the organisational level of the lessons. The tasks were to solve problems or answer questions formulated in the pupils' textbooks, and the teachers' questions to the pupils gave little or no space for analysis or reasoning. The pupils were supposed to do what the teachers told them to do. Teachers were never observed entering each other's classrooms. This school organised different themes during the school year—these were isolated happenings in which some teachers organised a theme and others helped to carry them out.

Both schools worked according to a collection code (Bernstein 1975, 1996). The insulation between subjects was strong, and the teachers mostly planned, performed and evaluated their own lessons (Diehl et al., 2015). However, individual teachers (primarily in school 1) handed over some control and power to the pupils (Deuchar, 2006), although “serving” them with fixed solutions and lectures (Svedberg, 2010) was still frequent (more so in school 2 than school 1). The strength of motivation for their actions differed (Leffler et al., 2013). The teachers in school 1 often had a clear ambition both regarding subject goals and developing “entrepreneurial” skills. In school 2, many actions were obviously not thought through and were difficult to motivate, other than by the notion that certain things just need to be done and learned. The ambition of the fiery spirits in school 1 can be interpreted as them wanting entrepreneurial education to be a fundamental pedagogic idea, whilst it could be seen as enacted through activities in school 2 (Berglund & Holmgren, 2007).

Education is not about values on the one hand and competences on the other; it is merged (Bernstein, 1996). The observations clearly revealed the dominance of the regulative discourse (RD). It was more obvious in the more traditional teaching culture of school 2 but also in school 1, where pupils in some subjects had more room to develop entrepreneurial skills. Still, in school 1, the regulation at these lessons involved pushing pupils to dare to take their own initiative, to be creative, to cooperate and so on. One could say that (some of) the classroom practise in school 1 showed teachers as being more “obedient” to the consciousness advocated by the distributing field, whilst school 2, to a greater extent, challenged the agenda of the same field. On the other hand, the different practises and cultures can be interpreted as teachers in school 1 urging for school and pedagogic development, and using entrepreneurial education as a means of accomplishing this (Berglund & Holmgren, 2007; Svedberg, 2010; Holmgren, 2012), whilst school 2 was obedient on the surface but not willing to change its practises and therefore was more hesitant to actually put the means of entrepreneurial education into practise. Teachers in school 2 expressed reluctance to use “entrepreneurship” and “entrepreneurial” in an educational setting due to their political connotations. They may not have been comfortable with the implications the terms had on a cultural level, with cognitive, social and cultural consequences, i.e., in the change of consciousness of their pupils (Bernstein, 1996). Yet another interpretation of the different school cultures may have to do with the differences regarding the pupils' sociocultural and ethnic backgrounds. It might be more natural for teachers in school 1, teaching middle-class pupils in a middle-class white area, to adopt the

implications of entrepreneurial education because that is what is expected and maybe natural for them, as it is the regulative and moral discourse of the family, community and peer groups of pupils (Singh, 2002), whilst the regulative and moral discourse in school 2, with pupils from different ethnic and social backgrounds, may be another. This is a potential research area for further studies.

6. Conclusion

The aim of this study was to understand how teachers in two Swedish lower secondary schools transmit entrepreneurial education. To understand the transmission, it was essential to get a picture of the teachers' understanding of entrepreneurial education. It turned out that, on a shallow level, the understanding was rather common, even if teachers in school 2 were more reluctant due to the actual words that were used. Entrepreneurial education implies teachers learning and collaboration among colleagues (e.g., Peltonen, 2014; Leffler, 2014), which means a look upon the school's culture, with a focus on collaboration, collegiality and codes (Hargreaves, 1994; Bernstein 1996; Diehl et al., 2015). The study indicated different transmitting cultures between the schools: one with organised meetings focussing on entrepreneurial education (school 2), and another in which teachers had given up on verbal transmission and instead hoped to set good examples through action (school 1). Despite this, the practise in school 1 could be defined as being more entrepreneurial. These were all actions taking place in the field of reproduction, but to get a full understanding of the pedagogising process of a concept's transmission from its natural discourse to an educational discourse, even the other rules and fields of transmission were looked at. The distributing field has a purpose and an aim when implementing "entrepreneurship" in education. It wants to increase employability, but also incorporate a consciousness in line with a neoliberal agenda. Within the field of recontextualisation (PRF and ORF), different ideologies and agents battle for power and control over the outcomes in the field of reproduction (practise). This creates gaps that enable autonomy, in both the recontextualisation and reproduction fields. This can, shortly, be seen as the "journey" of the pedagogic device. There is an inevitable battle between and within different fields—a "battlefield of transmission". As continuous evaluation is the key, meaning and purpose of the pedagogic device, due to its potential to change policy (Bernstein, 1996), only the future can tell what will happen with the concept of entrepreneurship within school practise.

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References

Apple, M. W. (2009). Foreword. In S. Gewirz, P. Mahony, I. Hextall, & A. Cribb (Eds.), *Changing Teacher Professionalism International trends, challenges and ways forward*. London & New York: Routledge.

