JYVÄSKYLÄ STUDIES IN BUSINESS AND ECONOMICS
120

Maija Suonpää

Constructing an Opportunity Centred Collaborative Learning Model through and for Entrepreneurship

JYVÄSKYLÄN YLIOPISTO

JYVÄSKYLÄ STUDIES IN BUSINESS AND ECONOMICS 120

Maija Suonpää

Constructing an Opportunity Centred Collaborative Learning Model through and for Entrepreneurship

Esitetään Jyväskylän yliopiston kauppakorkeakoulun suostumuksella
julkisesti tarkastettavaksi yliopiston Vanhassa juhlasalissa S212
helmikuun 1. päivänä 2013 kello 12.

Academic dissertation to be publicly discussed, by permission of
the Jyväskylä University School of Business and Economics,
in building Seminarium, Auditorium S212, on February 1, 2013 at 12 o'clock noon.

UNIVERSITY OF JYVÄSKYLÄ

JYVÄSKYLÄ 2013

Constructing an Opportunity Centred Collaborative Learning Model through and for Entrepreneurship

JYVÄSKYLÄ STUDIES IN BUSINESS AND ECONOMICS 120

Maija Suonpää

Constructing an Opportunity Centred Collaborative Learning Model through and for Entrepreneurship

UNIVERSITY OF JYVÄSKYLÄ

JYVÄSKYLÄ 2013

Editors
Tuomo Takala
Jyväskylä University School of Business and Economics
Pekka Olsbo
Publishing Unit, University Library of Jyväskylä

URN:ISBN:978-951-39-5032-3
ISBN 978-951-39-5032-3 (PDF)

ISBN 978-951-39-5031-6 (nid.)
ISSN 1457-1986

Jyväskylä University Printing House, Jyväskylä 2013

ABSTRACT

Suonpää, Maija
Constructing an Opportunity Centred Collaborative Learning Model through and for Entrepreneurship
Jyväskylä: University of Jyväskylä, 2013, 171 p.
(Jyväskylä Studies in Business and Economics,
ISSN 1457-1986; 120)
ISBN 978-951-39-5031-6 (nid.)
ISBN 978-951-39-5032-3 (PDF)

The purpose of this study is to construct a learning model to support the development of students' entrepreneurial ways of learning and behaviour and the role of the teacher as a facilitator in the context of Finnish higher education (HAAGA-HELIA University of Applied Sciences). The aim is that the constructed learning model supports teachers in their work as entrepreneurship educators. The study engages in a paradigmatic shift from a teacher centred to a student centred learning in entrepreneurship. The study is interdisciplinary and draws on theories from behavioural sciences, education sciences and business sciences.

The applied methodology was the constructive research approach (CRA), a procedure through which construction was created. Within the CRA approach, a qualitative single case study was constructed. An integral part of the case construction process was the planning and implementation of a learning intervention. An action research approach was utilized in the implementation of the learning intervention where the data was collected in the form of learning log books, team reports and class materials from the teacher and 24 students participating in it in 2009. Purposeful sampling was utilized, and data from the teacher and one multicultural team consisting of four members was used for the construction of the learning model.

In the analysis of the empirical material, a collective narrative was produced, operationalising the collective learning process from idea development to commercialisation. The narrative was analysed and interpreted through the lenses of entrepreneurial learning and teaching during an opportunity centred learning process. The learning model was constructed as a result of this research and was called the Opportunity Centred Collaborative Learning Model through and for Entrepreneurship. The constructed learning model was tested with experts in entrepreneurship education.

Theoretical contribution of this study is the construction and testing of the Opportunity Centred Collaborative Learning Model through and for Entrepreneurship. It tests, refines and explicates Rae's (2003; 2007; 2010) Opportunity Centred Learning Model. The underlying relationships and interactions between individual and collective learning practices were explicated and integrated into the opportunity centred learning process. It is in these interactions where the interrelated drivers and processes of collaboration emerge; negotiated enterprise, patient communication, team empowerment and shared leadership to support the development of entrepreneurial behaviours, skills and attitudes into entrepreneurship. Methodological contribution is achieved by operationalisation of a collective learning process from idea development to its commercialisation in the market.

The study suggests that the developed model produce a framework for opportunity centred learning, mental collective development and growth into entrepreneurship with the teacher being a co-learner.

Keywords: entrepreneurship, entrepreneurial learning, entrepreneurial behaviour, collaborative learning, opportunity centred learning, constructive research approach

Author's address

Maija Suonpää
Koivuviita 3A2 ESPOO, Finland
+35840 570 3096
Maija.suonpaa@haaga-helia.fi

Supervisors

Professor Matti Koiranen
Jyväskylä University School of Business and Economics

Adjunct professor Tarja Römer-Paakkanen
Jyväskylä University School of Business and Economics

Reviewers

Professor David Rae
Lincoln Business School University

Professor Jaana Seikkula-Leino
Lappeenranta University of Technology

Opponent

Professor Jaana Seikkula-Leino
Lappeenranta University of Technology

ACKNOWLEDGEMENTS

The thesis writing process is a true learning process which requires entrepreneurial mindset and skills. In this learning process, an individual's cognitive, affective and conative processes are put to a test and new knowledge and skills are learnt to finish the research project. The process of writing the thesis is not only an individual endeavour but is influenced on and supported by others. Therefore, I like to thank all those who have been involved in my research process.

I am very grateful for Professor Matti Koiranen who provided valuable comments and insight to my work. Probably the most memorable is Professor Koiranen's capability to motivate me when I needed it most. I also like to thank Adjunct professor Tarja Römer-Paakkanen who was always available to read my work and comment it, and with her support, I was able to finish the research.

I like to thank my pre-reviewers, Professor Jaana Seikkula-Leino and Professor David Rae, who provided me constructive feedback, which I highly appreciate. With this feedback, I was capable of developing the contents of my study further. I am grateful for Professor Rae who gave me possibility to visit Lincoln Business School University to learn more about entrepreneurship and entrepreneurial learning.

Without the doctoral programme organized by Jyväskylä University School of Business and Economics at HAAGA-HELIA University of Applied Sciences, I would hardly have had a chance to do this research. I also like to thank the Programme Director Marja-Riitta Eriksson who supported my studies at all times. I am grateful for all those colleagues at HAAGA-HELIA University of Applied Sciences who have taken time to reflect my study with me. I am also privileged to get to know entrepreneurship educators and teachers both in Finland and internationally who have inspired and given me new understanding in this field. I would like to thank all the students who took part in my research project. These students taught me a great deal about learning and teaching and without them the research would never have been realised.

I like to thank Liikesivistysrahasto and Yksityisyrittäjäinsäätiö which supported my research financially.

I am thankful for my parents, Kirsti and Matias Suonpää, who supported my upbringing with the right balance between freedom and control to find my own ways in life. My brother Juha who showed that it is possible to achieve a doctoral degree and my brother Visa who has shown how important entrepreneurial behavior is in the artist's career.

My deepest thanks go to my children, Annika, Erica and Olivia who had supported each other while I have been away. I hope I show an example of how entrepreneurial behavior can make the dreams come true.

Espoo 20.12. 2012
Maija Suonpää

FIGURES

TABLES

CONTENTS

1 INTRODUCTION

1.1 Background and motive for the research

Globalisation has increased uncertainty and complexity at the national, organisational and individual levels by creating changes and the need to cope with them. In many western countries, the role of governments as providers of basic welfare continues to decline, which demands more individual responsibility for oneself and one's family. Even though different environmental threats dominate the general business and social climate changes create many opportunities as well.

Entrepreneurship emerges as nations, organisations and individuals recognise opportunities and act on them. Entrepreneurship has become a top priority in national government policies due to its ability to drive creativity, innovation, competitiveness, employment and growth. These are key components of any sovereign country's future welfare. Even though this is agreed on by many, rather small steps are taken to develop entrepreneurial activity in many countries.

In Finland entrepreneurship is not generally perceived of as an attractive career opportunity among the adult population even though unemployment can become a reason to start one's own business. According to the Global Entrepreneurship Monitor (GEM) 2009 study, 9,4% of the Finnish adult population have established business ownership, 5,7% are engaged with early stage entrepreneurship activities, and 25% are potential entrepreneurs who have recognised business opportunities but do not create companies even though 40% have the knowledge to start a company. (Stenholm, Heinonen, Kovalainen and Pulkkinen 2010, 8-12.) In Finland, as well as in many other European countries, enterprise activity as well enterprise education is at a lower level than that in Canada and the United States of America (Niras consultants, Fora, Econ Pöyry 2008, 13).

The European Union (EU) adopted entrepreneurship education as a policy instrument in the Lisbon process in 2000 to promote not only actual

entrepreneurship but also to develop students' entrepreneurial mindsets and skills. Since the Lisbon process, national governments in the EU member states have designed entrepreneurship education policies to promote them. (Niras consultants et al. 2008, 9.)

The focus of this study is on entrepreneurship education in higher education institutions (HEI). More specifically it is on business studies at Universities of Applied Sciences, where many advances are being made to implement entrepreneurship education, but also many challenges remain. One of the challenges of entrepreneurship education, not only in business schools but also in other HEIs, is the narrow view of entrepreneurship as the creation of new ventures. The emphasis is on the technical knowledge of new business creation rather than on the development of entrepreneurial mindset and skills. A lack of understanding of the concept broadly creates threats to training future graduates who need entrepreneurial competences to be innovating and the abilities to create new growth and wealth. The broad definition of entrepreneurship is not only about new venture creation, but also about the development of an individual's generic competences to identify and act on opportunities as well as to plan and manage goal oriented projects (e.g., EU Commission and Parliament 2005). Entrepreneurship, defined in this way, promotes entrepreneurial behaviour at the individual, organisational and national levels. Even though challenges remain to define entrepreneurial behaviour (Auteri 2003, 7), it involves those activities that individuals autonomously generate when they creatively combine resources and identify and pursue opportunities (Mair 2002, 1).

A narrow view of entrepreneurship influences on how teaching and learning is organised. Current teaching and learning practices do not seem to produce the entrepreneurial behaviour, skills and attitudes needed to live and work in a globalised and complex environement. One reason is the current use of teacher centred learning methods in entrepreneurship and other courses with the focus on lectures, case studies, guest speakers and business plan projects (Wilson and Twaalfhoven 2005, 316, NIRAS Consultants et al. 2008, 128). The worldwide use of the busines plan project as a learning method makes it basically a legitimate method to teach entrepreneurship. Therefore, not many educators or teachers question its use in teaching and learning entrepreneurship in business schools.

Business planning has obvious advantages, such as teaching the students specific knowledge about business start ups and business functions. Business planning originates from strategic planning and it has been borrowed from management education to entrepreneurship education. The aim of business planning is to control and predict environmental uncertainty and complexity, whereas entrepreneruship emerges from uncertainty and complexity through an entrepreneur's search, creation and exploitation of opportunitites. (Armstrong 1982 in Honig 2004, 259.) From a temporal perspective, entrepreneurship occurs before business planning starts, (Sarasvathy, Venkataraman, Dew and Velamuri 2010, 93) and thus it can be said that

entrepreneurship is not the same as business planning. Hence, the overuse of business planning in entrepreneurship programmes and courses might mislead students' to think entrepreneurship as a linear process of writing a business plan rather than being an integral part of one's own life and work.

Entrepreneurial pedagogy originates from research on how entrepreneurs learn. According to Gibb (1997), entrepreneurs learn by copying, problem solving, learning from mistakes, experimenting and discovering. Entrepreneurial learning is experiential and contextual (Cope 2005, Politis 2005; Carswell and Rae 2000). Entrepreneurial learning requires student centred learning methods where the role of a teacher is to support students' learning and the development of entrepreneurial behaviour, skills and attitudes (Kirby 2007).

Teachers play a key role in promoting entrepreneurship education and learning (Hannula, Ruskovaara, Seikkula-Leino and Tiikkala 2012, 101). The move from teacher centred to student centred learning requires a paradigm change where the traditional roles of teachers and students change. The role of the students is to be active, responsible actors and doers of their learning processs, whereas the role of teachers' is to support and provide opportunities for learning in an uncertain and complex learning environment (Kyrö 2005a,93). A shift from teacher centred to student centred learning does not mean that business theories or models become obsolete but are applied when students learn by doing. Knowledge is not seen as an objective substance owned and transferred by a teacher to students, but it is created in students' active social processes in action. Hence, knowledge is contextual and subjective. (Kyrö 2005a; Kirby 2007.)

The motives for this research emerge from the need for paradigm change in teaching and learning entrepreneurship. The paradigm change is often a slow process due to the needed changes in mindsets and understanding entrepreneurship broadly as well as how to teach and learn it. The paradigm change also slows down due to the lack of teaching and learning theories and tools necessary to speed up the process. The lack of appropriate models for teaching and learning entrepreneurship is acknowledged by researchers and educators in entrepreneurship education. For example, Kirby (2007, 31) argues that there is a lack of pedagogical learning models through entrepreneurship.

In the literature of entrepreneurial education, a few models exist which depict the learning process through entrepreneurship. Many of these utilise project based learning models. One example of such a learning model is developed by David Rae (2003; 2007) whose first learning model in 2003 was called Opportunity Centred Learning (OCL) followed by a modified version Opportunity Centred Entrepreneurship (OCE) in 2007. For Rae (2003; 2007), learning and entrepreneurship are behavioural and social processes where learning is not only an individual process of knowing but also acting interaction with others. Rae's learning models support learning of entrepreneurial and enterprising capabilities, where the role of a teacher is to faciliate students' learning practises. He encourages participants to develop leadership and team

working skills for ventures to grow and individuals to enjoy their unique contributions they can make. (Rae 2007, 41-44.)

The ability to collaborate and lead teams is a key success factor in any project, whether an entrepreneurial team starting and developing a new business or another similar project is concerned. Unfortunately, teachers are not always supporting team's skills development and team leadership. Holmer (2001, 590) asks a relevant question : *Will we teach team leadership or skilled incompetence? The challenge of student project teams.* She argues that students are not always provided with enough support by teachers to develop team work and leadership skills. The lack of team work support by teachers signals to students that team work is not important for passing a course. This can lead to behaviours detrimental to the development of team skills and team leadership skills.

