LEARNING ENTREPRENEURIAL COMPETENCES: PARADOXES IN THE LEARNING PROCESS

ABSTRACT:

The purpose of the longitudinal study was to ascertain to what extent students’ entrepreneurial competences developed on the degree programme. The study examined the perceptions of the students by mixing different research methods. Six subsidiary-studies were conducted in total. In this paper, only the results of three subsidiary-studies are discussed and the results are discussed from the viewpoint of the paradoxes in the learning process.

The findings indicated that competence profiles and entrepreneurial intention are interrelated already in the beginning of the studies. Further, the learning objectives of the degree programme are realistic for the first-year students to be achieved. There lies the first paradox: self-regulation in learning is expected, yet the students may lack the abilities for self-directed learning and meta-cognitive learning strategies. Secondly, use of creativity is expected to some extent, yet the students are not sufficiently encouraged and supported by teachers. Thirdly, the entrepreneurial attitudes of the students were quite positive, yet the attitudes remained stable or declined during studies. Forthly, the degree programme had a positive influence on the development of business competences, but not on entrepreneurial intention. It can be concluded that there is a need for changes in pedagogy and learning environment, if the aim is to promote the entrepreneurial competences of students more and increase their new business creation.

Keywords: students, competences, entrepreneurship, intention, learning, perceptions.
RESUMO:

A finalidade do estudo longitudinal foi averiguar até que ponto que as competências empreendedoras dos estudantes se desenvolveram no programa de aprendizagem de atribuição de grau. O estudo analisou as perceções dos alunos através de uma mistura de métodos diferentes de pesquisa. Seis estudos foram realizados no total. Neste trabalho, apenas os resultados de três deles são discutidos e os resultados são discutidos de um ponto de vista dos paradoxos do processo de aprendizagem.

Os resultados indicaram que os perfis de competência e intenções empreendedoras já estão inter-relacionados no início dos estudos. Além disso, os objetivos de aprendizagem do programa de ensino de atribuição de grau são realistas para o alcance dos alunos do primeiro ano. Aí reside o primeiro paradoxo: é esperada a autorregulação na aprendizagem e no entanto, os alunos podem não ter as habilidades para a aprendizagem autodirigida e estratégias de aprendizagem metacognitivas. Em segundo lugar, uso da criatividade é esperado em certa medida, mas os alunos não suficientemente são encorajados e apoiados por professores. Em terceiro lugar, as atitudes empreendedoras dos estudantes foram bastante positivas, no entanto, as atitudes permaneceram estáveis ou diminuíram durante os estudos. Em quarto lugar, o programa de ensino de atribuição de grau teve uma influência positiva no desenvolvimento de competências de negócio, mas não na intenção empreendedoras. Pode concluir-se que há uma necessidade de mudanças na pedagogia e no ambiente de aprendizagem, se o objetivo é promover mais as competências empreendedoras dos alunos e aumentar a criação de negócios.

Palavras-chave: alunos, competências, empreendedorismo, intenção, aprendizagem, percepção

RESUMEN:

El propósito del estudio longitudinal fue investigar hasta que punto que las competencias empreendedoras de los estudiantes se desarrollaran en el programa de aprendizaje de grado. El estudio analizó la percepciones de los estudiantes a través de una mezcla de diferentes métodos de investigación. En total se realizaron seis estudios. En este trabajo, se discuten sólo los resultados de tres de ellos y los resultados se discuten desde el punto de vista de las paradojas del proceso de aprendizaje.

Los resultados indicaron que los perfis de competencia y las intenciones empreendedoras ya están interrelacionadas en el comienzo de los estudios. Además, los objetivos de aprendizaje de la asignación del programa de enseñanza de grado son realistas para el logro de los estudiantes en el primer año. Aí radica la primera paradoja: es esperada la autorregulación en el aprendizaje de los estudiantes, sin embargo, pueden no tener las competencias para el aprendizaje auto dirigida y las estrategias de aprendizaje.
meta cognitivas. En segundo lugar, uso de la creatividad se espera hasta cierto punto, pero los estudiantes no son suficientemente animados y apoyados por los profesores. En tercer lugar, la actitud emprendedora de los estudiantes fueron muy positivas, sin embargo, las actitudes permanecieron estables o disminuido durante el estudio. En cuarto lugar, el programa de educación para la concesión del grado tuvo una influencia positiva en el desarrollo de las competencias empresariales, pero no en la intención emprendedora. Se puede concluir que existe una necesidad de cambios en la pedagogía y en el medio ambiente de aprendizaje, si el objetivo es promover más las competencias emprendedoras del estudiante e incrementar la creación de empresas.

