Entrepreneurship education has increasingly gained interest in the European Union, and for example in Finland, entrepreneurship education has long been included in the national core curriculum as one of its cross-curricular themes. In order to achieve the societal goals of entrepreneurship education, teachers need to know these goals and act accordingly. Therefore, we may assume that the practical implementation of entrepreneurship education is based on the idea of teachers learning and reflecting on what they have learned. This involves the development of a vision, motivation, understanding and practice. However, it is a long way from the international and national policy making level to the actual foundation of business enterprises. Therefore, we wanted to study teachers’ reflections on entrepreneurship education. The research project was entitled “Measurement Tool for Entrepreneurship Education”. The preliminary data was collected at the beginning of the project from twenty-nine (29) teachers at basic, upper secondary and vocational secondary education levels in 2008. They were asked, for example, what kinds of aims they have for entrepreneurship education, how they put the entrepreneurship education into practise, what kind of results they have achieved and how entrepreneurship education is accounted for in their local education and business strategies and curricula. These questions allowed us to analyze teachers’ reflections about entrepreneurship education. The analysis of the qualitative data was coded through content typing.
and typological analysis. The main results indicate teachers’ reflections are in process although they are still too limited thinking about strengthening entrepreneurship and entrepreneurship education in societies. In order to develop this point of view, we would like to stress 1) the development of teachers’ learning in terms of their reflection, 2) the development of practical tools for their self-reflection, 3) the implementation of changes in the educational arena, such as curriculum reforms, from the point of view of teachers' learning and 4) connecting the aims and results in the context of entrepreneurship education.

Keywords: entrepreneurship, entrepreneurship education, teachers’ reflection, teachers’ learning

INTRODUCTION

The strategy of the European Union highlights the importance of the development of entrepreneurial culture by fostering the right mindset, entrepreneurship skills and awareness of career opportunities (Commission of the European Communities 2006). Finland in particular has extensively promoted entrepreneurship education mainstreaming at all education levels. This process has been supported administratively. For example, The Ministry of Education announced an initiative entitled The Clarification and the Action Program of Entrepreneurship Education in 2004.

In Finland, entrepreneurship education has a certain role in the national core curriculum. First, the core curriculum defines the implementation of learning. The core curriculum defines learning as an individual and communal process although interactive cooperation aids individual learning. The learning environment must support interaction between teachers and students and among the students, and guide students in working as member of a group sharing responsibility. Teachers select working methods which promote the student’s individual learning process. The aim is to develop the student’s social, learning, thinking, working, and problem-solving skills, and to encourage active participation. (Finnish National Board of Education 2004; 2003)

The conception of learning is based on lifelong learning, constructivism and socio-constructivism (Finnish National Board of Education 2003; 2004), and it is connected closely to the pedagogy of entrepreneurship education (see Seikkula-Leino 2007). According to Gibb (2005), the pedagogy of entrepreneurship education is focused on students’ activity in learning. The learning situations are flexible, interactive and based on multidimensional knowledge development. Knowledge is built together and mistakes are regarded as a part of the learning process.

Second, the core curriculum defines so-called cross-curricular themes, which are themes integrating upbringing and education. The cross-curricular themes allow
responding to prevailing educational challenges. In formulating the curriculum, cross-curricular themes are to be included in the subjects and in joint events such as assemblies, and are to be manifest in the school’s operational culture. Entrepreneurship education is one of seven cross-curricular themes for basic education, and one of six cross-curricular themes for upper secondary education. (Finnish National Board of Education 2004; 2003). Especially internal entrepreneurship is considered as a main target in the school context (Finnish National Board of Education 2003, 25; 2004, 40-41).

The theme in the curriculum for basic education is called “Participatory citizenship and entrepreneurship”, and for upper secondary education it is called “Active citizenship and entrepreneurship”. For basic education, the goals of the “participatory citizenship and entrepreneurship” are to help the pupil perceive society from the viewpoints of different players, to develop the capabilities needed for civic involvement, and to create a foundation for entrepreneurial methods. The school’s methods and culture of learning must support the pupils’ development as independent, initiative-taking, goal-conscious, cooperative, engaged citizens, and help the pupils form a realistic picture of their own possibilities for influence. (Finnish National Board of Education 2004)

The goals of the “Active citizenship and entrepreneurship” are similar, although the levels of participation are global. The main focus in the implementation must be on practical exercises and on the creation of personal experiences of participation and influence. In addition to the school’s own active efforts, such a study environment may be developed in co-operation with other bodies operating in society, different organisations and business enterprises. (Finnish National Board of Education 2003)

However, despite of the core curriculum, there is a long way to go from the international and national policy making level to the actual establishment of business enterprises. The journey consists of two different stages: first, from the goal setting in the education system, starting from EU strategies and national curricula, to the altered daily teaching work of all teachers, and secondly, from the teaching to the altered behaviour of the students in the years to come. These processes are illustrated in the following figure.
Nevertheless, teachers have at times had difficulties in identifying contents and means by which to respond to challenges posed by entrepreneurship education (Seikkula-Leino 2006; 2007, Fiet 2000a; 2000b). We propose the view that teachers are in a crossroads of several transformation processes embedded in entrepreneurial education. Teachers make the journey from the general aims of entrepreneurship education to their actual outcome, i.e. increasing entrepreneurial activities in the society, as they transform the aims of entrepreneurship education into teaching activities and into learning outcomes.

Not only do teachers have a “hands on” approach to entrepreneurship education, but they are also in the best position to evaluate the aims, actions and outcomes of entrepreneurship education. Teachers always receive the most recent and accurate feedback about entrepreneurship education. As setting targets for entrepreneurship education contains the idea of guiding the education into the desired direction, learning from previous actions is crucial in that process. Therefore, we propose that teachers are in a central role in operationalizing entrepreneurship education, and more specifically, in finding the best practices.