This study takes part in a discourse to support a needed paradigmatic shift from teacher centred to student centred learning in entrepreneurship programmes and courses. This is achieved by constructing a learning model for teachers to support their work as entrepreneurship educators.

1.2 Context of the study

In each European country, entrepreneurship education research originates from national interests, and this is the situation in Finland as well. The Finnish government, and Finland as a member of the EU, has a strong political will to promote entrepreneurship education in the Finnish educational system. Historically, Finnish entrepreneurship education has developed during three phases. The first phase took place in the 1950s and 1960s when education was called economic education. The second phase started in the 1980s when entrepreneurial training gained a foothold in education. The third phase, which started around the 1990s, was when entrepreneurship education gained ground, and was triggered by a difficult economic recession, when voices were raised demanding young people seek self-employment at least at some point in their career rather than expecting others to offer employment. At that time educational institutions were seen as the appropriate places to offer entrepreneurship education and training for students to earn a living by themselves or improve employability. (Ministry of Education and Culture 2009, 25.)

The Finnish government policies for entrepreneurship education are derived from the European Union's (EU) entrepreneurship education policies. The Finnish Ministry of Education and Culture as a responsible actor for entrepreneurship education has applied a broad definition of entrepreneurship and designed development priorities for all types of education institutions: early childhood education, general education, vocational education, and higher education. The development priorities in Finnish higher education are to inculcate entrepreneurial attitudes, generate innovations, nourish

entrepreneurship during studies, perform joint research projects together with industry, and to promote growth-oriented business. To support the implementation entrepreneurship education activities, work-based learning environments are developed to integrate entrepreneurship more into learning situations. In addition, a teacher training is offered for teachers to implement entrepreneurship in teaching. Unfortunately, teacher training has faced challenges due to the low-level of participation of teachers in these training opportunities. (Ministry of Education and Culture 2009, 23-24.)

A key task in the future is to encourage educational institutions to adopt a more entrepreneurial operations culture which is flexible and encourages creativity, innovativeness, risk taking and cooperation where everyone needs to learn to work entrepreneurially. (Ministry of Education and Culture 2009, 16-17.)

The diffusion of entrepreneurship education into the Finnish educational system has been rather slow. In Finnish society, hard work, cooperation and achievement of common goals are key societal values which sometimes clash with individually oriented ideas of entrepreneurship education. (Ikonen 2006, 31-34.)

The Finnish education system is based on quality, efficiency, equity and internationalisation. An adult education is a tool to upgrade the competence of the adult population and assure national competitiveness in the future. The structure of the Finnsh education system is depicted in Figure 1:

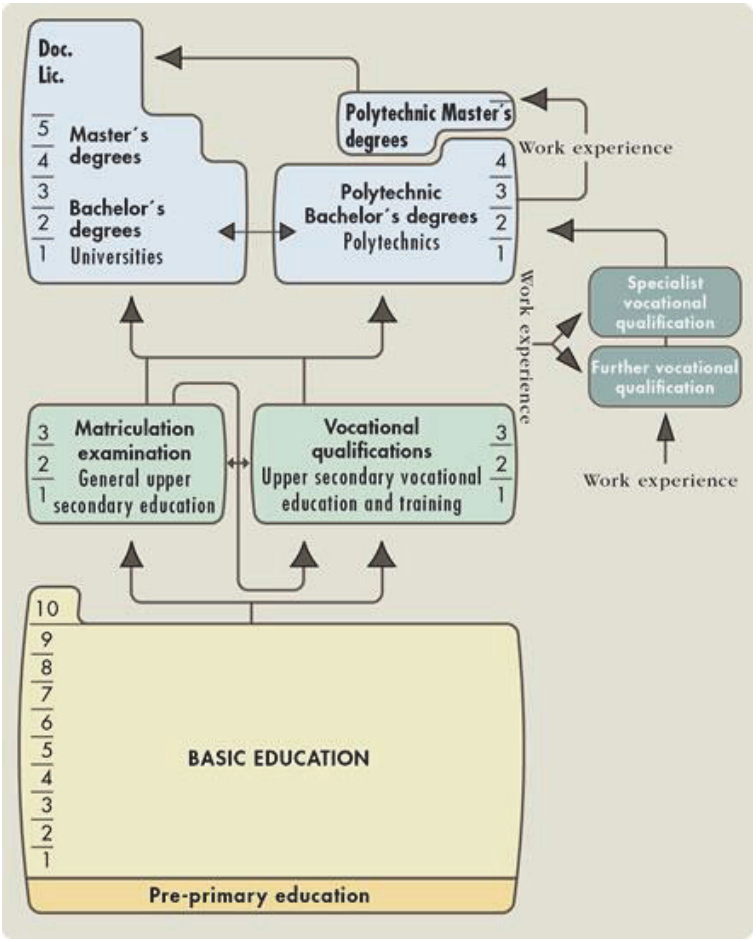

FIGURE 1 The overview of the Finnish education system (OPH 2012)

The Finnish educational system is a comprehensive one, and a basic education of nine years is compulsory for students between 7-16 years of age. After the completion of compulsory basic education everyone has an equal opportunity to develop themselves in further education free of charge. (OPH 2012.)

Finnish higher education is built on a dual system. Universities of Applied Sciences (UAS), also called polytechnics, are positioned next to traditional universities. The dual system is rather young in Finland. It started permanent operations only in 1996 when the need to increase the general level of education among the adult population arose due to societal as well as working life challenges influenced by globalisation. There are, of course, differences in the roles between traditional universities and UAS. Traditional universities emphasise research and instruction, whereas UAS are more practice focused institutions. (OPH 2012.)

The mission of UAS is "to provide professional higher education geared to the requirements of and development of working life, to support one's

professional development, and to carry out research and development that serves the education, the work life, the regional development and industry and commerce of the region" (ARENE 2011). The main strength of UAS is in its capability to react fast to societal and work life changes compared to traditional universities (Helakorpi and Olkinuora 1997, 22).

Currently there are 27 UASs in Finland which operate in eight different fields including business and administration. Bachelor Degrees, Master Degrees, professional specialisation studies, the open university of UAS and vocational teacher education are the main areas of educational possibilities. (ARENE 2011). The scope of a UAS degree (bachelor) is 210-240 ECTS which takes on average 3,5 or 4 years of full-time study (MINDEDU 2012).

Specific entrepreneurship education guidelines for universities of applied sciences are to "enhance R&D and to focus it especially to support and upgrade SME, to support transfer of business to the next generation, to establish a polytechnic master's programme in SME business" (Ministry of Education 2009, 24).

HAAGA-HELIA University of Applied Sciences (HH) educates students for business and services. Educational programmes can be found in the fields of business, hotel and restaurant, tourism management, information technology, journalism, management assistant training, sports management and vocational teacher education. (HAAGA-HELIA 2012a.)

The mission of HH is in line with the goals of entrepreneurship education set by the Finnish Ministry of Education and Culture as it states that:

> HAAGA-HELIA educates experts with customer service, strong sales and entrepreneurial skills. Our R&D&I activities focus on innovative products, services and business operations for the benefit of business and society (HAAGA-HELIA 2012b).

A pedagogical strategy is harnessed to achieve the mission of HH which encourages a student centred approach to learning and professional development. The roles of students, teachers and partners are clearly stated where the role of students is to be proactive and self-directive experts who are interested in personal development as well as motivated to develop their work and work community. Students set their own learning objectives and plan their studies within the framework of the curriculum. The roles of teachers are versatile. Teachers support students learning and personal development by planning, enabling, advising and motivating students' learning processes. Teachers facilitate students' learning processes by taking into account students' learning styles and starting levels. Students' and teachers' professional identity development takes place in a learning environment which supports social interaction. Teachers co-operate with students and different business and community stakeholders in work related projects. The participation of partners in work related projects is important not only to enrich learning processes but also provide opportunities for partners to develop their own operations and learn new competence. (HAAGA-HELIA 2012c.)

1.3 Research tasks

In this study, the research purpose and aim originate from a relevant practical problem in entrepreneurship education. The need for pedagogical models for teachers to support students' entrepreneurial behaviour, skills and attitudes through entrepreneurship appear to be lacking. T*he purpose of this study* is not to construct a totally new learning model, but to adopt Rae's (2003; 2007) learning model as a building block for an interventional strategy to enhance entrepreneurial learning and entrepreneurial behavior at a collective level and explicate the role of a teacher as a facilitator of students' learning process.

The aim of this study is to develop a model that supports teachers in their daily work to develop students' entrepreneurial behaviour, skills and attitudes in entrepreneurship programmes and courses and to understand the supporting role of a teacher in collective learning processes.

In order to fullfill this purpose and aim, the following research tasks are set:

I. To identify a practical problem in entrepreneurship education to be solved.

II. To utilise existing theory in entrepreneurship education, entrepreneurship teaching and learning to design a learning intervention which produces the key elements and processes for a learning model.

III. A learning intervention plan is tested with students who participate in the third-year marketing course in the International Business Programme at HAAGA-HELIA University of Applied Sciences, Finland.

IV. After implementing a learning intervention with students, a learning model is constructed.

V. The functionality of a learning model is tested with nine experts in entrepreneurship education in Europe (Estonia [1], Finland [5], France [2], United Kingdom [1]). This weak market testing of the learning model with experts aims for finding the main faults in the logic of the model.

The methodological choice for the study is the constructive research approach (CRA), which is a problem solving process through the construction of a model, plan or other procedure to meet the needs of the modern challenges faced by managers or teachers in this case. The constructive research approach is a

procedure through which new constructions are created. (Kasanen, Lukka & Siitonen 1993, 224.)

1.4 Some limitations of the research

Entrepreneurship education covers a variety of objectives, contents and audiences. Therefore, the focus in this study is on teaching and learning entrepreneurial capabilities in higher education institutions, specifically in the Universities of Applied Sciences (UAS). Therefore,

1) The study does not include primary, secondary or upper secondary education.

2) The study does not involve specific contents of entrepreneurship degrees and programmes, extracurricular activities, incubator or mentoring programmes.

3 The study excludes the discussion of the entrepreneurial univerisity, even though the teaching and learning of entrepreneurship plays a major role in the development of the entrepreneurial university.

4) The study does not include the technical knowledge of new venture creation processes, such as decisions of company forms, financing or other documentation needed in starting a business.

5) The focus of the study is on learning and teaching entrepreneurial behaviour and skills during a marketing course, but the content of marketing theories and models is not the primary focus of the study.

6) The study's focus is not on the interaction or cooperation among public authorities, businesses and universities (which plays a key role in social changes occuring).

1.5 Position of the study

This study is interdisciplinary and it combines and crosses boundaries of three academic disciplines; behavioural sciences, education sciences and business sciences. The position of the study is depicted in Figure 2. The focus, an Opportunity Centred Learning process, can be found in the intersection of these academic disciplines.

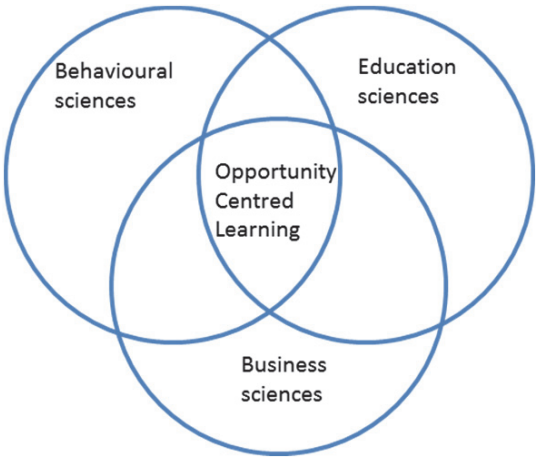

FIGURE 2 Position of the study

This study relates to behavioural sciences and it involves elements and processes from psychology and social psychology. It is also related to education sciences in its relationship with social constructivist learning theory and business sciences with its relationship with entrepreneurship.

1.6 Key concepts

1. Entrepreneurship is defined in this study based on European Parliament and Commission definition:

   Entrepreneurship is 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 day to day 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 and commercial activity (COM 2005).

2. An entrepreneur is defined broadly as "an undertaker, or someone who acts, make changes and disturbs the status quo" (Kirby 2007, 36).

3. Entrepreneurial behaviour involves activities that individuals autonomously generate when they creatively combine resources and identify and pursue opportunities (Mair 2002, 1).

4. Entrepreneurship education is defined in this study as "any pedagogical programme or process of education for entrepreneurial behavior, which involves developing certain personal qualities"(Fayolle and Klandt 2006,1)

5. Opportunity is defined as "the potential for change, improvement or advantage arising from our action in the circumstances" (Rae 2007, 3).

6. Collaborative learning combines individual and social learning where participants construct shared meanings and understanding by producing interactions where diverse viewpoints can be negotiated, co-ordinated and reflected upon to produce performance that no individual can do alone (Dillenbourg 1999, 13; Stahl 2003, 1;Hämäläinen, Manninen, Järvelä and Häkkinen 2006, 48).

1.7 Structure of the study

The research process is a cyclical and iterative process, whereas the final research report presents an organised content of the research process. The structure of this report is shown in Figure 3.

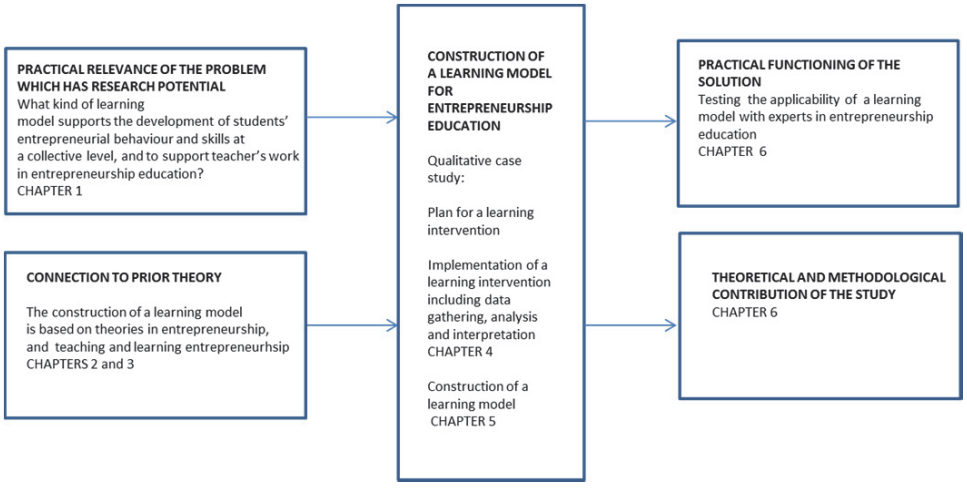

FIGURE 3 Structure of the study

Chapter 1 introduces the reader to the relevant problem in entrepreneurship education. The lack of pedagogical models for learning through entrepreneurship slows down the paradigm shift needed in teaching and learning entrepreneurship. To construct a pedagogical model which would not only facilitate teaching and learning entrepreneurship, but also construct a theory base in entrepreneurship education, teaching and learning.