Palabras clave: alumnos, competencias, empreendedorismo, intención, aprendizaje, percepción

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1. INTRODUCTION

The European Parliament and Commission emphasise the importance of a broad approach to entrepreneurship and define the concept of entrepreneurship as follows: “Entrepreneurship refers to an individual’s ability to turn ideas into action. It includes creativity, innovation and risk-taking, as well as the ability to plan and manage projects in order to achieve objectives. This supports everyone in daily life at home and in society, employees in being aware of the context of their work and being able to seize opportunities, and is a foundation for more specific skills and knowledge needed by entrepreneurs establishing social or commercial activity.” (COM(2005)548). Therefore the entrepreneurial competences can be taken to be the knowledge and skills needed in setting up and running a business, but also a lot of other individual competences which are a set of attributes, combined with personality traits, skills and knowledge. Further, since entrepreneurial competences can also be considered a combination of “inborn” personal characteristics and learned abilities, entrepreneurial competences relate to such features as initiative, work motivation, goal-orientation, independence and persistence (Leskinen 1999; Paajanen 2001).

There are several studies indicating many positive characteristics related to entrepreneurship and entrepreneurial behavior (Henry et al. 2005; Chen & Lai 2010; Ristimäki 2004; Gibb 2005) and many entrepreneurial features and characteristics can be developed during the studies, yet some of them can also be regarded as inborn characteristics. Earlier studies have also included attitudes and intention among the entrepreneurial competences. The attitude toward entrepreneurship is an individual’s conception of entrepreneurship, assessment and inclination towards entrepreneurial behaviour as in self-employment. (Chen & Lai 2010, 3). Attitudes are relevant for understanding and predicting people’s social behaviour (Ajzen 2001).

This study adopts a broad definition of entrepreneurial competences combining several entrepreneurial features: personal characteristic, intentions, attitudes, knowledge and skills. By following the definition introduced in Nab, Pilot, Brinkkemper and Ten Berge (2010, 25) it is accepted that knowledge and skills can be learnt and taught. Further, since it is difficult to make a clear distinction between some of the entrepreneurial competences learnt during the degree programme and those developed outside the programme or through...
upbringing and growth, in this study the concept of entrepreneurial competences is taken to include a student’s overall capacity, behaviour, knowledge, skills and characteristics (Eraut 1999, 179; Gonczi 2003). Thus, the entrepreneurial competences can be learned and are not only innate abilities. Therefore learning entrepreneurial competences is not achieved only through experiences (e.g. in an entrepreneurial context), but is also promoted by well-directed educational efforts (Klandt & Volkmann 2006, 197). Further, in this study entrepreneurial intention refers to students’ self-perceived likelihood to start up a new venture after graduation. Nevertheless, this study addresses the paradoxes in the process of learning entrepreneurial competences. Based on the dissertation (Kakkonen 2012) the paradoxes are related to the learning strategies, the use of creativity in the studies, entrepreneurial intention and attitudes towards entrepreneurship. Next, the theoretical foundation of these matters are presented briefly.

1. LEARNING ENTREPRENEURIAL COMPETENCES

1.1. LEARNING STRATEGIES

Students utilise different ways and means to assist in the acquisition, storage, retrieval and use of information to accomplish a study assignment. Specific patterns of learning activities can be called learning strategies (Vermetten, Lodewijks & Vermunt 1999, 1). These learning strategies are often connected to a certain learning situation and to the task involved. (Ruohotie & Nokelainen 2000, 155). The use of learning strategies is personal and habitual and they are also related to the context (Vermetten, Lodewijks & Vermunt 1999, 1).