In this paper, we will introduce data gathered during the project “Measurement Tool for Entrepreneurship Education”. A group of teachers was asked to describe their aims for and results from entrepreneurship education. The teachers were familiar with entrepreneurship education, but, as the results indicate, there is a remarkable lack of cohesion in definitions of basic concepts and, most of all, between the aims and the results. This analysis seems to suggest that there is a definite need for more systematic data gathering and discussion around entrepreneurship education.
Studying this phenomenon is warranted, as entrepreneurship education is in the central focus in the development of social and economic well being. Since teachers are the key factors in promoting it, we stress their point of view as promoters. However, there is a lack of relevant studies in this context. Moreover, there is a lack of tools which could enhance teachers’ development as entrepreneurship educators. Entrepreneurship education research is also mainly conducted at the adult education level, and does not deal with basic education, upper secondary education and basic vocational training, as is the case in the present study. Therefore, this paper presents how rather untraditional fields of education can be developed by teachers at these levels of education and what challenges are faced on this road.

The interest in successful entrepreneurship education is great, and expectations run high. As this study has been conducted to serve as a basis for the future development of a measurement system for entrepreneurship education activities, we are starting from the actor – the teacher as an entrepreneurship educator – and the teacher’s reflections on entrepreneurship education, focusing especially on the vision, practice, motivation and understanding.

CONCEPTS AND THEORETICAL BACKGROUND

Teachers’ development and learning processes
As the target of this paper is to present the teacher’s role as an entrepreneurship educator and present teachers’ views of entrepreneurship education, the key question here is to concentrate on teachers’ reflection processes, which are the essential element in the development of education. The success and desired implementation of education are centrally focused on teachers’ learning and reflection processes.

We build our approach on the model of teachers’ development and reflection processes by Shulman and Shulman (2004). They say an accomplished teacher should be a member of a professional community and be ready, willing, and able to teach and to learn from his or her teaching experiences. According to Shulman and Shulman, a vision generates readiness and willingness which induce motivation. They suggest that an accomplished teacher should be ready to pursue a vision of classroom or school that forms a “learning community” where teachers understand and have motivation to further develop the forms of pedagogical and organizational practices needed in transforming their visions, motives and understandings into a functioning, pragmatic reality. When teachers form learning communities and work as members of such communities, they are capable of learning from their own and others’ experiences through active reflection.
We build our approach on the assumption that the model by Shulman and Shulman (2004) contains two separate dimensions. The first dimension is about being in contact with the outside world, having a hands-on approach, dealing with material world and the concept of time. This means that the aims of education are illustrated in the section called “vision” and the action and outcome of education are present in the section called “practice”. This outside world dimension can be seen (Figure 2) as a horizontal level. The second dimension consist mainly individual, personal elements such as “motivation” and “understanding”, that is, the vertical level (Figure 2).

In the teachers’ learning and reflection processes (Figure 2) it is essential to note the shape of the arrows (double arrows) and the location of reflection (in the centre). Shulman and Shulman (2004) summarize that an accomplished teacher smoothly integrates vision, motivation, understanding and practice into the teaching, and learns to improve that teaching through active reflection. They believe that reflection is the key to a teacher’s learning and development. In fact, Seikkula-Leino (2007) points out this same aspect in her study concerning entrepreneurship education development through curriculum reform. According to her results, a teacher’s reflection does not have the scope for developing visions and even though there are minor elements for enhancing motivation for implementing entrepreneurship education. The lack of understanding entrepreneurship education and the undeveloped implementation of practices

Figure 2. Features of teachers’ development and reflection process (Shulman & Shulman 2004).
restrict the development of teachers’ reflection, and as a consequence, the development of entrepreneurship education. Also other curriculum research points out this aspect of the teacher’s role and reflection (see e.g. Shulman & Shulman 2004; Schwartz 2006; Westbury et al. 2005; van der Akker 2003). In fact, Schwartz (2006) stresses that educational change, like curriculum reform, is more about educating teachers than students. Thus, we may assume, implementing entrepreneurship education is based on the idea of teachers’ learning and their reflection.

The model of Shulman and Shulman (2004) has here been utilized in the formulation of questions for teachers and collecting data. On that basis, questions dealing with entrepreneurship education (practices, aims, results, strategies and curricula) were formulated and the answers given by the group of teachers were analyzed. This will allow drawing conclusions about the teachers’ reflections, and in consequence, what they have learned about entrepreneurship education.

Entrepreneurship and entrepreneurship education

Understanding the concept of entrepreneurship is fundamental for defining entrepreneurship education. So far, no consensus has been reached about one single, comprehensive theory of entrepreneurship (e.g. Shane & Venkataraman 2000; Davidsson et al., 2001), and there are many notions of many different approaches to conduct research on the subject (e.g. Grebel et al. 2003; Grant & Perren 2002).

As a summary of different definitions, we present five perspectives on entrepreneurship. The first is about bearing uncertainty (e.g. Cantillon circa 1730; Knight 1921; Drucker 1985), where the entrepreneur tries to strike a balance between the demand and supply of the market. The second definition is by Schumpeter (1934) and is about making new combinations as well as innovations, such as new products, production methods, new markets and new forms of organization. The third definition concentrates on exploring opportunities (e.g. Kirzner 1973, 1979; Shane & Venkataraman 2000; Casson 1982; Leibenstein 1966, 1979), and the fourth is about the emergence and creation of organizations, which is a combination of definitions by many researchers (Pinchot 1986, Gartner 1988, Amit et al. 1993). Johannisson (see Johannisson 1983; Johannisson & Nilsson 1989) presents the fifth definition on community and social entrepreneurship.