Chapters 2 and 3 provide the reader a review of the existing theory base related on entrepreneurship education as well as teaching and learning entrepreneurship which provides elements for planning a learning intervention.

Chapter 4 introduces the reader to the research methodology of the constructive research approach and the qualitative case study approach. The construction of a learning model follows the procedure introduced in the constructive research approach methodology.

Chapter 5 provides the reader with the results of the analysis and interpretation process, and presents the constructed learning model.

Chapter 6 introduces the pragmatic benefits of the constructed learning model as well as the methodological and theoretical contributions of the research. The validity and reliability of the research are discussed.

2 ENTREPRENEURSHIP EDUCATION IN HIGHER EDUCATION

The need for entrepreneurship education arises from major environmental changes that shape national governments, organisations and individuals alike. For example, technological advancements in communication, technology and transportation, have influenced organisational life and that of the individual in many ways. Historically, the need for entrepreneurship and entrepreneurship education appears to emerge through transformational periods where major changes occur and people move from a predictable future into uncertainty and complexity (Kyrö, Lehtonen and Ristimäki 2007, 34).

In this era of globalisation and the interdependence of markets, individuals, organisations and nations are increasingly required to take care of themselves rather than relying on the help of someone else (Kirby 2007, 23). Many voices are raised (e.g. Gibb 2002, 45) that pressure societies, organisations and individuals to mould themselves into entrepreneurial societies. An entrepreneurial society requires individuals and groups to have entrepreneurial skills and the abilities to deal with and adjust their behaviour to changing situations (Henry, Hill and Leitch 2005, 101). They need to have more personal initiative to overcome barriers in work to achieve goals (Frese and Fay 2001,133).

In order to make societies and organisations more entrepreneurial requires that individuals become more entrepreneurial or enterprising. Many educational policy makers believe that entrepreneurship and enterprise education in educational institutions should focus on developing individuals' entrepreneurial activity (Garavan and O'Cinneide 1994, 3). This is also recognised by the European Union (EU), which has adopted entrepreneurship education as a policy tool for promoting the development of the entrepreneurial mindset and behaviours of citizens (NIRAS Consultants et al. 2008), and as a consequence entrepreneurship education has increased in HEIs (e.g. Menzies 2005, 287; Kuratko 2005).

Different approaches to entrepreneurship education and training programmes exist, but little uniformity is found in the programmes' objectives, contents, and delivery methods (Henry, Hill and Leitch 2005, 98). In addition,

the terms entrepreneurship and enterprise education are vague and the terms have differing meanings in different educational contexts.

In this chapter the concepts and objectives of entrepreneurship education and enterprise education in higher education are discussed. The three broad objectives of entrepreneurship/enterprise education combine the concepts of entrepreneurship/enterprise and education. Even though a variety of attempts are made to implement entrepreneurship education in higher education institutions many challenges remain which are contemplated in this chapter. Toward the end of this chapter the definition of entrepreneurship for this study is established followed by the discussion of two broad views to entrepreneurial opportunities and processes related to their formation and exploitation. These two views have different explanations of how entrepreneurial opportunities come to exist and how they are exploited which have implications on teaching and learning entrepreneurship.

2.1 Concept and objectives of entrepreneurship and enterprise education

The concept of entrepreneurship education involves two different domains; entrepreneurship and education. Entrepreneurship education is influenced by formal, informal and non-formal education. Formal education involves learning that takes place in educational institutions with the goal of achieving a recognised certificate. Informal education involves learning from everyday activities, which is not necessarily intentional and is influenced by print media, TV and the Internet as well as parents. Non-formal education involves learning alongside the mainstream education and involves educational activities offered at workplaces or other civil society organisations. Entrepreneurship education is formal education and provided in educational institutions. (Remes and Hietanen 2011, 4; Fayolle and Gailly 2008; Niras Consultants et al. 2000, 8.)

Education is about a socialising process that involves activities aiming to develop a person as a member of society. The core of education is learning and teaching, aiming for the transmission of values and accumulated knowledge of society to individuals. (Remes 2003.) Teaching aims for conscious and goal oriented learning and the role of the teacher is to motivate, guide and support learning and a student's personality development (Engeström 1994, 5).

The use of the terms entrepreneurship and enterprise education is not clear and these terms are used interchangeably. Anglo-American terminology and educational background have influenced the use of these terms (Kyrö 2005a, 181). In the UK and the USA, the concepts of enterprise and entrepreneurship education have different meanings compared with Continental Europe (e.g. Paasio and Nurmi 2006). Jones and Iredale (2010) differentiate the concepts of enterprise and entrepreneurship education in the UK educational system. Enterprise education emphasises active, lifelong learning and the development

of personal skills, attributes and knowledge to function as an active citizen, consumer, employee or self-employed person. For Draycott and Rae (2010), personal capabilities of self-confidence, self-efficacy, and ability to identify and act on opportunities are generic skills needed to cope with an uncertain and complex environment. Graduates with enterprising qualities not only have an understanding of economic values, but also of environmental, aesthetical and other values. (Drycott and Rae 2010, 127.) Entrepreneurship education in the UK system, on the other hand, emphasises on how to start, plan, manage and grow new ventures and develop the necessary knowledge, skills and behaviours to start and manage a business (Jones and Iredale 2010, 9-10).

The concept of entrepreneurship education is a commonly used term in Continental Europe, including Finland (Kyrö 2005a). Entrepreneurship education is used as a broad concept with the aim of the creation of an entrepreneurial mindset and skills. For example, Fayolle and Klandt (2006, 1) define entrepreneurship education as "any pedagogical programme or process of education for entrepreneurial behavior which involves developing certain personal qualities, which covers a variety of teaching and learning approaches."

Gibb (2002, 243) and Jones and Iredale (2010 9-10) argue that enterprise education focuses on the development of enterprising behaviours, attributes and skills in any context, whereas entrepreneurship education focuses on the development of entrepreneurial behaviours, skills and attributes in a business context. Kyrö (2005a) has come to the same conclusion and recommends keeping the concepts separate due to the different contexts.

Kyrö (2005b, 187) seeks an answer to a conceptual confusion over the concepts of entrepreneurship education and enterprise education by combining the concepts of entrepreneurship and education (Figure 4). These terms are not comparable, because the elements have different focuses. An entrepreneur is a person who learns, the target of learning is an enterprise (outcome or organisation), and the way of learning can be enterprising or entrepreneurial. These elements provide answers to two of the educational questions of what is learnt and how it is learnt. (Kyrö 2005b, 181; 187.)

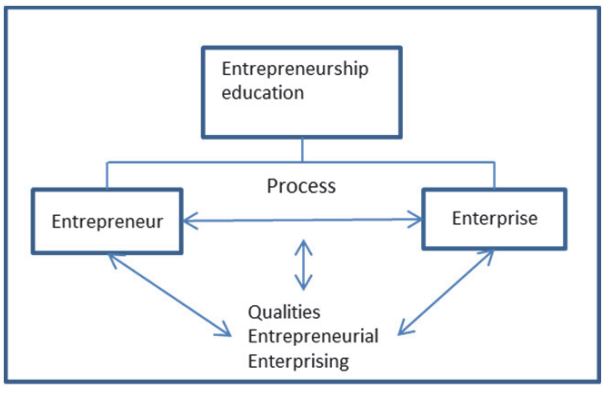

FIGURE 4 The framework for the elements of entrepreneurship education (Kyrö 2005b, 188)

Entrepreneurship education as presented by Kyrö (2005b, 188), provides the key dimensions and relationships of entrepreneurship education: an entrepreneur, an entrepreneurial or enterprising way of learning, and an enterprise as an outcome. Entrepreneurship education can be approached from one dimension or from the interaction between different dimensions. (Kyrö 2005b, 189.)

Three broad objectives are often cited as linking entrepreneurship and education (Gibb 1993, 22 ; Scott, Rosa and Klandt 1998,1 ; Hartshorn and Hannon 2005, 618 ; Kirby 2007, 21) based on the differing needs of individuals in their entrepreneurial process. Scott et al. (1998, 1) describe these three objectives as education about enterprise, education through enterprise, and education for enterprise. *Education about enterprise* involves educational activities that support individuals in becoming aware of the importance of enterprise and entrepreneurship for economic and social change. As a specific objective, students learn to start up and run a business in theory. Lectures and seminars can be used at all levels of education to promote and help people to understand entrepreneurship (Hytti and Gorman 2004, 12-14). The teaching orientation is cognitive, where the focus of learning is on rationality and reasoning (Kyrö and Carrier 2005, 28).

Education through enterprise utilises a student centred pedagogical style and real world projects to enhance the education process itself (Scott et al. 1998,1). The goal is to learn to become entrepreneurial, and to be active and responsible for one's own life and career (Hytti and Gorman 2004, 12-14). Teaching is oriented toward individuals' affective and conative constructs, and learning focuses on finding knowledge, creating knowledge, and new ventures (Kyrö and Carrier 2005, 28). Kirby (2007, 21) argues that a minority of educators focus on educating through entrepreneurship, which utilises an entrepreneurship process in developing students' entrepreneurial behaviours and mindsets.

Education for enterprise aims for the development of entrepreneurs for entrepreneuship as well as for creating new ventures (Scott et al. 1998,1). The aim is that individuals be encouraged to start a business. They are taught the necessary knowledge and skills needed to be capable of starting and managing a business. (Hytti and Gorman 2004, 12-14.) Teaching is oriented toward individuals'conative and cognitive constructs, and learning focuses on the will and competence to start a business (Kyrö and Carrier 2005, 28).

All three broad objectives to entrepreneurship and enterprise education are important. It appears that educating about entrepreneurship dominate in entrepreneurship education programmes and courses in HEIs. The contemporary challenges of entrepreneurship education is discussed next.

2.2 Challenges of entrepreneurship education in Higher Education Institutions

Entrepreneurship education faces many challenges in European Higher Education Institutions (HEIs). The first European survey (2008) on the current state of entrepreneurship education in Europe was carried out in 31 countries in Europe in not only business and technological institutions but also medical, art and design, natural science and humanities departments to cover a wide variety of entrepreneurship education approaches. The broad definition of entrepreneurship education was applied in the survey by assuming the role of HEIs to encourage students in entrepreneurship, to foster an entrepreneurial mind set and to provide relevant entrepreneurial skills which have a positive impact on future economic growth, innovation and employment. (Niras Consultants et al. 2008.)

A survey provides worrisome results, indicating that over half of the student population or approximately 11 million students at HEIs in Europe do not even have access to curricular or extracurricular activities which promote entrepreneurship. On the other hand, 21 million students at HEIs have the possibility for entrepreneurship education. Students who study at business or technical schools are most likely to be engaged in entrepreneurship education. Key drivers for successful entrepreneurship education at HEIs were found to be active top management who promotes the teaching of entrepreneurship in their institutions. On the other hand, some institutions had successful programmes due to dedicated individuals. Eventually, the successful implementation of entrepreneurship education at HEIs depends on joint actions from top management and active teachers and staff to promote entrepreneurship education in their institutions. Many HEIs are only starting to develop infrastructures for entrepreneurship education such as entrepreneurial centres, departments and incubators. The most common teaching methods for entrepreneurship education were found to be the use of project work, lectures, cases and guest speakers. The study indicates that the most effective teaching methods in entrepreneurship education are different from traditional teaching. In many HEIs, teacher training lacks the promotion of entrepreneurship education. (Niras Consultants et al. 2008, 1-7.) The survey results are not suprising, and it appears that educational institutions have not been capable of adopting policy recommendations set by the European Union and national governments.

Contemporary challenges for entrepreneurship education lie in its history, both research and practice. Researchers in psychology were the first ones to study entrepreneurship in the 1960s and onwards. Researchers focused on personality characteristics that are common among successful entrepreneurs. The trait theory represents a static view of entrepreneurship by ignoring the role of learning in the development of entrepreneurial competence. This has

influenced how teachers perceive entrepreneurship and whether it can be taught (Faoylle and Gailly 2008).

Many policy makers and teachers define entrepreneurship narrowly as a process of new venture creation (Gibb 2005) rather than broadly as developing entrepreneurial mindset and skills. The lack of a generally agreed definition of entrepreneruship, and subsequent problems in entrepreneurship research and theory development, have forced many educators to seek potential teachable theories in other disciplines (see more e.g. Fiet 2000a). As a consequence, management theories have filled the void in entrepreneurship teaching and business plan project has become an important tool for learning entrepreneurship (Blenker, Dreisler, Faergeman, and Kjeldsen 2006; Kyrö 2005a). Business planning originates from management education (Carrier 2005; Honig 2004), and it was first introduced at the beginning of the 20th century (Honig 2004).

Despite the widespread use of business planning in entrepreneurship courses, there is little evidence that business planning has a positive influence on new venture performance. The research by Schwenk and Shrader (1993) found a positive relationship between formal strategic planning and small business performance. Lange, Mollov, Pearlmutter, Singh and Bygrave's (2007) study on the relationship between a written business plan prior to a new venture launch, and its impact on subsequent performance, indicate no relationship between the business plan and new venture performance. Honig and Karlsson (2002, 42-43) found that many companies make plans because they think that they are expected to plan; so they imitate others who plan or they are told to plan.

Kyrö and Niemi (2008, 39) reveal three core aspects of business planning which have an impact on teaching and learning entrepreneurship:

1. Business planning is regarded as an objective, isolated phenomenon excluding individual competences and contribution as well as creativity, motivation and volition, thus also excluding individual and contextual factors and processes as well as innovativeness.

2. Its normative and static form follows a linear and rational logic and focuses on an existing idea and situation also excluding innovative learning and development.