Although various learning strategies have been proposed by different scholars, such as rehearsal, elaboration, and organizational strategies, critical thinking, meta-cognitive self-regulation, time and study management, effort regulation, peer learning and help-seeking (e.g. Huang 2008, 532), there is a disagreement among scholars on exactly what learning strategies are and how many of them exist, how they should be defined and categorised. Nevertheless, a number of scholars have agreed on three main categories of learning strategies: cognitive strategies, metacognitive strategies, and resource management strategies. (e.g. Pintrich & McKeachie 2000, 40; Soric & Palekcic 2009, 551; Clayton, Blumberg & Auld 2010, 351). In brief, cognitive strategies refers to the mental effort of monitoring one’s own comprehension of
new learning material (forming relations, critical thinking, selecting main ideas, memorizing, rehearsal, etc.), whereas meta-cognitive strategies consist of students’ thoughts and knowledge of themselves as learners. In addition, resource management strategies refers to the use of techniques such as time management.

1.2. CREATIVITY AND ENTREPRENEURSHIP EDUCATION

Basically creativity can be defined as the skill to create something new, different and practically usable (Sternberg & Lubart 2003). In the literature creativity is often considered from the point of view of the final result, a process or an individual. In addition, creativity is context-related: the operating environment is highly significant in the use of an individual’s creativity.

To increase students’ abilities to diagnose and solve problems encountered in organizational creation, teachers can adopt creative thinking and behavioural techniques in the classroom. In fact, there are different methods and techniques for enhancing creative thinking and behaviour in the classroom. (e.g. Gundry & Kickul 1996; Bowkett 2006; Higgins 2006). In general, to promote creativity in classes a few general guidelines can be presented: provide opportunities for student choice and discovery, emphasise mastery and self-development rather than sticks and carrots, promote supportable beliefs about creativity, and teach techniques and strategies for creative performance. (Petrowski, 2000). Further, if part of the creative process involves linking unassociated bits of information into new combinations, this knowledge can serve to train students to be creative in ways that make entrepreneurial behaviour more likely (Ko & Butler 2007, 366).

Entrepreneurship education meets several challenges in creativity, in spite of the goals it has in each case. The curricula are often drawn up in a very explicit manner and contain concrete and practical learning targets and competences for business work tasks. If different levels are set for the goals of entrepreneurial education according to the model of Ristimäki (2004), the role of and need for creativity can be considered from different perspectives. For instance, if the goal of entrepreneurship education is considered to be only the teaching of commercial subjects, the need for creativity in entrepreneurial education is likely to be rather small. The higher one advances in those levels, the greater is both the opportunity and the need to utilise creativity, because entrepreneurial education is then seen widely as a matter concerning
the whole school community and promoting an individual’s entrepreneurial behaviour. Further, the competences that students need in education institutions and in the workplaces have changed dramatically. To prepare them for what is expected involves a commitment to teaching a new set of skills. For example, by building creativity skills into entrepreneurship instruction, students will gain a great advantage when they enter working life after graduation. (Gundry & Kickul, 1996). However, there are contradictions related to this: if we try to force students to learn or try to make them to be more creative in supposedly disciplinary ways, it will have the opposite effect. In addition, in an educational and business tradition we place great emphasis on rewards and punishments; management by objectives, appraisals and exams are all geared towards the improvement of performance. However, in the area of creativity these policies are counterproductive (Gurteen 1998).

It is commonly agreed that creativity is an essential asset in entrepreneurship and business. In general, creativity turns ideas into useful knowledge, and then the useful knowledge into added value. (Gurteen 1997). In addition, creativity is an important antecedent of entrepreneurial intentions (Hamidi, Wennberg & Berglund, 2008). Further, since creativity (e.g. creative problem solving, perceiving new opportunities) and risk are the most essential phenomena related to entrepreneurship and entrepreneurial behaviour (Robinson & Stern 1997), their use should already be fostered and promoted during studies. However, since creativity is connected with expertise, creative thinking and the motivation to utilise creativity (Amabile 1998), the challenge is how creativity can best be realised when the future experts are still studying.