To define entrepreneurship education, we may consider terms such as enterprising and entrepreneurial. The only major distinction between these two is that entrepreneurial traditionally refers to business activity, whereas enterprising can be used in any context (e.g. Gibb 2005). In order to avoid confusion and to be exact, this article uses both concepts explicitly: entrepreneurial (referring to
Teaching younger students entrepreneurship education is more about enterprise education. The purpose is for students to take more responsibility for themselves and their learning, to try to achieve their goals, be creative, to discover existing opportunities and in general to cope in our complicated society. Moreover, the aim is for them to take an active role on the labour market and consider entrepreneurship as a natural career choice. This education involves developing behaviour, skills and attributes applied individually and/or collectively to help individuals and organizations of all kinds to create, cope with and enjoy change and innovation. This involves higher levels of uncertainty and complexity as a means of achieving personal fulfilment and organizational effectiveness. Enterprising education is the process by which such behaviour is practised and supported. Such skills, behaviour, and attributes are exhibited in organizations of all kinds ranging from within the family to the wider community context. It may embody elements of learning for the pursuit of some task. Moreover, it involves learning through and learning about a particular pedagogy and which then refers to cognitive learning (e.g. Gibb 2006).

According to Kyrö (1997), entrepreneurship education deals with three main components: 1) self-oriented, 2) internal and 3) external entrepreneurship. Self-oriented entrepreneurship refers to an individual’s self-oriented behaviour. Self-oriented entrepreneurship is the basis for developing internal and external entrepreneurship (Remes 2004: 84). Internal entrepreneurship deals with entrepreneurial and enterprising behaviour. External entrepreneurship is about doing business (Ristimäki 2003: 6). Even though self-oriented and internal entrepreneurship resemble each other, the difference between them is in the collectivistic sense which emerges in internal entrepreneurship development and which could be developed in organizations (Remes 2001). If an organization possesses internal entrepreneurship, it realizes its opportunities, makes use of them and demonstrates self-trust (Heinonen 2001). Self-orientated entrepreneurship is basically only about an individual’s development. In terms of self-oriented entrepreneurship, Kyrö (2005: 89) argues: In general, entrepreneurial and enterprising behaviour involves the idea that the human being, looking around him and combining different elements, creates holistic realities, which have their consequences in action. Even when the environment is full of paradoxes and events, the entrepreneur chooses what is suitable for him and his ideas. He does not select his elements from a single environment; on the contrary, his ideas can spring from anywhere and this combines different elements and this enhances the creation of something new.

The younger the students are, as in basic education, the more self-oriented entrepreneurship should be emphasized (Remes 2001). As a consequence, the focus is not only on developing factors related to motivation, self-awareness and creativity (e.g. Menzies & Paradi 2003), and responsibility for learning (Heinonen
2004), but also on co-operation and interaction, which refer to internal entrepreneurship development. In comparison, in the school context, external entrepreneurship education is about developing innovation (see also Gibb 2005, 48), and business ideas as well as strengthening co-operation between schools and the world of work, including such activities as professional experience and study tours. Through these processes, we have a chance to develop an enterprising society, which entails entrepreneurship and the development of an enterprising mindset in the society.

In traditional education, the teaching is structured so that contents are studied one at a time. The learning situations are controlled and students do not feel insecure during the learning processes (e.g. Gibb 2005). The following working methods could be considered for activating students' interactive learning and reflections: co-operative learning, problem-based learning, group and peer work, project work, team work, learning by doing, pedagogical drama and learning diaries. This is different from traditional teaching, where the teacher gives, for example, lectures and aims at transmitting his or her knowledge, the pieces of information that he or she masters, to students. As Gibb (2005) argues, the pedagogy of entrepreneurship education is focused on students' activity in learning, and this approach could be considered as a non-traditional teaching method. The learning situations are flexible, interactive and based on multidimensional knowledge development. Knowledge is built together and mistakes are regarded as a part of the learning process. Therefore, we may assume that the pedagogy of entrepreneurship education is based on socioconstructivism. Learning communities have a major role in these processes (e.g. Blenker et al. 2006, 99; Jack and Anderson 1999), and experiences are crucial in learning. Therefore, in entrepreneurship education and its pedagogical discussion we could rely on Kolb's (1984) experimental learning theory.

In summary, entrepreneurship education is seen here through three aims that are learning to understand entrepreneurship, learning to become entrepreneurial and learning to become an entrepreneur (e.g. Hytti 2002). Therefore, entrepreneurship education should be considered both as a method of learning and a content of learning (see Remes 2003). The concepts we use in our paper are internal entrepreneurship, which deals with entrepreneurial and enterprising behaviour, and external entrepreneurship, which is about doing business (Ristimäki 2003, 6). Moreover, we consider that internal entrepreneurship in education is about learning to become entrepreneurial and external entrepreneurship is to understand entrepreneurship and become an entrepreneur.

This paper aims at presenting teachers' views about entrepreneurship education – their vision, practices, motivation and understanding. Nevertheless, it is not stated in our research questions that we analyze how teachers present their views about entrepreneurship education in the context of concept definition and literature review of entrepreneurship education.
Next, we will present the project “Measurement Tool for Entrepreneurship Education” which aims to develop teachers’ reflection skills and their work as entrepreneurship educators, and in what context the data of the study was collected.

A measurement tool project – a framework for data gathering

The project Measurement Tool for Entrepreneurship Education is a three-year (2008-2011) development project during which a measurement tool and a related manual will be prepared for entrepreneurship education. The tool is made for teachers working in basic and upper secondary education and basic vocational training. The tool will be built to support the work of teachers, principals and decision-makers, and to guide entrepreneurship education. As is frequently the case, “you get what you measure”, and that is a challenge we are aiming to meet with the project presented here.

The project is coordinated by Lappeenranta University of Technology and implemented in part by Kerhokeskus – koulutyön tuki ry (Centre for School Clubs). It is a European Social Fund (ESF) project funded by the Finnish National Board of Education, and private funding has been granted by Yksityisyrittäjäin Säätiö (foundation for entrepreneurship). In addition, partners in the project include a number of municipalities and educational organizations from all around Finland.