Apple, M. W. (2013). *Can education change society?* London & New York: Routledge.

- Backström-Widjeskog, B. (2008). *Du kan om du vill: Lärares tankar om fostran till företagsamhet* (Doctoral Thesis). Turku: Åbo Akademi University Press.
- Backström-Widjeskog, B. (2010). Teachers' thoughts on entrepreneurship education. In K. Skogen & J. Sjøvoll (Eds), *Creativity and Innovation: Preconditions for Entrepreneurial Education* (pp. 107-120). Trondheim: Tapir Academic Press.
- Berglund, K., & Holmgren, C. (2007). *Entreprenörskap i skolan Vad berättar lärare att de gör när de gör entreprenörskap i skolan?* Örebro: Forum för småföretagsforskning.
- Bernstein, B. (1996). *Pedagogy Symbolic Control and Identity—Theory, Research, Critique*. London: Taylor & Francis.
- Bernstein, B. (1975). Towards a Theory of Educational Transmission. *Class, Codes and Control* (Vol. 3). London: Routledge & Kegan. <http://dx.doi.org/10.4324/9780203011430>
- Cohen, L., Manion, L., & Morison, K. (2011). *Research Methods in Education*. London & New York: Routledge.
- Diehl, M., Lindgren, J., & Leffler, E. (2015). The impact of Classification and Framing in Entrepreneurial Education: Field observations in Two Lower Secondary Schools. *Universal Journal of Educational Research*, 3(8), 489-501. <http://dx.doi.org/10.13189/ujer.2015.030803>
- Deuchar, R. (2006). 'Not only this, but also that!' Translating the social and political motivations underpinning enterprise and citizenship education into Scottish schools. *Cambridge Journal of Education*, 36(4), 533-547. <http://dx.doi.org/10.1080/0305764060101049157>
- Erkkilä, K. (2000). *Entrepreneurial Education*. New York & London: Garland Publishing Inc.
- European Commission. (2002). *Entrepreneurship education at school in Europe—National strategies, curricula and learning outcomes*. Brussels: Eurydice.
- European Commission. (2006). *Promoting entrepreneurship in schools and universities*. Brussels: Eurydice.
- European Commission. (2010). *Europe 2020. A European strategy for smart, sustainable and inclusive growth*. Brussels: European Commission.
- European Commission. (2013). *Entrepreneurship Action Plan*. Brussels: European Commission.
- Freeman, R., & Sturdy, S. (2014). Knowledge in Policy: Embodied, Inscribed, Enacted. In R. Freeman & S. Sturdy (Eds.), *Knowledge and Policy in Research and Practice*. Bristol: Policy Press. <http://dx.doi.org/10.1332/policypress/9781447309987.001.0001>
- From, J. (2010). Contradictions at play. *Ejournal of Education Policy*. Retrieved from <https://nau.edu/uploadedFiles/Academic/COE/About/Projects/Contradictions%20at%20play.pdf>
- Gibb, A. (2011). Concepts into practice: Meeting the challenge of development of entrepreneurship educators around an innovative paradigm. The case of the International

Entrepreneurship-Educators' Program (IEEP). *International Journal of Entrepreneurial Behavior & Research*, 17(2), 146-165. <http://dx.doi.org/10.1108/13552551111114914>

Government Office of Sweden. (2009). *Strategi för entreprenörskap inom utbildningsområdet*. Stockholm: Regeringskansliet.

Hargreaves, A. (1994). *Changing Teachers, Changing Times teachers' work and culture in the postmodern age*. London: Cassell.

Hannan, A. (2007). Interviews in Education Research. Retrieved from <http://www.edu.plymouth.ac.uk/resined/interviews/inthome.htm>

Holmgren, C. A. (2012). Translating entrepreneurship into educational setting—A case of societal entrepreneurship. In K. Berglund, B. Johannisson, & B. Schwartz (Eds.), *Societal Entrepreneurship Positioning, Penetrating Promoting* (pp. 214-237). London & New York: Edward Elgar. <http://dx.doi.org/10.4337/9781781006337.00019>

Johannisson, B., Amundsson, A., & Kivimäki, K. (2010). Training in entrepreneurship as a many-sided struggle for growing insight. In K. Skogen & J. Sjøvoll (Eds.), *Creativity and Innovation: Preconditions for Entrepreneurial Education* (pp. 171-188). Trondheim: Tapir Academic Press.

Jones, B., & Iredale, N. (2010). Enterprise education as pedagogy. *Education + Training*, 52(1), 7-19. <http://dx.doi.org/10.1108/00400911011017654>

Kuhn, T. S. (1962). *The structure of Scientific Revolutions*. Chicago: University of Chicago Press.

Kvale, S. (1997). *Den kvalitativa forskningsintervjun*. Lund: Studentlitteratur.

Lackéus, M. (2015). *Entrepreneurship in education—What, why, when, how*. Entrepreneurship360 Background paper, OECD, France.