2.3 ATTITUDES TOWARDS ENTREPRENEURSHIP

According to the theory of planned behaviour, people act in accordance with their intentions and perceptions of their control over the behaviour (Ajzen 2001). For example, to start a business is intentional and can best be predicted by intentions. Starting a business cannot be predicted by attitudes, beliefs, personalities or demographics. However, intentions are best predicted by certain attitudes. In other words, attitudes predict intentions which, in turn, predict behaviour, and further, only intentions directly affect behaviour, while attitudes affect intentions. (Ajzen 2001; Krueger & Carsrud 1993). In general, an attitude represents a summary evaluation of a psychological object. Further,
one’s own belief associates the object with a certain attribute, and the person’s overall attitude towards an object is determined by the subjective values of the object’s attributes in interaction with the strength of the associations. Only beliefs that are readily accessible in memory influence attitudes at any given moment (Ajzen 2001). Thus an attitude is a mentally prepared state for any known subject, and is a subjective consciousness that is affected by the environment. The attitude towards entrepreneurship, in turn, is an individual’s conception of entrepreneurship, assessment and his or her inclination towards entrepreneurial behaviour or self-employment. (Chen & Lai 2010, 3). All in all, attitudes are relevant for understanding and predicting people’s social behaviour (Ajzen 2001).

The concept of entrepreneurial intention is based on two models: a theory of planned behaviour (Ajzen 2001) and a model on the entrepreneurial event (introduced by Shapiro and Sokol 1982). The first one explains how individual attitudes toward an act, the subjective norm, and perceived behavioural control are antecedents of intentions. The latter was developed to understand entrepreneurial behaviour. Entrepreneurial intentions are derived from perceptions of desirability, feasibility and a propensity to act upon opportunities. Further, the perceived desirability is defined as the attractiveness of starting a business, perceived feasibility as the degree to which an individual feels capable of doing so, and the propensity to act as the personal disposition to act on one’s own decision (Lee, Wong, Foo & Leung 2011, 126). Krueger, Reilly and Carsrud (2000) compared and contrasted the two models and concluded that they are largely homologous to one another. However, they emphasise that Shapiro’s Entrepreneurial Event includes a volitional element among intentions: the propensity to act which the theory of planned behaviour does not have.

Entrepreneurial intention refers to the intention to start a new venture. The findings of Pihkala (2008) indicate that the entrepreneurial intentions of polytechnic (UAS) students seem to be constant during studies. Further, although the studies in higher education increase the awareness of entrepreneurship in general, they do not support and enhance the entrepreneurial intention. In fact, it seems that the conceptions of entrepreneurship became more negative during studies, which does not support the entrepreneurial intention to set up one’s own business. The findings of Urbano (2006) indicated that if there were entrepreneurs among relatives, this had a significant effect on the intention of starting up one’s own company. The findings of Degeorge &
Fayolle (2008) also claim that the level of intention seems to be higher when there is an entrepreneur in the immediate family, yet at the statistical level the relation was not significant in their results.

3. METHODOLOGY OF THE STUDY

The study assumed that since the students were only studying and learning the competences, the most convenient and practical way to examine these competences was to ask the students to assess them by themselves. Therefore, as the epistemological approach the study has adopted to study perceptions of the competences, not the competences demonstrated in practice. (cf. Gonczi 2003, 182). Therefore it was assumed that the students were willing and able to reflect their own learning processes and outcomes. However, to enrich the expected findings related to the perceptions, a mixed methods approach was selected for data collection during the research process. In other words, both numerical and verbal data were collected for the study, because it was assumed that neither quantitative nor qualitative methods are sufficient by themselves to capture the details of the phenomenon and situations (Creswell & Clark 2011, 104, 304).