The tool will be made with teachers for teachers, and it will measure teaching, the content of teaching and the methods used. At the beginning of the project, a trial group of approximately thirty teachers was put together from basic and upper secondary education and basic vocational training. Their mission is to comment on, further develop and pilot the tool at different stages. This helps to ensure that the final measurement tool is reliable and wide-ranging. In the final stages of the project, new teachers will be recruited to the group to confirm the intelligibility and transferability of the indicators.

The outcome of the project, the tool, will explain in specific terms the teacher’s work as an entrepreneurship educator, provide guidelines for teaching and its organisation and be applied to school quality management and its development. The tested and research-based tool may also be employed by decision-makers as they assess the state of entrepreneurship education (grade, region, and later also international comparison).

The tool aims to steer development in the long run, and will be manifest in the understanding of entrepreneurship and the presence of entrepreneurship education as a content and method in education. The measurement tool will serve to establish the role and importance of entrepreneurship education. This project will support the incorporation of entrepreneurship education into the
The contents of teacher education and the continuing education of teachers. The tool will be implemented during the course of the project through teachers in the trial group. In the trial stage, the tool will be applied by the trial group and their organizations. At the end of the project, the tool and manual will be published for use at the national level.

Next we will present the data gathering process and methods used when analyzing the teachers’ answers during the Measurement Tool project.

Methodology

The research methodology relies on the qualitative approach, where the body of data consists of texts based on subjectivist ontology. Entrepreneurship and entrepreneurship education are seen here as socially constructed phenomena (Berger & Luckmann 1969; for entrepreneurship see for example Bouchikhi 1993). As researchers we are interested in what is being said (see Silverman 2001, 97) and are aiming at a deeper understanding of entrepreneurship education in a specific context and also being part of reproducing local interpretations of it (Silverman 2001, 12).

According to our epistemological position to social constructivism, we believe that teachers’ views on and underlying assumptions of entrepreneurship education can be accessed through studying texts that the teachers have produced. In this research, the data consists of teachers’ answers to an e-mail interview taken in September 2008 concerning entrepreneurship education activities. The content of the interview is discussed more closely in the following section.

Content typing

We chose to approach the data through content analysis, and more particularly, content typing. In content typing, the data is grouped into parallel types by searching for similarities in the data. It is based on theme categorization and grouping and is a valuable method to illustrate the research problems with examples. (Eskola & Suoranta 1998, 174-175, 178, 181) With content typing, we aimed at finding answers to the question of what is being said, and we concentrated on teachers’ views on entrepreneurship education and identified similarities from the data. The content typing was realized as follows:

1. First, the data was read several times to try to construct an overall picture of the responses which included the elements how entrepreneurship education was described.

2. Second, the data was read more reflectively and analytically, aiming to organize the data through the questions answered by the teachers. Based on our questionnaire, the answers were grouped into four categories: the
aims, practices, results and understanding of entrepreneurship education in the context of strategies and the curriculum.

3. Third, the answers were mirrored against our literature review and concept definitions which involved, for example, different aspects of entrepreneurship education. Similar types of answers were grouped.

4. Fourth, the answers were analyzed through Shulman and Schulman’s (2004) framework for teachers’ reflection which involves, as mentioned before, the elements of vision, motivation, practice and understanding.

5. Fifth, the data analysis described above was integrated, which allows analyzing the teachers’ reflections in the context of entrepreneurship education.

Research questions and data gathering

The research paper here is based on the data produced in the process of generating a measurement tool for entrepreneurship education. The data was collected at the beginning of the project to discover how the teachers of the trial group describe entrepreneurship education and to ascertain its status and practices used. This enquiry was the first assignment for the trial group. During the three-year project, they will comment on, further develop and pilot the measurement tool. One of the aims of the first assignment was to orientate the teachers to forthcoming development work.

The data was collected from twenty-nine (29) teachers representing different levels of education and appointed by their organisations (thus composing the above-mentioned “trial group”). Sixteen (16) of them worked at the basic education level (elementary and upper level of comprehensive school), six (6) at the upper secondary education level, and seven (7) in basic vocational training. The teachers represent ten (10) different municipalities and educational organization and come from different parts of Finland. Seventeen (17) of the teachers were women and twelve (12) men. Their average age was forty (40) years, and on an average, they had 10-15 years of teaching experience. As background information, they were also asked to assess how long they have worked as an entrepreneurship educator. Eleven (11) of them replied having worked in that capacity for 1-5 years, three (3) for 6-10 years and ten (10) for more than ten (10) years. The answers were analyzed by the entire research group. In forthcoming papers, we will compare the differences between variables such as school levels and age.

The trial group received an e-mail with six questions. Below, we present four of them:
1. What kinds of aims do you have for entrepreneurship education?
2. How do you put the entrepreneurship education into practice?
3. What kinds of results have you achieved in entrepreneurship education?
4. How is entrepreneurship education manifest in your local education and business strategies and curricula?

The teachers had four (4) weeks time (September 2008) to answer the questions, and they all did.

The questions were derived from Shulman and Shulman’s (2004) “Individual level of analysis” model which consisted of a vision, understanding, practice, motivation and individual reflection. The first question about the aims (What kinds of aims do you have for entrepreneurship education?) deals with the vision. The second (How do you put the entrepreneurship education into practice?) and the third ones (What kind of results have you achieved in entrepreneurship education?) were about practices. The fourth question (How is entrepreneurship education manifest in your local education and business strategies and curricula?) was about understanding the aims.

As we can see here, there were no direct questions about “motivation”, but the overall qualitative data gives a certain basis for interpretations about motivation and as well as about “reflection”, which is analyzed based on the idea of integrating answers concerning aims, practices, motivation and understanding. Moreover, there were no direct questions about entrepreneurship education in the context of our concept definition and literature review. This aspect was analyzed in light of the answers, as well.

**Results from the questions**

In this section, we will present the results derived from the questions given to the teachers. We will introduce the analysis round conducted with traditional qualitative analysis method: content analysis and typing.

**Question 1: What kinds of aims do you have for entrepreneurship education?**
Of all the respondents (29), four (4) did not answer this question. Altogether, the teachers mention approximately 120 aims for entrepreneurship education.