3. It assumes that business planning and consequently learning is a static and functional series of operational planning activities.

Business planning projects are based on the cognitive learning tradition which focuses on knowledge transmission rather than knowledge acquisition (Kyrö and Carrier 2005). With the emphasis on a linear, normative and static process, business planning does not provide opportunities for students to utilise their competence, creativity, motivation and volition in a learning process. Instead of focusing on business planning and knowledge transmission, pedagogy should focus on skills and competences needed in entrepreneurship (Binks, Starkey and Mahon 2006, 3). This requires changes in the roles played by teachers and students in learning processes (e.g. Jones and Iredale 2010, 13; Kickul and

Fayolle 2006; Kyrö 2005a; Gorman, Hanlon and King 1997). Hence, a move from a teacher centred learning approach toward a student centred learning is needed. One reason for the use of business planning in entrepreneurship education especially in business schools might be that it offers a clear outcome product which is easy for teachers to evaluate (Honig 2004). On the other hand, the dominance of the business plan project can distort learners' understanding of what entrepreneurship is and what behaviours, attributes and skills are needed in creation and developing a business or to become an entrepreneur.

2.3 Approaches to entrepreneurship

Entrepreneurship is a multidisciplinary subject which can be studied from different perspectives, for example, psychology (e.g. McClelland 1961), sociology (e.g., Gartner 1989) and economy (e.g., Schumpeter 1934, Kirzner 1973). Each different perspective sets its own understanding and definitions for entrepreneurship. Due to the multidisciplinary nature of entrepreneurship, no universal definition of entrepreneurship can be found. The concepts of entrepreneurship can be categorised in a variety of ways. van der Sijde, Ridder, Blaauw and Diensberg (2008, 2-3) found four different approaches to entrepreneurship that influence how entrepreneurship is taught: 1) entrepreneurship as realising opportunities, 2) entrepreneurship as a set of competence, 3) entrepreneurship as starting a business and 4) entrepreneurship as managing a small company. In a similar way, Davidsson (2003 in Bjerke 2007, 16) found three different principles by which to define entrepreneurs and entrepreneurship: 1) entrepreneurs defined by skills they possess, 2) entrepreneurship defined in terms of processes and events, 3) entrepreneurship defined by its end outcomes. No clear cut categorisations among different definitions can be made and definitions overlap with each other.

Entrepreneurship, as defined by its outcomes, can be found in Gartner's (1989, 47) definition as "*entrepreneurship as starting or creating an organization to exploit an identified business idea.*" Also, Low and McMillan (1988) acknowledge entrepreneurship as the creation of new organisations, but they emphasise that entrepreneurship occurs in a variety of contexts. Hisrich and Peters' (1998, 6) focuses on value creation, hard work, risks and rewards.

Gibb (2005,46) defines entrepreneurship in terms of "*sets of behaviours, attributes and skills that allow individuals and groups to create change and innovation and cope with, and even enjoy, higher levels of uncertainty and complexity in all aspects of their life.*" Hence, the emphasis is on entrepreneurial competence demonstrated by entrepreneurs. Koiranen and Ruohotie (2001, 103) define entrepreneurship as "*neither a profession nor a career, but a cognitive, affective and conative process intended to increase value through creation, revitalization and/or growth.*" Gibb and Koiranen represent the view that entrepreneurial competence is an integral part of everyone's everyday life. Gibb's and Koiranen's definitions are similar to that of Laitinen and Nurmi (2007, 79), who

view entrepreneurship from a perspective of active citizenship. The broad definition of entrepreneurship is also the official view of European Parliament and Commission, which defines "*Entrepreneurship is 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 day to day 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 and commercial activity*" (COM 2005). It is a key competence for all to support young people to be more creative and self- confident whatever they like to do (EU 2008).

Entrepreneurship defined by processes and events are common in present day entrepreneurship definitions. Gartner, Bird and Starr (1992, 13) view entrepreneurship as a process of 'emergence.' The process focused definitions recognise the important role of opportunity. According to Shane and Venkataraman (2000, 18), entrepreneurship is not only about entrepreneurs who create new ventures, but it is about the nexus of enterprising individuals and lucrative opportunities. For Shane and Venkataraman (2000) entrepreneurship as a field of research is interested in studying the sources of opportunities and processes of discovery, evaluation and the exploitation of opportunities. Carswell and Rae (2000, 150) define entrepreneurship "*as a process of identifying opportunities for creating or releasing value, and forming ventures which bring together resources to exploit those opportunities.*" The entrepreneurship process is non-linear and discontinuous (Deakins and Freel 1998, 151).

It has, however, been acknowledged that behind each major innovation, is a team rather than an individual who identifies an idea and turns it into an innovation. In addition, teams are often a more effective form of organisation compared to individual work in globalised, dynamic and fast changing environments. The role of teams in entrepreneurship literature has started to appear in recent years as well (e.g Harper 2008; Cooney 2005: Kamm and Nurick 1993). The key advantage in team work is the opportunity to utiilise team members' variety of skills to produce performance which is not possible for an individual alone.

Even though different definitions of entrepreneurship exist, it appears that entrepreneurship is related to human beings whose actions are related to venture creation, innovation, opportunity recognition and exploitation (Kyrö 2005a, 79). According to Bjerke (2007, 17-18), similarities can be found between entrepreneurship and marketing in that both have an interest in new value creation. However, marketing does not always create new value, which is central in the entrepreneurship process.

The concept of *enterprise* has a variety of meanings. It can mean a business organisation (Encyclopaedia Britannica online), but it can also mean the utilisation of enterprising attributes in any context (Gibb 1987, 11). An enterprising individual has the following attributes: initiative, strong persuasive powers, moderate rather than high risk-taking ability, flexibility, creativity, independence, autonomy, problem solving ability, need for

achievement, imagination, high belief in controlling their own destiny, leadership and hard work. (Gibb 1987, 6.)

2.4 Entrepreneurial process from an opportunity to action

As discussed earlier, the contemporary interest in entrepreneurship is focused on the emergence of entrepreneurial opportunities and processes related to it. Understanding these processes facilitates understanding how an entrepreneurial process from an opportunity to action is constructed and what implications it may have on teaching and learning entrepreneurship.

To define an opportunity first is not an easy task. Entrepreneurship researchers have approached the concept of opportunity and related processes from many different theoretical perspectives. For example, Dubin's (1987) theory building framework (Ardichvili, Cardozo and Ray 2003; 105), social cognition theory (Gaglio 2004, 533), experiential learning theory (Corbett 2005), organisational theory (Dutta and Crossan 2005, 425; Lumpkin and Lichtenstein 2005), and discovery and creation theory (Alvarez and Barney 2007; 123), creativity (Dimov 2007; 713), enterprise education (Rae 2003). Hansen, Shrader and Monllor (2011, 283) found considerable fragmentation in defining opportunity both at the conceptual and operational levels.

Earlier, many entrepreneurship researchers took opportunities for granted (Companys and McMullen 2007, 302), until Shane and Venkataraman (2000) moved the focus toward opportunity discovery and exploitation. The two approaches, the discovery and creation views, aim for explaining the formation and development processes of entrepreneurial opportunities, but the entrepreneurial actions are different in both. An entrepreneurial action is action that entrepreneurs take to form and exploit opportunities (Shane and Venkataraman 2000, 221). The discovery view appears to dominate over the creation view with more advanced theory development and empirical testing (Berglund 2007). Understanding the general nature of these approaches help to understand entrepreneurial actions and learning involved in the process.

A discovery view on opportunities (Shane and Venkataraman 2000; Shane 2003; Delmar and Shane 2003) originates from Neoclassical and Austrian economics (Berglund 2007, 246), and relies on a realist philosophy based on positivism. It assumes that reality has an objective existence independent of an individual's perceptions and an entrepreneur is needed to discover them (Alvarez, Barney and Young 2010, 23-26). This is summed in Shane and Venkataraman's (2000, 220) definition of entrepreneurial opportunities as:

> Entrepreneurial opportunities are those situations in which new goods, services, raw materials, and organization methods can be introduced and sold at a greater price than their cost of production. Although recognition of opportunities is a subjective process, the opportunities themselves are objective phenomena that are not known to all parties at all times.

Shane (2003, 251) visualises a discovery and exploitation process of entrepreneurial opportunity (Figure 5). The discovery and exploitation of entrepreneurial opportunities are influenced by individual and environmental factors. It is a linear process where an entrepreneurial opportunity is discovered and exploited through resource assembly, organising and developing a strategy.

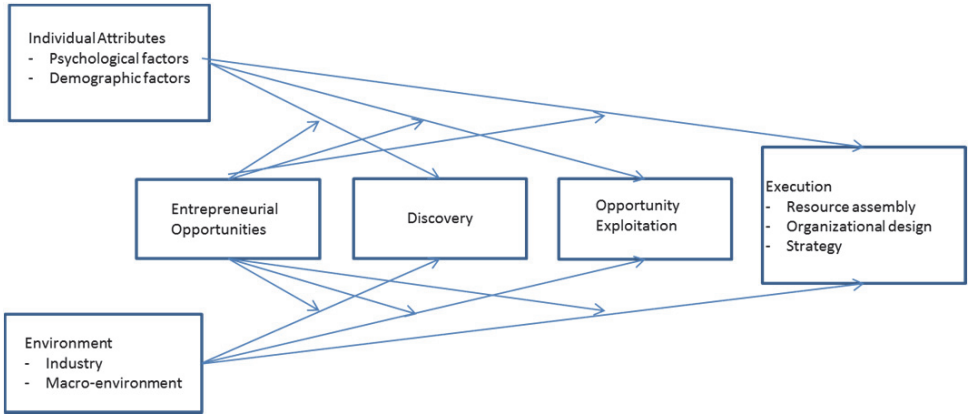

FIGURE 5 A model of the entrepreneurial process (Shane 2003, 251)

Due to the supposed objective nature of opportunities, they are assumed to arise exogenously from competitive market imperfections, such as technology and in changes in market preferences (Shane 2000). In a similar way, Dracker (1985, 30) identified seven sources of entrepreneurial opportunities as unexpected occurrences, perception-reality incongruities, unmet process needs, changes in industry structures and markets, demographic changes, changes in public priorities, and new scientific knowledge. Economic value or profit potential of introducing new goods, services, raw materials and organising methods differentiate entrepreneurial opportunities from other market opportunities (Companys and McMullen (2007, 303).

Entrepreneurial opportunities differ in different contexts, and entrepreneurs are not equally likely to discover the same opportunities due to differences in prior knowledge and experiences (Shane 2000, 448; Eckhardt and Shane 2003, 336). Hayek argues that knowledge is incomplete, contradictory and dispersed among individuals (Hayek 1945, 520). An underlying assumption of realist philosophy is that knowledge is assumed to be informative, reliable and useful (Alvarez et al. 2010, 26). In the context of discovery view, decision making is perceived to be risky due to the objective nature of opportunities. Entrepreneurs handle risk by collecting and analysing information to predict any possible outcomes (Alvarez and Barney 2007, 130).

Opportunity search can be an active or passive process. Kirzner (1979) argues that an alert entrepreneur can discover opportunities without actively searching them. The concept of alertness is unambiguous and difficult to measure, but involves judgement in evaluating information and changes in markets which indicate profit potential (Tang, Kacmar and Busenitz 2010, 1).

Fiet (2007, 593) argues that systematic searching is a more viable way of discovering opportunities than being alert. Smith, Matthews and Schenkel (2009, 38) view entrepreneurial opportunities as a continuum where more codified opportunity discoveries are based on systematic searching and more tacit opportunities are discovered based on prior experience.

Experience influences on opportunity recognition. Baron and Ensley's (2006) study indicated that expert entrepreneurs have richer and more relevant images of opportunity than novice entrepreneurs. Mitchell and Shepherd (2010, 138) argue that entrepreneurs are different and they perceive opportunities differently and make decisions based on images of themselves and opportunities underlying opportunity recognition.

After an opportunity is discovered, it is exploited. Delmar and Shane (2003, 1165) argue that business planning is a key precursor in the exploitation of opportunities where an entrepreneur utilises information and knowledge to describe an opportunity and how it is to be exploited.

Business planning as a predictive process is depicted in Figure 6. It assumes that a products or service is discovered, followed by market and competitor research, a business plan development, resource acquisition and stakeholder commitment. When planning is completed, implementation starts with the focus on environmental adjustment and protection of competitive advantage. (Sarasvathy 2001; Read, Dew, Sarasvathy, Song and Wiltbank 2009, 4.)

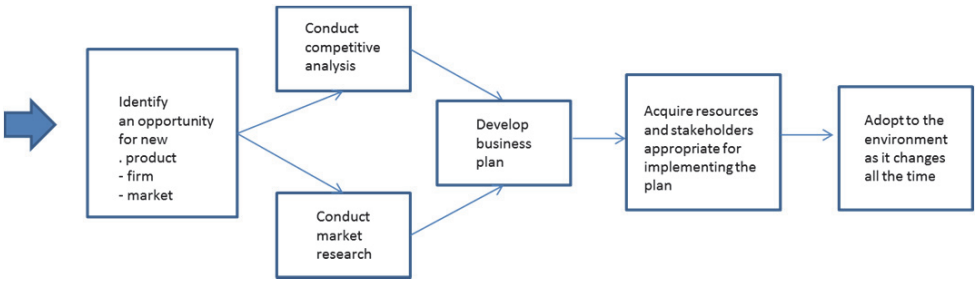

FIGURE 6 Predictive process (Read, Dew, Sarasvathy, Song and Wiltbank 2009,4)

Business planning is a goal oriented process where existing resources are used to produce the goal. New opportunities, in the form of products and services, are pursued based on the expected value that they produce in the future. The aim is to predict the future in order to control it and risks are adjusted to the expected future value of products and services. The protection of market share from competitors is important for the overall success of a company. The overall idea of planning and prediction is to avoid surprises from external events. (Sarasvathy 2001, 243; Reid, Dew, Sarasvathy, Song and Wiltbank 2009, 3.)

The predictive process works in markets where demand, supply and existing institutions are already present and working (Sarasvathy and Dew 2005, 537). The challenge of the predictive process is to explain a new market creation process. Sarasvathy and Dew argue (2005, 537) that new markets have incomplete information and multiple combinations of how to satisfy demand and supply. A new market creation is therefore characteristically uncertain, involves time lags and is risky.