Numerous studies have been conducted on learning entrepreneurship competences in higher education, also through students’ self-assessment, but often they have been cross-sectional studies (e.g. Oosterbeek, van Praag & Ijssekstein 2010; Gravenitz, Harhoff & Weber 2010), and more longitudinal studies are needed in order to improve the understanding of the development of the learning outcomes (e.g. Pihkala 2008). Since longitudinal studies are more difficult and demanding to arrange in practice, little is known about the development of entrepreneurial competences during the whole degree programme. The present study was longitudinal and followed the learning process and outcomes of one student group in 2007-2010. The study addresses the learning entrepreneurial competences of students on the programme, and it is longitudinal and interpretative in nature. The research task was to ascertain to what extent entrepreneurial competences of students developed during the degree programme.
3.1 PARTICIPANTS

The follow-up study addressed the competences of international students who started their studies according to a new competence-based curriculum in autumn 2007. The students were bachelor’s level students who had applied and had been selected to study on an international business management programme in Mikkeli, Finland. In autumn 2007, altogether 25 students started their studies according the new curriculum. The students represented different nationalities and continents: they came from Africa (Cameroon and Nigeria), Australia, Western Europe (Finland and Germany), Asia (China, Pakistan and Vietnam), America (Mexico), Ukraine and Russia. There were 13 males and 12 females.

In terms of learning, it was assumed that this multicultural student group consisted of students with different learning styles (Kakkonen 2007). However, they followed the same curriculum and therefore they were expected to achieve the same main learning outcomes. Nevertheless, since the students and their backgrounds differed, it was assumed that there would be individual differences in learning outcomes inside the curriculum, especially in terms of learning entrepreneurial competences.

3.2 DATA COLLECTION

The detailed description of data collection and analysis are presented in the dissertation reported by Kakkonen (2012). However, in order to get a general view of them, they are introduced here briefly. The subsidiary studies were carried out in different phases of the research process and the quantitative and qualitative methods were mixed. It is assumed that when the two approaches are properly combined, one approach enhances the other. (Bryman 1995, 69). This paper introduces the results of three subsidiary-studies; i.e. two qualitative and one quantitative studies. The aim of the first qualitative subsidiary-study was to understand what the students learn in terms of entrepreneurship as well as what strategies the students use in their learning. The study was implemented through self-assessment tasks in which the students were encouraged to recall and describe their most significant learning experiences related to entrepreneurial learning during their first year.
The main objective of the second qualitative study was to explore and understand students’ perceptions related to the use of creativity in their studies, and the inhibiting and promoting factors in using creativity in their studies in higher education. The sample consisted of those first-year students who had taken an entrepreneurship course, and also learnt the basics of creativity in general and in entrepreneurship in particular. The study was implemented through the self-assessment tasks of the students.

The quantitative subsidiary study aimed to ascertain the attitudes of business students towards entrepreneurship. The study was implemented by distributing a questionnaire with 27 statements related to the four main themes to ascertain students’ attitudes towards entrepreneurship. Beside these statements, the students were asked to provide background and report their entrepreneurial intentions. The study was carried out in 2009 and four different international student groups were selected for the sample \( n = 106 \). In addition, two of the student groups had already responded to the same questionnaires in 2008, therefore the development aspect of the attitudes was included in the study and the findings of the two groups were compared between the years studied. The survey was related to the students’ attitudes towards entrepreneurship and used a Likert scale 1–5. The questionnaire included four main topics; i.e. “Entrepreneurial features and characteristics”, “Entrepreneurial motives”, “Interest in one’s own enterprise”, and “Barriers to entrepreneurship”. The survey was carried out twice within one year in order to monitor the development of the attitudes. The entrepreneurial intention was examined by asking if a student had thought about starting up a business alone or together with others in the future and by providing the following options: “I have not, Sometimes I have toyed with the idea and dreamed about it, I have made some plans already, and I have already started a business or I am the owner of a business”.