Two (2) teachers linked the aims to the curricula, but most (17) of them focused the aims on pupils or students. Only four (4) respondents mentioned aims that are related to teachers or the school community, such as:

“I try to create an enterprising attitude in our school.”  
(Teacher, elementary level of comprehensive school)

The aims of entrepreneurship education are directed towards strengthening pupils/students’ knowledge, skills, attitudes and readiness. The aims related to knowledge are connected in one way or another to understanding entrepreneurial activities, which can be illustrated with the following example:
“One wants to provide basic information about entrepreneurship, starting a business and acting as an entrepreneur for pupils (...)”
(Teacher, upper level of comprehensive school and upper secondary education)

Only seven (7) respondents list aims related to knowledge, whereas twenty-two (22) respondents mention aims related to skills, attitudes and readiness. The most common terms used in describing the aims are initiative (also the capability to act independently, activity), enterprise (also the attitudes and actions with entrepreneurial characteristics), responsibility and teamwork (also cooperation skills).

The aims are either related to the present time and pupils/students’ schoolwork, or oriented more towards the future.

Altogether, the teachers mentioned “internal entrepreneurship” seven (7) times and “external entrepreneurship” one (1) time. Entrepreneurship is not defined at this stage. Among other things, the teachers conceive internal entrepreneurship as independent initiative, self-direction, self-esteem, commitment, the capability to adapt and cooperate, sustainability and diligence. Based on the responses, the terms enterprising and entrepreneurial refer to internal entrepreneurship, and are used more often than internal entrepreneurship.

**Question 2: How do you put the entrepreneurship education into practice?**
Of all of the respondents, only one (1) did not answer this question. Altogether, the teachers mention approximately 239 methods of teaching entrepreneurship education and 36 good examples of their entrepreneurship education practices. Of all respondents, only three (3) teachers linked their teaching to the curricula.

The responses show that entrepreneurship education can be implemented in many different ways, such as in the form of different contents and teaching methods. The contents of entrepreneurship education are linked to the teacher’s own subject, although much more often they are connected to individual entrepreneurship courses or studies. Entrepreneurship courses, studies or club activities are mentioned twenty (20) times. Business plans, marketing and general business theory are general contents in these courses, studies or clubs – also at the upper level of comprehensive school.

Teaching methods of entrepreneurship education generally consist of various forms of collaborative teaching. These teaching methods are implemented at all school levels:

“The best way to implement entrepreneurship education is to integrate the theme into your own everyday teaching. Trading and marketing games (...) etc.”
“Learning by doing and participating. Team learning and project learning as methods of entrepreneurship education.”

(Teacher, upper secondary school)

In spite of the two experiences described above, the teachers' answers indicate that teaching methods of entrepreneurship education are more often connected to some course, club or project than to the teacher's own everyday teaching. Nine (9) teachers mention that entrepreneurship education is implemented in everyday teaching – as many as 24 teachers mention that entrepreneurship education is implemented in the form of separate courses, studies or projects.

The responses show that teachers implement entrepreneurship education largely in the form of projects. There are variations between the projects, although all projects are implemented in a limited timeframe. Teachers rarely incorporate projects into their own subject and everyday teaching. Projects are often linked to a separate course or club or to school functions, such as Independent Day or Christmas festivities, or special theme days such as the annual Entrepreneurship Day (September 5th).

The implementation mostly focuses on pupils/students, although entrepreneurship education strongly involves pupil/student collaboration. Parents are also included in the process. However, the teachers do not seem to cooperate with each other. The responses show that teachers implement entrepreneurship education largely in the form of collaboration between the school and businesses. There are different forms of collaboration. Often it is based on business visits. Answers show that currently collaboration is common in entrepreneurship education at all school levels, but highlighted especially in vocational secondary education. Collaboration is mentioned approximately 35 times.

“I try to share my own experiences about entrepreneurship when I teach. Entrepreneur visiting and telling the facts (...).”

(Teacher, basic vocational training level);

“In the course, we study (entrepreneurship) theory and students visit businesses and create their own fictitious enterprises.”

(Teacher, upper secondary education)

Internal entrepreneurship is mentioned 15 times and entrepreneurship three (3) times. Among other things, the teachers conceive entrepreneurship as business knowledge and business collaboration:
“Since our school is an elementary level comprehensive school, entrepreneurship as an orientation towards the world of business is (...) highlighted much more. Christmas marketing is one way of getting acquainted with entrepreneurship.”
(Teacher, elementary level of comprehensive school)

Although the school project and collaboration between schools and businesses often combine internal entrepreneurship and external entrepreneurship, internal entrepreneurship is emphasized more. Especially, when teachers represent good example of their entrepreneurship education practise, enterprising attitude and capability are strongly emphasized. The terminology of internal entrepreneurship such as initiative, responsibility and group work skills are once again highlighted.

Question 3: What kinds of results have you achieved in entrepreneurship education?
Altogether, results are mentioned approximately 77 times. Of all of the respondents, four (4) did not answer to the question at all, and two (2) responses were ambiguous. Of all respondents, only one (1) teacher linked the results to the curriculum. All of the teachers’ responses indicated that entrepreneurship education yielded positive results.

Eight (8) teachers evaluated the results in relation to themselves, other teachers and the school community as a whole. Among other things, entrepreneurship education reduced bullying and had a positive influence on teachers’ attitudes and their personal development. In addition, the favourable results include positive course feedback and the popularity of entrepreneurship studies or courses.