The roots of creation view on entrepreneurial opportunities (e.g., Sarasvathy 2001) originate in radical subjectivism where the entrepreneur's imagination and creativity are emphasised. Knowledge about the future is unknown, but knowledge and experiences are the input of an imaginative entrepreneur. In this view, an entrepreneur's actions are creative but bounded by imagination. (Berglund 2007, 249.)

Opportunities are viewed as subjective perceptions or images which drive entrepreneurial action. Entrepreneurs enact these images through social interaction and the mobilisation of resources and create opportunities. (Edelman and Yli-renko 2010, 848.)

Sarasvathy's (2001) effectuation logic is based on the creation theory. Its focus is on explaining new market creation. The effectual logic is an invert from the predictive process. The effectual process is depicted in Figure 7. Expert entrepreneurs are found to assess and imagine different alternative uses for the means. They interact with suppliers, investors, partners and customers who share their resources with the entrepreneur. Through interaction, they co-create new artifacts and 'precommit' themselves to the venture. Risks are reduced through strategic partnerships with the aim of eliminating the need to control the future. Suprises appear during the process that can lead to new

opportunities. (Sarasvathy 2001, Read, Dew, Sarasvathy, Song and Wiltbank. 2009,4.)

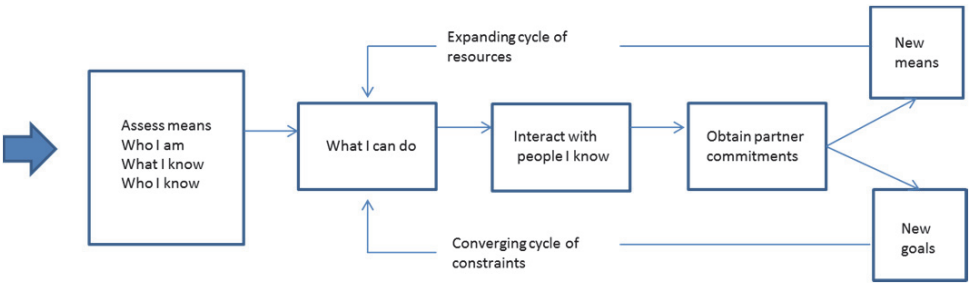

FIGURE 7 The Effectual process (Read, Dew, Sarasvathy, Song and Wiltbank 2009, 4)

Effectual logic is a social stakeholder dependent process. Stakeholder dependent processes set in motion two cycles. In the first cycle, each stakeholder expands the resource pool for a potential venture, and in the second cycle, each stakeholder increases the constraints on the venture which converges into potential new goals over time. The new means or goals are unknown at the beginning of the process, because the process is dependent on who participates in the process and which means they bring to it. In an effectual process, entrepreneurship is seen as an inductive process where individuals in interaction with the environment introduce new services or products which originate from human action in cyclical, non-linear and iterative processes which may or may not create new businesses. (Read et al. 2009, 3-4.)

In summary, the purpose of this study is to construct a learning model to support teachers to develop students' entrepreneurial behaviour, skills, and attitudes in higher education institutions. In order to construct a learning model, the researcher needs to establish an appropriate definition for entrepreneurship which influences on how entrepreneurship can be learnt and taught. The variety of definitions of entrepreneurship was presented and many of them related to a new venture creation process. In this study, the broad definition of entrepreneurship by European Commission and Parliament (2005) is adopted. The broad definition of entrepreneurship focuses not only an individual's capabilities to generate new ideas but also to turn these ideas into practise. This is not usually the case in business plan projects which does not require the implementation of the plan. The broad definition also focuses on an individual's abilities to plan and manage projects to achieve objectives as well as seize opportunities. It seeks individuals to enhance their creativity, innovation and risk taking abilities. It is in these processes where an individual learns entrepreneurial knowledge, skills and attitudes to take responsibility of one's own life, career or to start a new business.

Opportunity, and processes related to its formation and exploitation, is a central concept in an entrepreneurial process (Shane and Venkataramn 2000). It is in this opportunity centred process where an entrepreneur learns entrepreneurial behaviours, skills and attributes (e.g., Gibb 1993; Rae 2007). This

opportunity centred learning process is also adopted in this study. Contemporary views on entrepreneurial opportunities were investigated to gain insight to the underlying processes of opportunity formation and exploitation. Two broad views dominate the discussion about entrepreneurial opportunities: a discovery view (Shane and Venkataraman 2000; Shane 2003; Delmar and Shane 2003) and creative view (e.g., Sarasvathy 2001; Read et al 2009). The discovery view focuses on an individual and his or her cognitive abilities to discover new service and product ideas from external environment. It also focuses on business planning prior to the exploitation of opportunity where risks are handled by predicting the future. In conclusion, the discovery view favours the development of an individual cognitive processes, linear planning and rational thinking over social factors.

In a creative view (e.g., Sarasvathy 2001; Read et al. 2009), an entrepreneur's imagination drives entrepreneurial action in an entrepreneurial process. In this process, an entrepreneur interacts with different stakeholders (suppliers, investors, partners and customers), and it is in these interactions, where resources are put to new use and new ideas are co-created with stakeholders and risks are shared. It emphasises on social factors of learning and creativity in the process of opportunity formation and exploitation.

In this study, neither of the two views on entrepreneurial opportunities is chosen in its pure form, but the strengths of both views are combined in the planning of a learning intervention. The strength of the discovery view (Shane and Venkataraman 2000; Shane 2003; Delmar and Shane 2003) is in its emphasis on an individual's cognitive processes in the discovery of opportunity. Cognitive processes are critical in any entrepreneurial process and existing knowledge and experiences can be used to discover new product and service ideas from external environment. A business planning process as a predictive process (e.g., Read et al. 2009) is not considered as important in this study as it is in business planning projects. Business plan projects do not require the practical implementation of the plan which is seen as a cornerstone in this study. The creative view, on the other hand, aims to explain new market creation. It is assumed in this study that students do not often create new markets even though it can be possible in the different forms of start-up schools. The creative approach has its strengths in its emphasis on social dimension of learning and creativity.

3 APPROACHES TO LEARNING AND TEACHING ENTREPRENEURSHIP

An individual develops their worldview in interaction with the physical and social environment which is not only based on cognitive structures, but also with emotions and motivations which are an important part of creation of this worldview. (Rauste-von Wright, von Wright and Soini 2003, 50.) Learning is a complex phenomenon, and as such no generally agreed definition of learning exists. Mumford (1995, 4) connects learning to an individual's knowing and realising something that he or she did not know before and/or doing something that the individual could not do before. Mowrer and Klein (2001, 2) compared different definitions of learning and concluded that learning is "a relatively permanent change in the probability of exhibiting certain behaviour resulting from some prior experience (successful or unsuccessful). Jarvis (2009, 35), on the other hand, emphasises the holistic nature of a learning process which is a lifelong process triggered by experiences. In general, learning can be of many types, but the common feature of learning is that it is connected to action and serves effective action (Rauste-von Wright et al. 2003, 51).

Due to the variety of approaches to learning, it is useful to study the different processes and dimensions underlying a learning process. According to Illeris (2009), certain fundamental processes and dimensions of learning are present in all learning approaches even though the emphasis is different.

All learning theories have two fundamental processes: an individual's psychological process of acquisition and elaboration and an individual's interaction with the external world. These two processes are integrated not only with each other but also to three learning dimensions: content, incentive and integration which are all always present in a learning process. (Illeris 2009, 9-10.)

A content dimension involves what is learnt, for example, knowledge, skills, values, and ways of behaviour, insight, methods and strategies. The individual strives to construct meanings and abilities from content to work better and more efficiently in order to develop their functionality. An incentive dimension directs mental energy and the learning process. It consists of

motivation, emotion and volition. Through these elements, an individual seeks mental and body balance and develops a personal sensitivity. An interaction dimension triggers a learning process by sending impulses from external environment to an individual's psychological process. The individual receives these impulses in forms of perception, transmission, experience, imitation, activity or participation. These impulses are integrated to an internal acquisition and the elaboration process. Through an interaction process, the individual is integrated into community and society which builds an individual's sociality. (Illeris 2009, 9-12.)

Entrepreneurial learning is a holistic process. Koiranen and Ruohotie (2001,103) argue that the focus in entrepreneurship education should not only be on the development of cognitive capabilities, but also affective and conative areas need to be developed. Snow, Corno and Jackson (1996, 243-244) introduce the taxonomy of personality and intelligence which provides a holistic picture of different constructs involved in each learning situation. In this taxonomy, a personality construct is subdivided into affection and conation, and an intelligence construct into conation and cognition. English and English (1958 in Snow, Corno and Jackson 1996, 243) describe the constructs of cognition, affection and conation as follows:

> Cognition is a generic term for any process whereby an organism becomes aware or obtains knowledge of an object. It includes perceiving, conceiving, judging, and reasoning.
>
> Affection is a class name for feeling, emotion, mood, temperament…a single feeling-response to a particular object or idea…the general reaction toward something liked or disliked…the dynamic or essential quality of an emotion; the energy of an emotion.
>
> Conation is the aspect of mental process or behavior by which it tends to develop something else; an intrinsic "unrest" of an organism…almost an opposite of homeostasis. A conscious tendency to act; a continuous striving…It is now seldom used as a specific use of behavior, rather for an aspect found in all. Impulse, desire, volition, purpose, striving all emphasize the conative aspect.

Temperament and emotion are parts of affection. Traits are biologically determined, whereas the characteristics of mood are more situation specific. Values are integrated to temperament and change more slowly than attitudes which are more situation specific. Conation initiates and maintains purposive action. Motivation and volition form conation. Motivation is predecisional and initiates goal directed behaviour. Motivation involves intrinsic or extrinsic goal orientations. An intrinsic motivation originates within an individual and an extrinsic motivation originates from external rewards. Volition on the other hand performs a post decisional role of enacting and implementing goals. It regulates individual learning processes. Cognition on the other hand involves both declarative and procedural knowledge. Declarative knowledge involves factual knowledge whereas procedural knowledge involves skills and strategies to do something. (Snow et al. 1996, 247.)

3.1 Different approaches to learning

Behaviourism, cognitive learning and constructive learning dominate Western learning theories. Learning theories represent a society's view of the world, human beings, and how to acquire knowledge. Each learning theory therefore represents different underlying ontological and epistemological underpinnings which represent different conceptions of teaching and learning. (Kyrö 2005a.)

Behaviourism as a learning theory was dominant between the 1920s to 1960s. Reality exists and knowledge about it can be observed and predicted. It aims for acquiring knowledge which corresponds to reality. (Patton 2002, 91.) Hence, knowledge about reality originates from an objective world through an individual's sensory system which detects knowledge and connects it to the mind leading to behaviour. Knowledge accumulates linearly and can be measured quantitatively. (Case 1998, 75-79.)

In a classroom setting where behaviourism guides learning, a teacher decides what knowledge students need to learn in the course. A teacher controls classroom learning by dividing a large knowledge area into smaller pieces in order to observe students' learning and to reinforce the right behaviour immediately. Students are assessed through examinations which measure students' abilities to give the right answers to problems. (Lindblom-Ylänne and Nevgi 2003, 85.) Behaviourism is criticised to be too simple in explaining learning process. Even though it can be argued that students need to memorise basic concepts before they can understand broader concepts, the main criticism is focused on the roles of the teacher and students in the learning process. The role of a teacher is to be an active transmitter of knowledge whereas students are passive receivers of knowledge. This influences on students' abilities to develop their thinking and understanding of the content area. This teacher centred approach can lead to students' misconceptions that there is right knowledge and that the teacher possesses this knowledge. (Lindblom-Ylänne and Nevgi 2003,89.)

Historically, cognitive learning started to develop in 1950 at a time when behaviourism was criticised as inadequate to explain human learning. Scientists from computer science, psychology, linguistics and other social sciences joined forces to investigate human internal cognitive processes influencing human behaviour. An especially important role was played by computer science which compared the human mind to computers and considered humans as information processors. Cognitive researchers, with the help of computers, simulated complex conceptual models of human cognitive processes. Cognitive processes appeared to be more complex than anticipated at that time. (Case 1998, 76.)

Cognitive learning theory was also influenced by the neoclassical economic theory which assumes that the human being is an individualistic, goal oriented and rational decision maker. Rationalism, with its view on the human being as efficiently capable of choosing right means to achieve given ends, has

influenced on cognitive learning theory. (Etzioni 1990, 1.) In a learning situation, the role of the teacher is to decide what knowledge students need to know, and how to organise and present this knowledge to students in a logical form. (Kyrö 2005a, 83.) A curriculum sets the direction and contents for courses (Lindblom-Ylänne and Nevgi 2003, 113). In this teacher centred approach, the focus of curriculum development is on specific content areas and knowledge defined by a teacher who has expertise in a field. A teacher controls both the teaching and learning processes. (Kickul and Fayolle 2006, 2-3.) The current focus in universities of teaching entrepreneurship as a knowledge transmission process hardly prepares students to cope with and even enjoy the entrepreneurial 'Way of Life' (Gibb 2002). Entrepreneurs utilise networks and relationships in problem solving and decision making (Taylor and Thorpe 2004, 203) which is a challenge in classroom learning.

As an outgrowth of cognitive learning, experiential learning theory (ELT) was developed by Kolb in 1984. It is not one of the three main learning paradigms, but it has influenced adult education, organisational learning and management training (Miettinen 2000, 55) as well as entrepreneurial learning (e.g. Politis 2005; Cope 2005). ELT describes learning as a recursive process of experiencing, reflecting, thinking and acting. It is a holistic adaptation to the world with a learner's subjective experiences as the centre of learning through which he or she controls one's behaviour. Learning takes place in interaction between an individual and environment. (Kolb 1984, 34-37.) Experiential learning is based on humanistic psychology which views a learner as active, experiential and willing to develop oneself. An individual is seen as a good and responsible actor in one's learning process. (Lindblom-Ylänne and Nevgi 2003, 91.)