3.3 DATA ANALYSES

Since the perceptions of the students were studied with both qualitative and quantitative methods, both textual and numerical data were available for the analyses. Since the data of each qualitative subsidiary study was analyzed individually and it was feasible to do so without any computer soft-ware, the data analysis started by reading the data.
First, all the essays of the first subsidiary-study were read and all pieces of text describing the learning situations were selected from the essay of each student. Some of the students had focused on and described various events or learning experiences and their main outcomes, whereas others described, for example, only two or three more significant learning experiences from different perspectives. In any case, the main principle of the analysis process was that each piece of text was regarded as one learning context with at least one learning outcome, and it was also described in terms of which activities and how the learning had occurred. The data were analysed in light of the research questions. Next, in order to analyse the learning strategies, the data were also analysed inductively. First, the way of learning was identified from each piece of the texts and it was summarized in a few words. Finally, all the learning strategies were categorised according to main categories, which resulted in cognitive, meta-cognitive and resource management strategies.

The main phases of data analyses of the study related to the use of creativity were as follows. First, all the essays were read as such in order to get a complete picture of each student’s perceptions. After that all pieces of text related to the three research questions were arranged by topic. During the analysis process, the answers to the first research topic were divided into four different themes on the basis of the findings, the answers on the second research topic were divided into two themes, and the answers of the third research topic were also divided into two themes. All the themes were then rearranged further according to their sub-themes.

The data analysis of the study related to the attitudes was made by using SPSS software. First, the frequencies, means and standard deviations were examined for each variable, and crosstabulations were made. Then the means of the variables were combined into the combined variables according to the four themes introduced above. The correlation between the combined variables were examined and tested by correlation analysis (Pearson) and the crosstabulations using Pearson’s Chi-Square tests. In addition, T-tests were used to test statistical differences between two student groups (Independent-Samples T-Test) and one-tailed analysis of variance between several groups. Finally, the findings were reported according to the research questions of the study.
4 FINDINGS

4.1 LEARNING STRATEGIES OF THE FIRST YEAR BUSINESS STUDENTS

According to the findings of this study, the most commonly used learning strategies of the first-year students are different cognitive strategies, yet metacognitive learning strategies are also used to some extent. The cognitive learning strategies of the students included four different strategies. The strategy Learning by applying knowledge in practice in interaction with other people, was the most used strategy in which the students emphasised both the application of knowledge in practice and also the social interactive process with other people. The next commonly used learning strategies were Learning by applying knowledge in practice independently and Learning by listening and thinking. The first was used in practicing some skills or in losing ‘stage fright’ as well as in applying knowledge from the classes in a learning assignment. The latter refers mainly to the classes taught by visiting professors from abroad.

Finally, the learning by reading strategy was used only once to get further information about the topic taught during the classes. It seems that the learning strategies used are connected to different learning situations and to the task involved in certain contexts (Ruohotie & Nokelainen 2000, 155; Vermetten, Lodewijks & Vermunt 1999, 1). According to the findings, the metacognitive learning strategies were not so commonly used as cognitive strategies. Nevertheless, orientating oneself before starting on an assignment, assessing one’s own progress, and using a ‘mixed learning strategy’ were the strategies used. The most common metacognitive strategy was assessing one’s own progress when the outcomes were something other than what was expected. In other words, when things do not go as expected, the students are able to reflect on their experiences. Nevertheless, it seems that the students were not so familiar with the metacognitive learning strategies which might, however, help them to perform better and to be persistent in their learning efforts in acquiring knowledge and skills and in monitoring their own learning progress (cf. Clayton, Blumberg & Auld 2010, 351), not only then when something goes wrong.

It seems that the first year students learn best by doing: applying the knowledge acquired in practice in a group or independently. Further, it can be concluded that learning by reading is not used as a learning strategy. This can be explained in two ways: either this strategy is not
related to the most significant learning experiences, or else the students neglect reading as a learning strategy. Although the case organisation was a university of applied sciences, it is worth emphasising that the students need theories to apply, otherwise the insight into the topics, taught during the classes, might remain too narrow.