Similarly to the aims and implementation of entrepreneurship education, the results are focused on pupils’/students’ knowledge, skills, attitudes or readiness. The results related to knowledge are associated with understanding entrepreneurship and business, and are evidenced mostly by good grades. Numerically, there are few results related to knowledge, and only four (4) teachers explicitly mention these kinds of results in their answers. There are considerably more results related to skills, attitudes and readiness, even though only nine (9) teachers mention positive development in these areas. Similarly to the aims of entrepreneurship education, the most common terms used in describing the results were initiative (also the capability to act independently, activity), enterprise (also the attitudes and actions with entrepreneurial characteristics), responsibility, and teamwork (also cooperation skills). However, these terms are mentioned much less frequently than in the aims. Teachers mention internal entrepreneurship or enterprise (which can be equated with the former) only once. External entrepreneurship is not mentioned at all.

As many as eight (8) respondents mention that the evaluation of the results of entrepreneurship education is difficult. The difficulties mentioned by teachers
ensue from the time span of the evaluation and the difficulty to estimate the amount of prospective entrepreneurs. As the teachers in the following two examples describe:

“The evaluation of the results is troublesome, for (…) the results may not be seen until the child approaches adolescence.”
(Teacher, elementary level of comprehensive school);

“I cannot measure the results. Usually those basic vocational training level students who have a history of entrepreneurship in their family become entrepreneurs themselves.”
(Teacher, basic vocational training level).

However, the evaluation of education is generally considered difficult, and teachers find it difficult to see the immediate results. While the aims of as many as 21 teachers were related to strengthening the students' enterprise, only nine (9) teachers are able to assess in their responses whether enterprise was actually strengthened.

Question 4: How is entrepreneurship education manifest in your local education and business strategies and curricula?
Based on the responses, many teachers do not know enough about the curriculum and education strategy. Seven (7) respondents said nothing about the curriculum, and 13 respondents did not mention the education strategy. Six (6) respondents mentioned that they feel they know too little about the curriculum and education strategy.

Next, we will draw conclusions from the questionnaires. Moreover, we will analyze the answers through Shulman and Shulman's (2004) framework of teachers' reflection.

Conclusions from the data

According to the analysis, the following remarks arose from the data. Firstly, we will give an overview of the teachers' points of view on entrepreneurship education. Secondly, we will draw conclusions from the teachers' answers to the questionnaire. Finally, we will analyze and conclude the data in the context of visions, practice, understanding, motivation and individual reflection.

Entrepreneurship education

In our study, teachers view entrepreneurship education mainly as internal and external entrepreneurship, since these were the terms most used in the teachers' answers. We stress in our literature review this conceptual approach. For teachers, internal entrepreneurship means pupils'/students’ enterprising attitude towards life, school or future career and the surrounding society at large, such as participatory citizenship. Internal entrepreneurship is mostly associated with
characteristics such as initiative, responsibility and team/group work skills. External entrepreneurship is associated with business knowledge and the world of work and is best materialized in collaboration between the school and businesses. Teachers name more aims, methods and results related to internal entrepreneurship than to external entrepreneurship. Internal entrepreneurship is strongly emphasized in aims and results, while entrepreneurship is highlighted more in methods.

Aims
The aims of entrepreneurship education are tied primarily to the individual pupil/student and not the school community at large. The aims also pay little attention to the respondent or other teachers. Instead, it is more common to have a broad range of aims for the pupil/students. Some aims are clearly linked to the future, others to more immediate, everyday themes such as schoolwork.

As mentioned before, internal entrepreneurship and the pupil’s/student’s own enterprising learning was highlighted in the teachers’ entrepreneurship education aims. Internal entrepreneurship is seen as skills and attitudes, and as a result, informational and contentual aims, such as subject-specific aims, are rarely set. Knowledge of the world of business and work associated with external entrepreneurship is not included in the aims of basic education level teachers; aims related to external entrepreneurship are more common among secondary level teachers.

Practices
The individual student is also the focus in the implementation of entrepreneurship education, although communality in practices clearly becomes more important here than with the aims and results. Although entrepreneurship education is linked to the pupil’s/student’s everyday life, it is not implemented in everyday schoolwork. We will look at these problems in more detail later.

The emphasis between internal entrepreneurship and external entrepreneurship appears to differ from the aims and results. In practice, external entrepreneurship is encountered frequently although internal entrepreneurship is again more strongly highlighted. The gap has narrowed, however. In the implementation of entrepreneurship education, entrepreneurship is primarily linked to the teacher’s own subject or a separate entrepreneurship course. Besides the basic vocational training level, external entrepreneurship studies are also commonly implemented in upper secondary education in the form of optional studies, and in the upper grades of the basic level also as club activities. External entrepreneurship is more often associated with working methods than contents, however. In all responses, including those of basic level teachers, collaboration between the school and businesses is mentioned as a good way to implement entrepreneurship education in practice.
The responses show that there are variations between different forms of collaboration. Often, collaboration is based on business visits. A closer study of teachers’ implementation of entrepreneurship education reveals that the education does not always meet the criteria set for it. Field trips to businesses, professional introductions of entrepreneurs or fundraising for a class visit or a similar event do not automatically qualify as entrepreneurship education. The traditional practical professional orientation period in schools does not necessarily meet the criteria, either. Many responses regrettably do not mention whether the students play any kind of active role in these examples, or if they process what they have heard and experienced in groups.

The responses show that teachers implement entrepreneurship education largely in the form of projects. Projects emphasize teaching methods rather than contents, and they are usually implemented using various forms of collaborative teaching. In projects, the pupil’s/student’s own role is highlighted. Often projects combine intrapreneurship and entrepreneurship.

On the other hand, entrepreneurship education projects can also be viewed critically, as it seems that these projects are not part of the teacher’s everyday teaching; instead, they are implemented casually and are related to major events or theme days. Often projects are also linked with entrepreneurship courses, which means that only a small number of pupils/students get to participate.

Teachers say entrepreneurship education is best implemented through school theme days and individual projects rather than as an integral part of their own regular teaching. Yet in their own entrepreneurship education aims and results, teachers name precisely the kinds of themes – such as enterprising skills or business or professional knowledge – that they could integrate into normal classroom work regardless of the subject.