Kolb's (1984) experiential learning model has two levels (Figure 8); a learning process and learning styles associated with different phases of a learning process. Kolb (1984, 41) defines learning as "a process whereby knowledge is created through transformation of experiences." This transformation process occurs through four interconnected phases: 1) a learner gets a concrete experience or reinterprets an existing experience, 2) a learner through reflective observation seeks inconsistencies in understanding, 3) a learner through reflection finds a new idea or modifies an existing abstract concept, 4) a learner experiments and applies an idea to action to gain new experiences which start a new learning cycle. (Kolb 1984.)

In a learning cycle, a learner adopts to different learning styles. A reflective theorist (I) acquires knowledge and adopts what has been learnt. A reflective practitioner (II) applies knowledge and performs action. An active practitioner (III) learns skills and attitudes needed in entrepreneurship. The active theorist (IV) starts to undergo changes of how he or she perceives the phenomenon i.e. entrepreneurship and starts to understand it and one's role in it. (Dreisler 2008,12.) According to Garavan and O'Cinneide (1994), entrepreneurs favour active learning styles, but in formal education, they often are required to adopt the reflective theorist style.

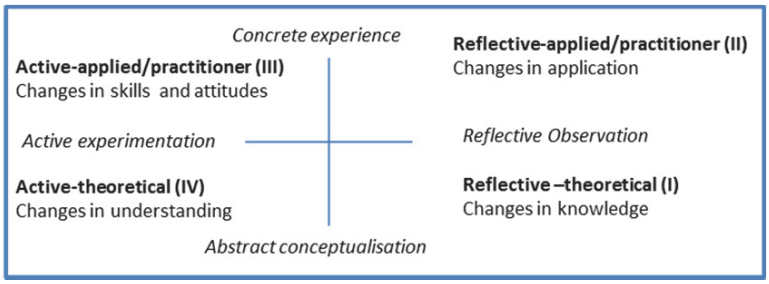

FIGURE 8 The conceptual grid of learning styles (Dreisler 2008, 12 modified form Kolb 1984)

Kolb's (1984) ELT has also received criticism over the years. The model is simple and easy to apply in practice, but does not involve learners' prior experiences in learning. It is also problematic to know whether students' experience leads to reflection, abstract conceptualisation and a potential change in behaviour, or whether students are still driven by routines. (Lindblom-Ylänne and Nevgi 2003, 95.) Taylor and Thorpe (2004) criticise Kolb's (1984) experiential learning as being a linear process and occurring in a context free environment. Jarvis (2009, 23) argues that ELT places too little emphasis on social learning processes.

Constructivism was born out from developmental and cognitive psychology with the main research contributions made by Bruner (1990), Kelly (1955), Piaget (1969), von Glaserfield (1993) and Vygotsky (1978) (in Young and Collin 2004, 8). Constructive learning theory is not one single theory, but many different approaches appear with the different philosophical presuppositions. Doolittle and Hicks (1999) describe three main constructivist approaches as radical, social and cognitive constructivism. These approaches are discussed next.

The basic philosophical principle of radical constructivism is that an individual's cognition actively constructs knowledge based on personal experiences. Reality is not known to an individual. Cognition functions as an adaptive process which organises an individual's experiences to make cognition and behaviour more viable in any given situations. The focus of radical constructivists is on an individual's subjective knowing and adaptation to the world. The role of other people and interaction with them are only part of an individual's experiences which are needed in an individual's active cognising processes. (Doolittle and Hicks 1999, 6.)

The principles of cognitive constructivist learning are driven from the philosophical roots of cognitive psychology. Constructivist learning is influenced by Piaget who describes learning as a process of assimilation and accommodation of knowledge based on experiences. (McCarthyGallagher and Reid 2002.) In contrast to radical constructivism, cognitive constructivist learning assumes knowledge to be objective, and a reality pre-given. An individual constructs knowledge in cognitive processes where environmental

and sensory information are absorbed to construct an accurate representation of that reality. Hence, the reality is reconstructed into an individual's mental structures. The role of other people does not play any significant role in an individual's knowledge construction process. (Doolittle and Hicks 1999, 8.) On the other hand, Dixon (1994, 34) argues that individual learning depends on collective learning which in turn depends on individual learning in an environmental context.

Whereas cognitive constructivist learning theories assume knowledge construction within an individual's cognitive processes, in social constructivism, knowledge is constructed in social interaction with others. Bakhtin (1984, 110 in Doolittle and Hicks 1999, 8) argues that knowledge is born between people in dialogic interaction in their collective search for truth. According to Doolittle and Hicks (1999, 29), an individual's mental models and knowledge are constructed through language in social interaction and negotiation processes. Social constructivism assumes that reality exists, but it is unknowable for an individual.

Social constructivists criticise cognitive constructivists for being dualistic. Bruner (2009, 160-161) tackles the problem with dualism by agreeing that the human mind constructs meanings from experiences through internal cognitive processes, but he highlights that meanings originate from the culture where they are created. Hence, meanings are culturally situated which provide the tools for human beings to organise and understand the world around them. This view emphasises that learning is culturally situated.

In social constructivist learning, the role of a teacher is to support student's learning and developmental processes. It is a student centred approach where students construct content of learning in social participation in the context. Hence, knowledge is defined by students and continually changing. Social constructivist learning assumes conceptual knowledge can be only fully understood in the context of its use which facilitates the changes in people's views of the world and adaptation to the culture in which it is used. Students are responsible of their own and others learning. (Lindblom-Ylänne and Nevgi 2003, 113.)

Situated cognition in learning emphasises learning as context dependent. Brown et al. (1989, 32-33) argue that knowledge is situated and it cannot be separated from a product of activity, context and culture where it occurs. Hence, knowing and doing are integrated rather than separated from each other. Contextual learning is opposite to the cognitive view of learning which emphasises individuals' cognitive processes independent of context. (Lindblom-Ylänne and Nevgi 2003, 101).

A matrix in Table 1 depicts the summary of roles of a teacher and students, sources of contents and an idea of knowledge in different learning theories. The matrix demonstrates how a teacher and content centred learning of behaviourism and cognitive learning are gradually moving toward social constructivist learning with a student centred approach. (Nevgi and Lindblom-Ylänne 2003, 113; Kember 1997, 262.)

TABLE 1 Different dimensions presented in different learning theories (Nevgi and Lindblom-Ylänne 2003,113; Kember 1997, 262)

Theory of learning	Behaviourism	Cognitive learning theory	Humanism	Constructivist	Socio constructivist
Role of a teacher	presenter	presenter	Teacher centred interaction	Facilitating understanding	change agent/ developer
Teaching	transfer of information	transfer of well-structured information	interactive process	process of helping students to learn	development of person and conceptions
Students	passive recipient	recipient, active experimenting	participant	student is responsible for one's learning	student participates in social learning situation and is also responsible for the learning of others
Content	pre-defined in curriculum	lecturer needs to order and structure material defined in curriculum	teacher defines contents based on one's expertise	constructed by students within teacher's framework	constructed by students, changing contents
Knowledge	possessed by lecturer	possessed by lecturer, student acquires knowledge through discovery and application	discovered by students but within lecturer's framework	constructed by student	socially constructed

The purpose of the study is to construct a learning model for supporting the development of students' entrepreneurial behaviours, skills and attitudes. It was stated in Chapter 1 that teaching and learning entrepreneurship needs more student centred rather than teacher centred approaches to learning. Therefore, it can be assumed that a student centred approach to learning supports the development of students' entrepreneurial behaviours, skills and attitudes.

In Table 1, the main learning theories are presented in temporal order and how learning and teaching are perceived in different learning theories. Behaviourism and cognitive learning theories follow a teacher centred learning approach. Both of these theories assume that a teacher has the 'right' knowledge which is transferred or presented to students. In behaviourism,

students are passive recipients of knowledge whereas in cognitive learning theory, an individual cognitively processes information and applies knowledge for case studies and exercises provided by the teacher. In cognitive learning theory, it is assumed then that the teacher presents the right knowledge and students apply it to solve problems correctly. This same logic applies in business planning projects where the contents of different business functions are presented by teachers and then applied by students in a business plan project. Typically, entrepreneurship books provide ready-made business plan outlines which set a clear structure for knowledge application.

An experiential learning theory (ELT) is based on humanistic psychology. It emphasises on an individual's subjective experiences as the centre of learning. It assumes that an individual who gains subjective experiences and reflects on them can control one's behaviour. Therefore, it can be assumed that an entrepreneur learns by gaining subjective experiences and reflecting on them. These entrepreneur's subjective experiences support deeper understanding about learnt knowledge.

In humanistic learning theory, the role of the teacher starts gradually shifting toward a student centred learning where a student is assumed to be active, self-directive and responsible for own learning practises.

It is constructive learning theories which shift the roles of the teacher and students in a learning process. Cognitive constructive learning assumes that a student constructs one's knowledge supported by the teacher. A discovery view (Shane 2003) on entrepreneurial opportunities can be explained by the cognitive constructive learning approach. In entrepreneurship courses, a student searches for the variety of ideas and combines these ideas together by producing new ideas. This process involves student's active knowledge construction process which is supported by a teacher's constructive feedback on ideas. Cognitive constructive learning theory assumes student's active role in a learning process, but the focus is still on an individual learning rather than social learning.

Social constructivist learning theory is a student centred learning approach which involves both individual and social aspects of learning. It assumes that students learn when they socially construct knowledge in interaction with other students within the context of its use. The role of the teacher is to create a learning environment which supports students learning and personal development. Students take responsibility of their own learning and others learning and they define what they learn and how they learn. Hence, in this approach, students are capable of developing their entrepreneurial behaviours, skills and attitudes.

A creation view (Sarasvathy 2011, Read et al. 2009) on entrepreneurial opportunities has the elements of social constructivist learning theory. When an entrepreneur shares ideas and resources in the network of other entrepreneurs, they socially construct knowledge in interaction and dialogue in social cultural environment. It is in these interactions where opportunities are created and developed into new resources and goals.

In this study, social constructivist learning theory provides the main approach to understand students' learning and development. It is a student centred learning approach where the role of a teacher is to support the development of students' entrepreneurial behaviours, skills and attitudes. This approach assumes that students are self-directive and take responsibility for their own learning and others' learning. The role of a teacher is to create a learning environment which is motivating and support students' learning and the development of entrepreneurial behaviours, skills and attitudes.

3.2 Entrepreneurial learning

In this section, the nature of entrepreneurial learning is described. Entrepreneurial learning is an approach within social constructivist learning theory. Entrepreneurial learning is a life-long learning process where learning occurs both at personal and social levels (Rae 2007). Entrepreneurial learning is based on subjective experiences and the discovery process (Politis 2005, 417). It takes place in the processes of opportunity recognition and action as well as in managing and organising ventures (Carswell and Rae 2000, 150). Entrepreneurs learn from critical events, which trigger reflective behaviour (Cope and Watts 2000,104) and produce a higher level of learning compared with incremental learning, which produces a lower-level of learning (Cope 2003, 429). Gibb (1997) argues that entrepreneurs learn by copying, problem solving, learning from their mistakes and discovery. Entrepreneurial learning is contextual (Rae 2007). Entrepreneurs acquire knowledge from several external sources such as reading newspapers and trade magazines, as well as attending seminars. They also visit business associates, private individuals and other professionals, such as accountants, bankers, lawyers and other consultants. (Young and Sexton 2003, 156.) Sometimes heuristics are beneficial in accumulating entrepreneurial knowledge, whereas sometimes they distort judgement (Holocomb, Ireland, Holmes Jr. and Hitt 2009, 167). The entrepreneurial process is an ongoing negotiated process of co-participation (Taylor and Thorpe 2004, 203).

Entrepreneurship is an action oriented change process where an entrepreneur creates new ideas and exploits them in a holistic, complex and changing world. This action oriented approach to entrepreneurial learning differentiates it from other learning theories. Ontologically, an entrepreneur's intentional action, creates new reality, and reality changes as a consequence of this action. The epistemological assumption of entrepreneurial learning originates from pragmatism, in which knowledge is created in action and assessed through action (Kyrö 2008, 42-43). The idea that an entrepreneur recognises and exploits opportunities assumes that an entrepreneur as a human being is a "unique, risk taking, creative and innovative, free and responsible actor" (Kyrö 2005a, 90). Therefore, in an educational context, entrepreneurship pedagogy assumes the following four principles suggested by Kyrö, Kauppi and Nurminen (2008, 120):

1. Life and knowledge are created through action, human being/learner is an actor.
2. Human being/learner has a holistic relationship with his/her environment.
3. Learner has a holistic relationship with him/herself and his/her action.
4. The human being/learner as an actor is:
   - unique
   - free, creative and capable of taking responsibility for his/her own actions and their consequences

Action orientation and creativity are emphasized in a learning environment that is holistic, complex and changing, and where students are at the centre of learning (Kyrö 2008, 2005a, Remes 2003). In contemporary teaching practices, action orientation and enhancement of students' creativity are the main challenges in teaching entrepreneurship at the higher educational context due to the lack of tools needed to guide students' learning processes. Many teachers have been trained to transmit knowledge rather than to support students learning. (Carrier 2005, 152.)

In general, learning and teaching entrepreneurship require changes in the roles played by teachers and students in learning processes (e.g. Jones and Iredale 2010, 13; Kickul and Fayolle 2006; Kyrö 2005a; Gorman, Hanlon and King 1997). Hence, a move from a teacher centred learning approach toward a student centred learning is needed. A student centred learning focuses on both the content and process of learning to achieve learning outcomes. Knowledge is not transmitted to students, but it is often skill-related and aims at personal development. (Carrier 2007, 155.)

The hierarchical role of a teacher, when moving from the teacher centred approach to the student approach, changes the way knowledge is created. Knowledge creation is a co-participation process where teachers and students have interchangeable roles. The role of a teacher is to facilitate students' learning through guiding students' understanding during the learning process. The responsibility for the organisation of knowledge is with the students. Knowledge is problem–oriented and contextual rather than context free or based on a specific discipline area. Each student is allowed to understand knowledge and learn competence at a different rate rather than having a teacher setting the pace for learning. (Kickul and Fayolle 2006, 2-7.)

In the process of framing phenomenon for the study, Figure 9 is produced. It summarises the main decisions made in Chapter 3.