Since self-regulated learning is associated with success and academic achievements (Huang 2008, 529; Kuyper, van der Werf & Lubbers 2000, 181), the enhancement of the self-regulated learning skills might support and help the students to achieve their personal objectives better. To conclude, although the use of learning strategies is personal and habitual, and are related to the context (Vermetten, Lodewijks, and Vermunt 1999, 1), they have the potential to mediate the relationship between students’ interests and their academic achievements (Soric and Palekcie 2009). Motivation and self-regulated learning are associated with success at school, and self-regulation is a good predictor of academic achievement (Kuyper, van der Werf, & Lubbers 2000, 181; Huang 2008, 529). Nevertheless, the results of the study showed that self-regulation in learning is expected, yet the students may lack the abilities for self-directed learning and meta-cognitive learning strategies.

4.2 USE OF CREATIVITY IN STUDIES

The results showed that the students mostly used their creativity to find new ways to study and improve their existing study methods. They also used their creativity in different learning tasks and projects and in occasional problem-solving situations. In utilising their creativity, the students took various risks, for example from the point of view of other people’s reactions and the final outcome of the project. Furthermore, according to the results, there are both educational and social factors which inhibit or even prevent the utilisation of creativity in studies. Nevertheless, the students could increase their use of creativity in their studies by finding out themselves about new study methods, by making their own way of thinking more positive, by acquiring more courage, by developing their ability to tolerate uncertainty and risk, and by actively acquiring more knowledge about business life. The results also showed that changes in current practices at school and in teachers’ modes of operation are required, so as to encourage and support the students’ use of creativity in their studies. To sum up, it seems that the use of creativity is not as such very much involved in studies, but rather in
study methods. Even then, the students take the personal risks of success or failure; i.e. the students are not encouraged and supported by teachers.

According to the findings, willingness to take risks and to use creativity to accomplish tasks seems to go hand in hand in an individual. Students therefore need both courage and encouragement to try something new. Because creativity and risk are essential phenomena related to entrepreneurship and entrepreneurial behavior (Robinson & Stern, 1997), their use could be encouraged and promoted more forcefully by means of entrepreneurship education. If creativity, on the other hand, is defined fairly commonly as the ability to create something new, different and practically usable (Sternberg & Lubart, 2003), then creativity can be utilised in many different ways in teaching. Therefore only the teacher’s own activity, ability and willingness set the limits to the use of creativity in teaching. If teachers themselves aim to work in an entrepreneurial way (Paajanen, 2001), the challenge is especially how to encourage students to use creativity when it is possible and appropriate, how to develop students’ creative thinking and problem solving skills, how to encourage them to take controlled risks, and how to develop expertise, at the same time helping them to perceive new opportunities and current phenomena from different perspectives.

4.3 STUDENTS ATTITUDES TOWARDS ENTREPRENEURSHIP

According to the findings the male students did not have more entrepreneurial features than the female students. However, they had more motivational factors and interest in entrepreneurship than the female students, which supports Urbano’s (2006) as well as Kundu and Rani’s (2008) research results. In addition, the barriers of entrepreneurship are lower for male students than for the female students. According to the findings it seems that the entrepreneurial features and characteristics are positively related to the interest for one’s own enterprise as well as the entrepreneurial motives. In addition, motivational factors for entrepreneurship are negatively related to the barriers of entrepreneurship. The findings illustrated that even if there was an entrepreneur in the core family or among acquaintances, it had no statistically significant influence on the perceived entrepreneurial intention of the international students (cf. Urbano 2006; Degeorge & Fayolle 2008). Further, summarizing the findings related to the development of attitudes, it seems that they do not differ between
academic study groups or between study years, but remain almost the same.

The findings of this study revealed the attitudes and entrepreneurial intention of international students. Further, since attitudes affect and predict intentions which, in turn, predict behaviour (Ajzen 2001; Krueger & Carsrud 1993), it can be concluded that the findings indicated that the entrepreneurial attitudes of the international business students are quite positive. This means that they might have a real intention for setting up their own businesses later, which could be taken into consideration and supported during their studies.