It seems that despite the core curriculum, entrepreneurship education in schools is not integrated into regular education. It also seems that teachers’ actual entrepreneurship education is still rather insignificant and entrepreneurship education is not a visible part of the everyday activity of schools.

Results
The results are also mostly mirrored against the individual students and their development. The evaluations are good – entrepreneurship education is mostly seen to have positive effects on students.

The results are less concerned with the contents of entrepreneurship education and evaluating informational results than with focusing on skills and attitudes and evaluating internal entrepreneurship. With few exceptions, entrepreneurship again only comes up in the responses of secondary level teachers.
The teachers’ responses clearly reveal that the results of entrepreneurship education are often difficult to evaluate. Difficulties in evaluation are often related to the general problems of evaluating educational and teaching work and the difficulties in evaluating entrepreneurship, such as the impossibility of predicting whether students will one day become entrepreneurs. The above-mentioned concerns brought up by the teachers and the difficulties in evaluating them are undoubtedly justified. What is odd, however, is that teachers sometimes also seem to have problems evaluating internal entrepreneurship. Therefore, it is impossible to evaluate whether the aims related to internal entrepreneurship are reached: although the aims seek to strengthen the student’s initiative and group work skills, the results may indicate something completely different. The results of entrepreneurship education are commonly evaluated quantitatively: how many good grades are given, how many interested students there are in class, how positive the feedback is or how much time in class is spent on discussing business activities and business knowledge.

**Strategies and curricula**

The aims seem to be even less derived from entrepreneurship education strategies or the core curriculum, for although teachers set aims for their entrepreneurship education, as mentioned above, few link them to education strategies, the core curriculum or local curricula. Many teachers admit that they do not know enough about the curricula and especially the education strategy, yet they present aims they have set for their own entrepreneurship education.

Next, we will integrate our findings from the answers into the frame of teacher’s reflection according to Shulman and Shulman (2004):

*Vision, practice, understanding, motivation and individual reflection*

1. Vision - aims for entrepreneurship education: Thinking about the teachers’ visions regarding themselves in the context of entrepreneurship education, it could be seen rather limited. For example, when describing the aims of entrepreneurship education, teachers do not talk about themselves but describe the aims for the pupils/students even though the question was about their own aims. For teachers, internal entrepreneurship is considered as the main goal. External entrepreneurship does not play a major role in their aims. Therefore, they have not developed their vision about entrepreneurship education as a whole, nor of its different parts. Moreover, teachers seem to have difficulties arguing their aims for entrepreneurship education – when asking about the aims, they give their practices in reply. In summary, we suggest that teachers’ visions about entrepreneurship education are rather confusing. Teachers do not know the state they are in the field of entrepreneurship education – nor do they not know which direction they ought to move.

2. Practices – entrepreneurship education practice and results gained: Entrepreneurship education in practice is rather limited since it is not a
part of normal schoolwork. Instead, it is implemented through separate projects and theme days. Students’ activity is questionable. The results gained clearly reveal that the student’s activity is often difficult to evaluate. In summary, teachers seem to have some, but limited, knowledge about how to do entrepreneurship education in practice.

3. Understanding - the presence of entrepreneurship education in local education and business strategies and curricula: Practical entrepreneurship education seems to have few links to entrepreneurship education strategies or curricula. In conclusion, we suggest that their in-depth understanding of entrepreneurship education is insufficient.

4. Motivation - interpretations about motivation: According to our interpretations from the data, we could highlight that even though teachers’ vision, practices and understanding are rather undeveloped, they are still somewhat interested in developing entrepreneurship education. For example, the responses show that entrepreneurship education is implemented in many different ways, such as different contents and teaching methods. Even though entrepreneurship education is not integrated into teachers’ daily work, they have developed projects and theme days on entrepreneurship education.

5. Individual reflection – summarizing the data according to visions, practices, understanding and motivation and drawing conclusions on the teachers’ reflections: In summary, we could see that since teachers are somewhat motivated and have some ideas, although rather limited ones, about the aims and practices of entrepreneurship education - there is some appearance of reflection. However, they have no understanding of entrepreneurship education in broader contexts, such as strategies and curricula. Therefore, we could deduce that teachers have developed some reflections on entrepreneurship education although they are not powerful enough to meaningfully strengthen practical entrepreneurship education.

Discussion

Even though this study only presents preliminary data from our project, we could highlight certain issues concerning the development of entrepreneurship education and teachers’ role in the process. This study focuses on the socially constructed reality of entrepreneurship education in the Finnish basic, upper secondary and vocational secondary education level. The data has given us access to descriptions of entrepreneurship education activities and the role of the teacher in it. The findings include that the structural elements of entrepreneurship education are not clear or supportive enough for teachers. The curricula emerged as a central theme from both analyses.

Despite the basic guidelines in national entrepreneurship education strategies and the national core curriculum, internal entrepreneurship and entrepreneurship
seem to be imbalanced in the aims, practices and results of teaching. It also seems that the entrepreneurship education given by teachers is still rather insignificant, and entrepreneurship education is not a visible part of everyday activities in schools. Also, the practices of entrepreneurship education are kept separate from the aims and results. There is no specific subject in which entrepreneurship education is included, and the teachers do not see themselves there in the context of entrepreneurship education. This is juxtaposed with the core of entrepreneurship and entrepreneurship education definitions, which emphasise the action and the responsible actor.

It seems that teachers’ methods and contents for entrepreneurship education are limited and the best way to implement entrepreneurship education is in the form of projects (see also Seikkula-Leino 2007). Collaboration between the school and businesses is highlighted at every school level, and entrepreneurship education is usually implemented in the form of business collaboration, which links it to external entrepreneurship.

The teachers’ views on entrepreneurship education coincide more or less with Ristimäki’s (2003, 6) views about, which include internal entrepreneurship, which deals with entrepreneurial and enterprising behaviour, and external entrepreneurship, which is about doing business (or as Hytti (2002) points out, “understand and become an entrepreneur”).