Leffler, E. (2009). The Many Faces of Entrepreneurship: A discursive battle for the school arena. *European Educational Research Journal*, 8(1), 104-116. <http://dx.doi.org/10.2304/eej.2009.8.1.104>

Leffler, E. (2014). Enterprise learning and school subjects—A subject didactic issue. *Journal of Education and Training*, 1(2), 15-30. <http://dx.doi.org/10.5296/jet.v1i2.5194>

Leffler, E., Lindster Norberg, E.-L., Diehl, M., & Näsström, G. (2013). *Att tänka fritt är stort men att tänka utanför boxen är större*. Report from the Ifous program, Umeå University.

Lindster Norberg, E.-L., Leffler, E., & From, J. (2015). Could we Catch a Glimpse of an Entrepreneurial Citizen? A Qualitative Study in Upper Secondary School in Sweden. *Advances in Social Science Research Journal*, 2(1), 11-24. <http://dx.doi.org/10.14738/assrj.211.1588>

Mahieu, R. (2006). *Agents of change and policies of scale: A policy study of Entrepreneurship and Enterprise in Education*. Umeå University: Doctoral Thesis.

OECD. (1998). *Fostering Entrepreneurship*. The OECD Job Strategy. France: OECD. <http://dx.doi.org/10.1787/9789264163713-en>

Olofsson, A. (2009). Entreprenörskap som lokal skol-och samhällsförändring. In A. Olofsson (Ed.), *Entreprenörskapsutbildning i skola och samhälle—formering av en ny pedagogisk identitet* (Vol. 1). Mid Sweden University: Utbildningsvetenskapliga studier.

Otterborg, A. (2011). *Entrepreneuriellt lärande. Gymnasieelevers skilda sätt att uppfatta entrepreneuriellt lärande* (Dissertation No. 11). School of Education and Communication, Jönköping University.

Peltonen, K. (2014). How can teachers' entrepreneurial competences be developed? A Collaborative learning perspective. *Education + Training*, 57(5), 492-511. <http://dx.doi.org/10.1108/ET-03-2014-0033>

Rae, D. (2000). Understanding entrepreneurial learning: A question of how? *International Journal of Educational Behaviour & Research*, 6(3), 145-159. <http://dx.doi.org/10.1108/13552550010346497>

Riese, H. (2010). Pedagogic entrepreneurship—An educational ideal for the school of the future. In K. Skogen & J. Sjøvoll (Eds.), *Creativity and Innovation Preconditions for entrepreneurial education* (pp. 79-88). Trondheim: Tapir Academic Press.

Røe Ødegård, I. K. (2014). *Pedagogisk entreprenørskap i lærerutdanningen: en framtidrettet læringsstrategi*. Norway: Cappelen Damm.

Riese, H. (2010). Pedagogic entrepreneurship—An educational ideal for the school of future? In K. Skogen & J. Sjøvoll (Eds.), *Creativity and Innovation: Preconditions for Entrepreneurial Education* (pp. 79-90). Trondheim: Tapir Academic Press.

Römer-Paakkanen, T. (2015). Applying doctoral studies and research on entrepreneurship to teachers' work at HAAGA-HELIA University of Applied Sciences. In A. Fayolle, P. Kyrö, & F. Liñán (Eds.), *Developing, Shaping and Growing Entrepreneurship*. London: Edward Elgar Publishing. <http://dx.doi.org/10.4337/9781784713584.00008>

Sagar, H. (2013). *Teacher Change in Relation to professional Development in Entrepreneurial Learning*. University of Gothenburg, Sweden.

Singh, P. (2002). Pedagogising Knowledge: Bernstein's theory of the pedagogic device. *British Journal of Sociology of Education*, 23(4), 571-582. <http://dx.doi.org/10.1080/0142569022000038422>

Svedberg, G. (2010). Pedagogical entrepreneurship in the formulation and realization arena? In K. Skogen, & J. Sjøvoll (Eds.), *Creativity and Innovation: Preconditions for Entrepreneurial Education* (pp. 121-129). Trondheim: Tapir Academic Press, Trondheim.

Swedish National Agency for Education. (2015). *Skapa och Våga Om entreprenörskap i skolan*. Stockholm: Skolverket.

Wallin, J. (2014). *Entreprenörskap I skolan Formulering och transformering av GY11 inom*

gymnasieskolans hantverksprogram. Licentiate, Institutionen för beteendevetenskap och lärande, Linköping University.

Watt Boolsen, M. (2007). *Kvalitativa analyser*. Malmö: Gleerups.

Notes

Note 1. Innovation, research and development in schools and preschools

Note 2. A software package used for statistical analysis

Note 3. An expression for an unspoken “law” saying “don’t ever believe that you are someone/Don’t think you know more or are more important than others” (Aksel Sandmosen, referred to in Holmgren, 2012). In this case, don’t think you know how to teach entrepreneurially better than someone else.

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