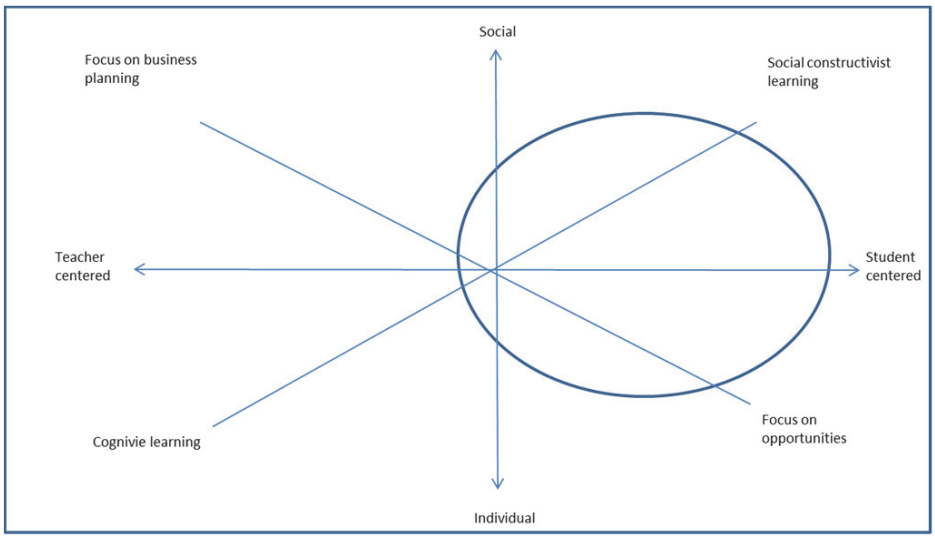

FIGURE 9 Framing of phenomenon

The position of the circle in Figure 9 indicates that phenomenon to be studied is characterised by the following views: it is more student centred than teacher centred, more social constructivist learning than cognitive learning, more focused on opportunity creation than business planning and more social than individual.

3.3 Learning and teaching entrepreneurial behaviours and skills

A well designed entrepreneurship and enterprise education improve students' employability, and students recognise that learning adds value to their personal development (Rae 2007, 617-618). It is not clear what to teach and how entrepreneurship should be taught. In a contemporary view, the consensus is that at least some aspects of entrepreneurship can be taught in an educational context (Henry et al. 2005, 98), even though there is disagreement as to what actually constitutes entrepreneurship (Kirby 2007, 21).

Learning entrepreneurship is paradoxical. On the one hand, it requires a person to be creative and innovative, and on the other hand, it requires competence in a variety of managerial functions (Jack and Anderson 1999, 110). The key to entrepreneurship education is not knowledge transfer but the development of entrepreneurial skills and personal development (Carrier 2007, 155). Ray (1997 in Kirby 2007, 24) suggests students should learn communication, persuasion, creativity, leadership, negotiation, problem solving, social networking and time management skills. Birch (in interview with Aronsson 2004) argues that currently business schools teach students to work

for someone else, but for learning entrepreneurship, it is important to teach students selling-, people management skills and the skills to create a product or service. Also, Kirby (2007, 23) suggests that future entrepreneurs need to learn traditional knowledge and skills to observe, describe and analyse, but should also have the abilities to identify opportunities, take responsibility to act on them in uncertain and ambiguous environments, and initiate change as a consequence of action. DeTienne and Chandler (2004, 242) emphasise that opportunity identification is a competence which can be learnt in a classroom context. Entrepreneurship education should aim to teach students to be reflective practitioners (Jack and Anderson 1999, 110).

Gibb (2005, 50) emphasises that students need to not only learn generic skills such as presentation and communication skills, but more importantly they should learn entrepreneurial behaviours, the skills and attributes which are needed at all levels of society to cope with change and uncertainty. These are listed in Table 2. Entrepreneurial behaviour is a function of the degree of uncertainty and complexity in a task and broader environment, and an individual's willingness to pursue opportunities to create change (Gibb 2002, 233). Entrepreneurial attributes are related to personality factors which can be influenced, and entrepreneurial skills are tied to attributes and are needed in the pursuit of entrepreneurial behaviours (Gibb 2005).

TABLE 2 Entrepreneurial behaviours, attributes and skills (Gibb 1993; 2005)

Entrepreneurial behaviours	Entrepreneurial attributes	Entrepreneurial skills
opportunity seeking and grasping	achievement orientation	creative problem solving
taking initiatives to make things happen	self-confidence and self-beliefs	persuading
solving problems creatively	perseverance	negotiating
managing autonomously	high internal locus of control (autonomy)	selling
taking responsibility for and ownership of things	action orientation	proposing
seeing things through	preference for learning by doing	holistically managing business/project/situations
networking effectively to manage interdependence	hardworking	strategic thinking
putting things together creatively	determination	intuitive decision making under uncertainty
using judgement to take calculated risks	creativity	networking

Gibb (1993; 2003; 2005) emphasises that learning entrepreneurial behaviours, attributes and skills are not restricted to entrepreneurship courses, but can be learnt in any course or context. The importance of learning entrepreneurial competence is stressed also by Chandler and Jansen (1992 in Carrier 2007, 151) who claim that an entrepreneur needs technical, managerial and entrepreneurial competence for which entrepreneurial competence must be

activated before other competence become useful. In recent years the discussion has moved from teaching contents to the process of learning (Bechard and Tolouse 1998).

The way educators view the concept of entrepreneurship and enterprise education influences the ways how they plan and implement learning and teaching programmes at higher education institutions. EU and national educational policies have recognised the focal role of teachers in promoting entrepreneurship education. The role of teachers in entrepreneurship education is to support the development of students' entrepreneurial skills and abilities, to be self –directive and to voice their own opinions (Kickul and Fayolle 2006, 12). It does not mean that a teacher leaves students alone to do whatever they want, but instead creates learning opportunities, motivates students, removes learning barriers, supports information search, is critical and questions, and enable learners to cope with changing environments (Koiranen and Peltonen 1993, 12). A teacher's role is to support learners' own goal setting and actions in order for them to develop entrepreneurial competence (Kyrö and Carrier 2005, 24). Kirby (2007, 26-27) suggests that entrepreneurial learning in entrepreneurship programmes has elements of students as owners of their own learning, real-world problem solving, decision making with incomplete data, rational and intuitive learning, team learning, learning from role models, and inquiry learning. Teachers decide what contents and with which methods they teach entrepreneurship to students, but teachers cannot decide what students learn and how they interpret teachers' messages. Therefore, it is wise to be cautious of the meanings students give to teachers' messages. (Ristimäki 2007, 42.)

Methods or how to learn entrepreneurial behaviours is of interest to many teachers and educators. In entrepreneurship courses both traditional and non-traditional teaching methods are needed (Henry et al. 2005, 105). When traditional teaching methods are emphasised, such as lectures and structured problem solving exercises, the objective is to teach about entrepreneurship rather than to act as entrepreneurs (Hytti and O'Gorman 2004, 19).

Non-traditional methods of teaching are for example role plays, simulations, and other methods requiring active student approaches (Garavan and O'Cinneide 1994, 11). Carrier (2007) has composed an inventory of less traditional teaching methods in entrepreneurship education in universities. A complete description of the methods can be found in the reference, but the main categories of methods were found to be the following: computer and behavioural simulations and games, the classics (books), life stories, learning about emotion and failure through role plays, training opportunity identification and creation. Each teaching method must be assessed based on its effectiveness in helping students to learn entrepreneurial competence (Carrier 2007, 143-155).

Programme and course-level design requires the involvement of different types of stakeholders such as entrepreneurs, alumni and other professionals who can provide feedback and be role models for students. The class sizes need

to be smaller and students need feedback for their personal development. (Garavan and O'Cinneide 1994, 11.)

A learning environment needs to be conducive for students to learn entrepreneurial capabilities. Often timetable and university lecture halls constrain learning of entrepreneurial capabilities. (Kirby 2007.) According to Gibb (2000; 2005), entrepreneurship and entrepreneurial competence can be taught within a supportive learning environment, but on the other hand, the learning environment needs to be uncertain and complex. According to Gibb (1993, 16-19), learning entrepreneurial behaviours, attributes and skills can be simulated in learning environments which reflect that of a small business owner-manager. The owner-manager works in environmental uncertainty where learning is by doing under pressure, problem solving and grasping opportunities. Ownership, control and responsibility over tasks require enterprising behaviour, and commitment to see things through and make them work. An owner-manager learns from different stakeholders: customers, competitors, bankers and suppliers.

Hartshorn and Hannon (2005, 621) reported on a study conducted at Durham University where students learnt entrepreneurial behaviours, attributes and skills through a practical project based learning approach. The project cycle involved four interconnected cycles: 1) getting started (self-review), 2) ideas generation and evaluation, 3) planning and resourcing and 4) implementation. Students learnt form an entrepreneurial life-world, which is characteristically based on uncertainty and complexity, in task structures. They learnt in groups not only from teachers and other students, but also from outside professionals who took part in providing feedback as well as being involved in the assessment process. Students learned through problem solving, doing, opportunity grasping, mistake making, customer feedback, borrowing, intuitive leaps, peer interaction and personal interaction. As a result of the learning project, students improved their personal confidence, communication and presentations skills as well as their understanding of personal behaviours and attitudes. Their risk taking capabilities were improved as well. Teachers who take part in such an experiment need to be recruited on a voluntary basis. In this experiment, teachers faced different types of risks that are not often present in a teacher centred classroom, such as being exposed to situations where they do not have the answers to all the questions and they become co-learners of the process. (Hartshorn and Hannon 2005, 624-625.)

The assessment of entrepreneurship and enterprise education does not focus primarily on the learning outcomes but rather the personal development. It is based on the awareness of cognitive, conative and affective developments of student experiences (Drycott and Rae 2010). As Salomon et al. (1994 in Kickul and Fayolle 2006, 6) argue learning entrepreneurship requires experience based teaching and evaluation methods. During a learning process students need to learn in an authentic real world environment where theory and practice can be combined (Kickul and Fayolle 2006, 6).

In the following section, David Rae's (2003; 2007) Opportunity Centred Learning (OCL) and Opportunity Centred Entrepreneurship (OCE) models are presented. Rae's learning model offers an existing framework for an opportunity centred learning process which are used as a building block for the planning of a learning intervention and the construction of a learning model in this study.

3.4 Opportunity Centred Learning by Rae

David Rae's OCL (2003) and OCE (2007) models are developed for enterprise and entrepreneurship education. Due to Anglo-American educational tradition, Rae views entrepreneurship and entrepreneurial learning in relation to a new venture creation and enterprise and enterprising learning more focused on general competence needed from an active citizen

Rae's (2005; 2006) triadic model for entrepreneurial learning is introduced here as background for the OCL and OCE models. According to Rae (2005, 324), entrepreneurship and learning are integrated processes which assume that learning plays an important role in the development of entrepreneurial capabilities, behaviours and practices. Both entrepreneurship and learning is constructivist, behavioural and social processes. For Rae, entrepreneurial learning is learning to recognize, and act on opportunities and managing ventures in social and behavioural ways where learning is not only an individual process of knowing but also acting in continuous interacton with others. (Rae 2006, 40; Rae 2007, 41-44.)

Rae's (2005; 2006) triadic model for entrepreneurial learning is based on a social constructionist methodology. Data is based on life story narratives were collected from three entrepreneurs in the creative industry (2005) and entrepreneurs from the technology based enterprises (2006). Narrative accounts allow the collection of an entrepreneur's experiences and behaviours in an authentic social and contextual 'life world'. The experiences and behaviours of entrepreneurs were analysed in-depth through discourse analysis based on the social learning perspective. As results of the thematic discourse analysis, Rae proposes the triadic model for entrepreneurial learning in Figure 10.

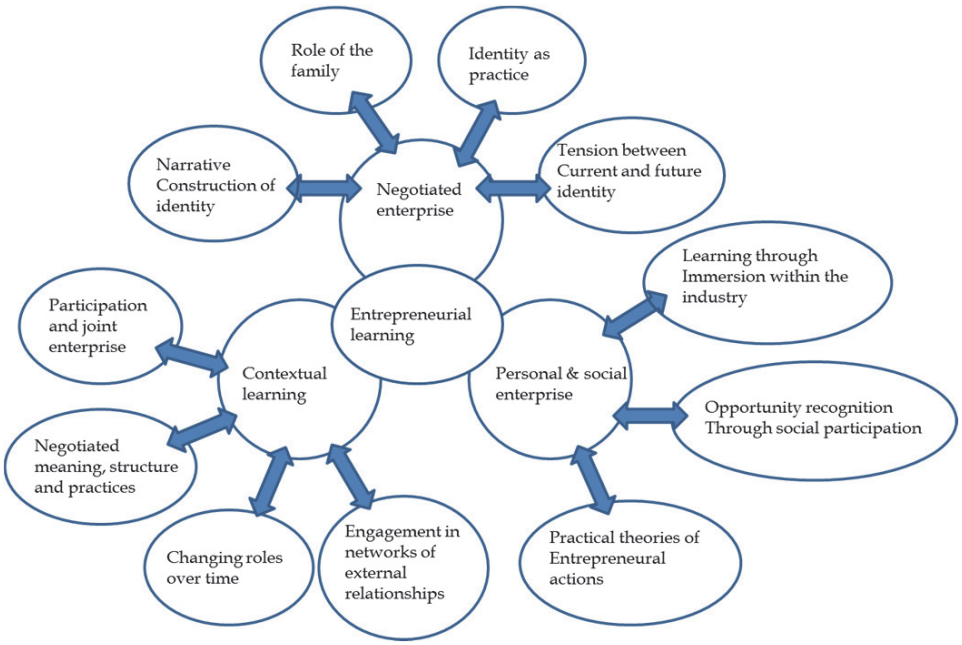

FIGURE 10 Triadic model of entrepreneurial learning (Rae 2005, 326; 2006, 43)

The first theme constitutes entrepreneurial learning as personal and social emergence. Entrepreneurial identity develops through personal and social emergence. Entrepreneurs narrate their lives and construct identities based on their own and others' perceptions of them. It can be said that identity is socially constructed and negotiated. Through learning, entrepreneurs change and develop their identities. The role of a family plays an important role in identity construction. Entrepreneurs' identities change and develop over the years in practice when they learn to know their strengths and skills through different activities and roles they take in work, hobbies and education. In entrepreneurs' lives, tensions often occur between current and future identities. Current identity may not reflect the one that the person wishes to be. These experiences are not only cognitive but also affective and conative, and can lead to the point where a person decides to become an entrepreneur. (Rae 2005, 326-328; 2006, 44-47.)