The teachers implied that the terms and concepts of entrepreneurship education are familiar to them, but it is obvious that they have no specific theoretical basis and definitions to back up their statements. As one teacher commented: “The aim is to make the student independent, self-assured, committed, adaptable, cooperative, persistent and studious.” This is in line with scientific publications on entrepreneurship and entrepreneurship education (see for example Gibb 2005; 2006; Shane and Venkataraman 2000), but it gives rather little insight into how the aims of entrepreneurship education are put to practice.

Teachers state that co-operation between subjects is essential when aiming to develop the working community into a more entrepreneurial direction. Teachers often described the aims of entrepreneurship education with an abundance of favourable adjectives that could hopefully be connected to their students. Moreover, when describing the aims of entrepreneurship education, teachers exclude themselves and describe the aims set for the pupils/students. One of our findings concerns the aims and practices: teachers seem to have difficulties arguing their aims for entrepreneurship education – when asking about the aims, they give their practices in reply.

Even if there was no fundamental error in the answers of the teachers, and they clearly described the situation as well as they could, one important notion became clear: there was no clear and unquestionable visible link between the aims and the results of entrepreneurship education. This means the crucial
iterative element for learning about and improving the education is missing. Individual teachers may have their own methods for adjusting their teaching in accordance with the results, but nothing conceptually solid or discursively serviceable can not been found in the comments. As was illustrated in the introduction, entrepreneurship education is a large and complex web with many parties involved. Teachers are the most important element in the system, as they carry out the actual teaching, are in contact with the students and the environment, and accumulate a great deal of knowledge during the education.

These results are in line with Shulman and Shulman’s (2004) study, which summarizes that an accomplished teacher smoothly integrates vision, motivation, understanding and practice into their teaching, and learns to improve his or her teaching through active reflection. Shulman and Shulman believe that reflection is the key to a teacher’s learning and development. Based on our results, teachers have no possibility to meaningfully develop their reflection because they lack understanding of entrepreneurship education and practice. This could be explained by the fact that the aims of the education are not clear to the teachers. Moreover, we could question whether they have even developed their vision of entrepreneurship education development. Seikkula-Leino (2007) points out this aspect in her study on curriculum reform and entrepreneurship education development. According to her results, teachers’ reflection does not have the scope for developing visions, and even though they are able to develop their motivation for teaching entrepreneurship education to a minor extent, the lack of understanding of entrepreneurship education and undeveloped implementation practices restrict the development of teachers’ reflection - and as a consequence the development of entrepreneurship education.

In reference to Figure 1 in the introduction of this paper, we would like to stress that there is a long way to go from the international and national policy making level to actual entrepreneurship. As mentioned before, it is a journey consisting of two different processes: first, from goal setting in the education system, starting from the EU strategies and national curricula, to the altered daily teaching work of all teachers, and secondly, from teaching to the altered behaviour of the students in the years to come. Therefore, if we wish to realize these international and national aims, we ought to focus more on teachers’ learning. We argue that since learner-centred education has been in focus during the past decades, the teacher’s role in education may have been neglected and the teacher’s role should be “rediscover”.

This, in our opinion, implies that there should be a more straightforward and accessible code system to describe aims and results, and most of all, to create a platform to understand the processes of entrepreneurship education. Our findings can be taken as a sign of uncertainty of teachers not knowing what to do and how to do it right. If there are no common definitions, no idea about the content and processes of education, and no frames for evaluating results, there will be no progress in the guiding role of entrepreneurship education. This will
give us an insight to develop concrete practices for this, for example a “Measurement Tool for Entrepreneurship Education”.

Conclusions

Studying this phenomenon is warranted, as entrepreneurship education is in the central focus in the development of social and economical well-being. This research takes an approach to teachers’ learning and their reflection in the context of entrepreneurship education which has so far been an unexplored field. We argue that since the learner-centred education has been in focus in the past decades, teachers could strengthen their role as learners in order to meaningfully develop education. As Shulman and Shulman (2004), Schwartz (2006), Seikkula-Leino (2006; 2007), Westbury et al. (2005) and van der Akker (2003) argue, educational changes, such as curriculum reforms, are focused on teachers’ learning. We propose the view that teachers are in the crossroads of a transformation process in entrepreneurial education. Teachers make the journey from the general aims of entrepreneurship education to their actual outcome, i.e. increasing entrepreneurial activities in the society, as they transform the aims of into teaching activities and into learning outcomes.

In order to approach the issue, we examined the basic concepts and introduced data gathered during the project “Measurement Tool for Entrepreneurship Education”. We used that data as an “acid test” to illustrate in a straightforward way the challenges in entrepreneurship education. A group of teachers were asked to describe their aims for and results from entrepreneurship education. The teachers were familiar with entrepreneurship education, but, as the results indicate, there is a remarkable lack of cohesion in definitions of basic concepts and, most of all, between the aims and the results. We have observed that there is no clear and unquestionable link between the announced aims and results achieved. Further, we suggest that as entrepreneurship education is considered important at many levels in societies, and official guidelines are set for it, it is natural that the results achieved are taken into consideration in the targeting and shaping of future aims and actions. This is important both for policy makers and for individual teachers. However, our results seem to indicate that the missing clear conceptual and contextual links between aims and results may affect the iterative processes of evaluating and improving the education. Moreover, teachers do not seem to be able to generate any meaningful reflections in this context. How could we enhance this process in order to develop teachers’ learning regarding entrepreneurship education?

In summary, based on our findings, we would like to stress 1) the development of teachers’ learning in terms of their reflection, 2) the development of practical tools for their self-reflection, 3) the implementation of changes in the educational arena, such as curriculum reforms, from the point of view of teachers’ learning and 4) connecting the aims and results in the context of entrepreneurship education. Therefore, we suggest that there is a definite need for more
systematic data collection and discussion around issues concerning entrepreneurship education.

REFERENCES


Commission of the European Communities. (2006). Entrepreneurship Education in Europe: Fostering Entrepreneurial mindsets through Education and Learning