However, based on earlier studies as well as the present findings, the attitudes seem to be fairly stable during the studies in higher education, which can be concluded in two different ways: depending on the aims of entrepreneurship education in an university, the attitudes could be taken more into consideration while selecting students carefully for entrepreneurship training, based on their attitudes towards entrepreneurship, and provide the training especially for them. On the other hand, if the aim is to increase the more effort could be put on the promotion of all the dimensions of entrepreneurship before and during the studies in higher education. In general, although the attitudes seem to remain stable during the studies in higher education, the level of them is what accounts. In fact, in order to influence the attitudes, the promotion activities should be taken up much earlier by the society through up-bringing and basic studies. All in all, how to affect and promote entrepreneurial attitudes is still a big practical challenge both for the education and also for business life.

5. DISCUSSION AND CONCLUSIONS

According to the findings, it seems that the first-year students learned best by doing: applying the knowledge imparted in practice in a group or independently. Further, it can be concluded that learning by reading is not used as a learning strategy. It seems that therein lies a paradox: self-regulation in learning is expected, but the students did not necessarily have the abilities for self-directed learning and meta-cognitive learning strategies. Therefore the use of these should be encouraged and supported already at the beginning of studies. Based on the findings of the subsidiary study related to the use of creativity in studies, willingness to take risks and use creativity to accomplish tasks
seems to go hand in hand in an individual. Students therefore need both courage and encouragement to try something new. The findings indicated that the present state of utilisation of creativity is closely involved only with the response creativity. Then the utilisation of creativity is a real challenge for both teachers and students. It seems that therein lies the second paradox: the use of creativity in studies is expected, but it is not sufficiently supported and encouraged by the teachers. The findings of the subsidiary study related to the attitudes towards entrepreneurship permit the conclusion that the entrepreneurial attitudes of the international business students were quite positive. The main conclusion is that the attitudes towards entrepreneurship remained stable or declined during studies even though they should be promoted among the students during their studies, which is the third paradox of the study.

The results of this dissertation confirm the findings of earlier studies, that there is still a need for changes in didactics, pedagogy and learning environments of entrepreneurship education (Blenker, Dreisler, Färgemann & Kjeldsen 2008; 50). In general, the goal of the business education should not be only the teaching of commercial subjects. Entrepreneurship education is then seen widely as a matter concerning the entire learning community and promoting an individual's entrepreneurial behaviour. It is emphasised that entrepreneurial pedagogy should be applied in teaching and the focus should be especially on the learning process and its dynamics. All in all, the main idea is to train “in”, rather than about, for or through (cf. Kyrö & Carrier 2005). On the other hand, also different learning strategies could be taught to the students in order to facilitate the students to achieve their personal learning objectives better. For example, there could be more business related learning environments and real-life challenges for students’ learning in order to support the use of learning “learning by doing”. The students could learn on the projects with local companies. An interdisciplinary approach, in turn, requires more co-operation between study fields. The business students possess business skills and entrepreneurial competences which they will contribute in the co-operation with students of other fields (health care, engineering, design, culture, etc.) who bring their expertise to the joint projects.

However, creativity could be genuinely supported if the whole environment behaves entrepreneurially and regards it as natural to work in complexity and uncertainty, understanding the risks, failures and successes involved (Kyrö & Carrier 2005, 29) and therefore by following Lücker (2011, 246) it can be concluded that a safe learning environment
that facilitates and fosters creativity could cause creativity to flourish. To sum up, with creative processes there is always the risk of failure; therefore it is necessary to emphasize the importance of an atmosphere where failure is allowed. From this point of view creativity, inventiveness and the courage to utilise them are closely related to entrepreneurship and entrepreneurial behaviour. Then the utilisation of creativity is a real challenge for both teachers and students. The findings of the study indicated that the use of creativity is not so much involved in studies as in study methods. Even then, the students take the personal risks of success or failure; i.e. the students are not sufficiently encouraged and supported by teachers.

In order to sum up, it seems that many things could be done in order to facilitate the learning entrepreneurial competences of students in higher education more. In fact, the changes should be done in an explicit way towards more entrepreneurial learning processes in more entrepreneurial learning environments. Then the changes in the learning processes as well as the learning outcomes are possible. Nevertheless, it is also worth emphasising that without the changes needed it may not be possible to expect more learning entrepreneurial competences in a broad way.

REFERENCES