The second theme constitutes entrepreneurial learning as contextual learning. Entrepreneurs participate in business networks and other social relationships where they share experiences with others. Through contextual learning experiences, opportunities emerge as entrepreneurs develop intuition and the abilities to recognise opportunities. Practical theories of "what works" in different situations are developed as outcomes of contextual learning. Entrepreneurs develop practical theories through experiences and learning which is often tacit and intuitive. Practical theories help to make decisions when entrepreneurs know what works and what not in certain situations. (Rae 2005, 328-329; 2006, 47-49.)

The third main theme which constitutes entrepreneurial learning is negotiated enterprise. The initiation and growth of a new venture is a process of negotiated enterprise. A new venture creation and development involves processes of participation and joint enterprise; negotiated meaning, structures and practices; changing roles over time; and engagement in networks of external relationships. Hence a new business is a negotiated enterprise which is formed together with people within and around the business. Other people such as partners, customers, suppliers and alike are engaged with the new venture creation. It is an owner who needs to share a vision and get others to engage with it. Each person in a venture expects something from a venture. An owner has certain expectations on employees and vice versa. Organisational culture emerges through negotiated enterprise which reflects an owner's and employees values, goals and ways of working. As a venture grows, it gets more complex and roles of people change over time. Acquisition of resources is important where external networks play important roles. Certain relationships are nurtured and others less so, this is all entrepreneurial learning. (Rae 2005, 329-331; 2006, 49-52.)

Besides the triadic model, Rae has developed an Opportunity Centred Learning (OCL) model in 2003 for enterprise and entrepreneurship education. This model leans on the ideas of entrepreneurial learning of the triadic model. The Opportunity Centred Entrepreneurship (OCE) model in 2007 is a modified version of the OCL. Both models emphasise opportunity oriented thinking and behaviour to find new and innovative solutions to complex problems and challenges triggered by globalisation pressures (Rae 2007, 4).

The OCL and OCE models emphasise on natural and social learning triggered by curiosity, desire and intentionality to accomplish a goal. Learning is opportunity centred where learners recognise, make sense, select and act on opportunities in an environment rich with opportunities. (Rae 2003 452.) Opportunity is viewed broadly as "*the potential for change, improvement or advantage arising from our action*" (Rae 2003, 543). People become interested in opportunities often because they are future-oriented, positive and offer potential for personal development. The learning process is both individual and social where learning is action oriented, experiential and conceptual. Through learning and personal development, learners develop understanding and capabilities for entrepreneurship. (Rae 2003, 542-544; Rae 2007, 9.)

The evolution of OCL and OCE models are depicted in Figure 11. Modifications to the original OCL model in 2003 have been made in 2007 and 2010. The name of the model changed in 2007 to Opportunity Centred Entrepreneurship (OCE). Since 2007, Rae has kept the main phases of the learning process unchanged, but has added key descriptions to each phase of the learning model in 2010. Both OCL (2003) and OCE (2007) models are compact, flexible and can be learnt fast. The learning model fits in different fields of studies not only entrepreneurship. Different tools and techniques can be added to a learning process as different situations require. In this model,

learners can also integrate different subjects to a learning process and learn them in practice. (Rae 2003, 547-548.)

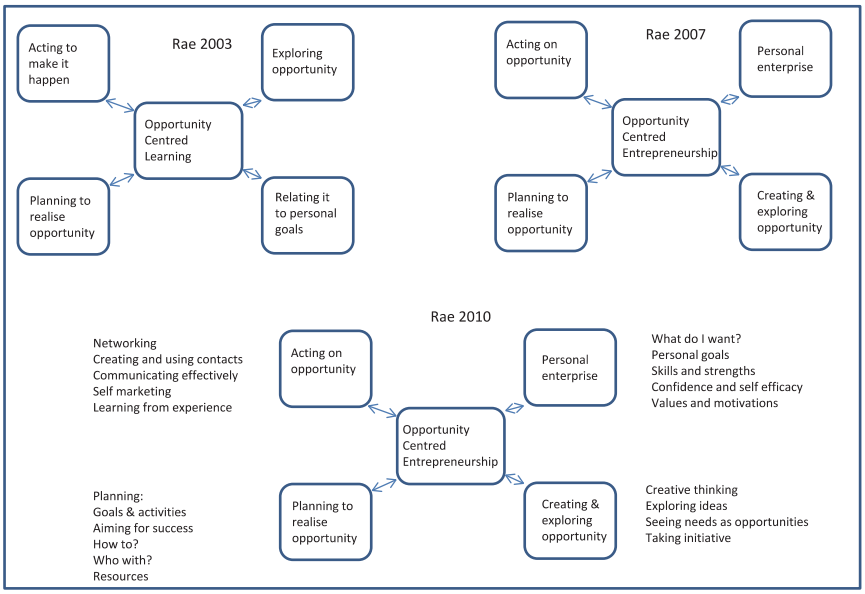

FIGURE 11 The evolution of Rae's Opportunity Centred Learning and Opportunity Centred Entrepreneurship models (based on Rae 2003; 2007; 2010)

The original OCL (2003) model consists of four interconnected phases of learning which simulate the enterprising and entrepreneurial learning process from idea to its realisation: 1) exploring the opportunity 2) relating to its personal goals, 3) planning to realise the opportunity and 4) acting to make opportunity happen. (Rae 2003, 545.) The learning model is not a linear process, but cyclical and iterative as the double arrows indicate. Hence, all phases are involved during the learning process.

The first phase in the 2003 model is 'exploring opportunity.' In this phase opportunities are originated, selected and explored by a team. Creativity is the key activity where ideas and resources are combined in new ways and different creativity and brainstorming tools can be used to facilitate the process. Learning is discovery and investigation based. An opportunity is selected and agreed on by the team. This phase develops students' enquiry and opportunity investigation skills that are transferrable to other contexts. (Rae 2003, 545.)

In the phase of 'relating it to personal goals' creating personal goals through self-discovery and negotiating and integrating one's own goals, motivations and interests together with others' goals, motivations and interests is the key activity in this phase. This phase involves reflections on each learner's future aspirations, interests and motivations to gain everyone's commitment

toward the opportunity and the project. Personal efficacy and confidence are the keys to acting on opportunity. (Rae 2003, 546.)

In the phase 'planning to realise an opportunity' is a future oriented problem solving process of translating an idea into a project. In this phase, plans are made on project tasks, the composition of the team and the needed resources to act on the opportunity. Team roles start to be defined based on different skills and competence.

In the phase 'acting to make it happen' a plan is realised in practice and often unpredictable issues take place which are not planned beforehand. Negotiation, persuasion, selling and emotional skills are needed with different partners, suppliers and customers. Learning is emergent, opportunistic, and social. Problems and conflicts occur in this phase which requires personal resilience. When a team is capable of reflecting" what works" and "what does not work" in practice, they can connect academic theories of entrepreneurship and management to the learning process. (Rae 2003, 546.)

An assessment of learning in an Opportunity Centred Learning can be based on the achievement of goals and a team's report which can be for example a business plan accompanied by each individual learning account. The role of a teacher is to facilitate students' learning processes. The model does not necessarily work in courses where time restricts the learning process. Also, large group sizes can cause problems for implementing a learning process. (Rae 2003, 548.)

Rae modified OCL model in 2007 when he introduced OCE model. The modification to the 2003 learning model relates to the first two phases and the name of the model. The modified model is called the Opportunity Centred Entrepreneurship. The first phase is called 'personal enterprise' and the second phase 'creating and exploring opportunity'. Rae (2007, 3) argues that enterprising people use skills, knowledge and personal attributes to create ideas and innovate them in practical situations. Enterprise is a capability that everyone has. The 2007 model is further modified in 2010 when the key elements and activities are added to each of the four interconnected phases of the learning process as described in Figure 11.

Rae's OCL and OCE models have many benefits. The models are compact, useful and easy to learn. The use of learning models aims for developing students' enterprising and entrepreneurial capabilities in collective and collaborative learning processes where the role of a teacher is a facilitator of students learning. Rae (2007, 41-44) also encourages participants to develop leadership and team working skills for ventures to grow and individuals to enjoy their unique contributions they can make. OCL and OCE models comply well with key elements of entrepreneurial learning in the context of higher education. It provides insight into an entrepreneurial learning process to recognise and act on opportunities at individual and collective levels.

OCL has similarities with Problem Based Learning (PBL). Both are based on a student centred learning in small groups where the role of a teacher is a facilitator. In OCL, students explore and develop opportunities generated by

students themselves while in PBL the focus is on the exploration of authentic or teacher generated problems. In OCL, students investigate, make sense, plan and act on opportunities while in PBL students investigate causes and effects of problems. When OCL develops students' abilities to identify, understand and act on opportunities and learn related knowledge, skills and self-confidence, PBL develops students' understanding of the problem and related knowledge to solve it. (Rae 2003, 544; Barrows 1996, 5-6.)

3.5 Synthesis as a learning intervention

The research task of the study is to construct a learning model through entrepreneurship. It aims for facilitating teachers' work as entrepreneurship educators in higher education institutions. As a synthesis of Chapter 3, an intervention plan is developed to be implemented in an International Marketing Strategy; Planning and Implementation course at HAAGA-HELIA University of Applied Sciences, Finland in 2009. In the process of developing the learning intervention, Fayolle and Gailly's (2008, 572) teaching framework for entrepreneurship education (Figure 12) is utilized. In this framework, they form a bridge between education and entrepreneurship by integrating ontological questions to educational level decisions. They recommend the following ontological questions to be answered: what entrepreneurship education means and what education means in the context of entrepreneurship as well as the roles of the teacher and the students in the learning process.

In this study, the entrepreneurship education is defined broadly (COM 2005) aiming to develop students entrepreneurial mindset and skills which do not necessarily lead to a new venture creation. According to Fayolle and Gailly 2008, 574), education is about providing students the opportunities for personal development and the possibilities to act entrepreneurially whereas teaching focuses on knowledge transfer, and seems more appropriate for teaching about entrepreneurship. In this study, the primary focus is on educating and developing students' entrepreneurial behaviours and skills, but also teaching when considered important in meeting learning objectives.

In this study, the roles of the teacher and the students are based on a student centred approach to learning. Entrepreneurial learning theory emphasises *"an individual right, ability and freedom to decide, make choices and act in a learning process keeping with his or her individual characteristics"* (Kyrö 2008, 40). Therefore, in this study, the role of the teacher is to guide and empower students to provide them autonomy to make their own decisions and take responsibility for their own learning and development. Learning is considered to be a holistic process, not only cognitive, but also affective and conative process. Students' existing competence (knowledge, skills and attitudes) formed a resource base where potential opportunities emerged in interaction with other students and the environment. This process is related to effectual logic which is based on what a person knows, who she knows and what she can do.

The role of a teacher is to facilitate, motivate and remove learning barriers in students' learning processes (Koiranen and Peltonen 1995). The teacher does not tell students what to do, but questions students' ideas and decisions during the learning process (Kyrö 2005a). In addition, the teacher aims to create a positive learning atmosphere for creativity. This involves both a physical atmosphere in the classroom as well as a psychological atmosphere of mutual respect among the teacher and students. The teacher builds a tentative content for a course, but it is assumed to change when students learn and create their own contents for learning. The teacher supports by directing the way for learning as well as is open for mutual learning experiences. (Nummenmaa and Lautamatti, 2005, 117.)

Entrepreneurial competences are learnt in an open learning environment characterised by uncertainty and complexity (Pittaway and Cope 2007; Gibb 2005; Kyrö 2008). The role of the teacher is to create a learning environment which promotes proactive, creative, and risk taking behaviour. This can be achieved by extending the learning environment away from the classroom learning. Students learn everywhere not only in the classroom. An extended learning environment increases risks and the potential for failures, therefore, students are allowed to make mistakes and not be punished for them.

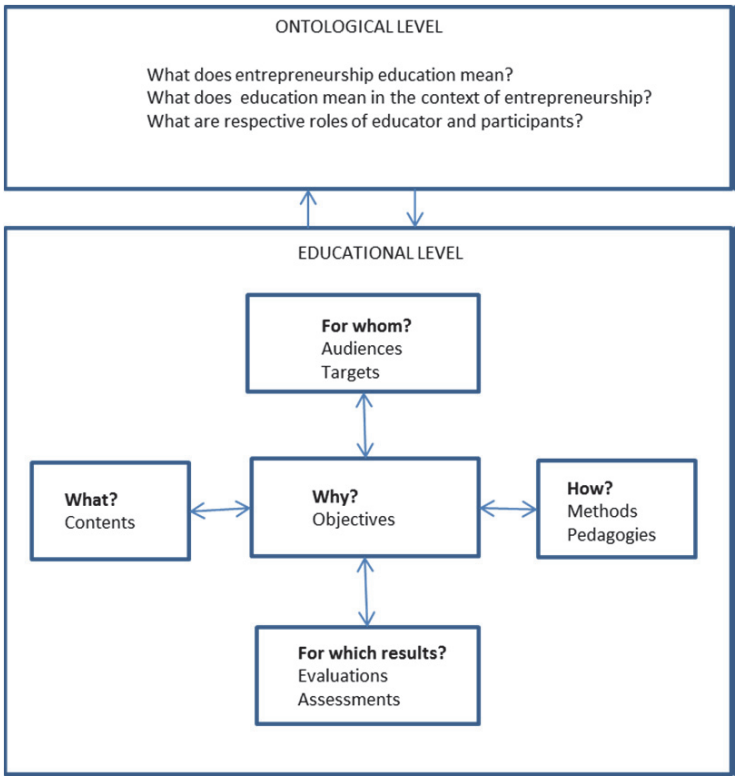

FIGURE 12 Teaching model framework for entrepreneurship education (Fayolle and Gailly 2008, 572)

For the educational level, Fayolle and Gailly's (2008, 575) conceptual teaching model presents the following key questions which are derived from ontological level questions: 1) Why? Objectives and goals, 2) For whom? Targets, audiences, 3) For which results? Evaluations and assessments 4) What? Contents, 5) How? Methods, pedagogies. These key elements form a pedagogical programme, and when integrated together, form a consistent whole. Even though Fayolle and Gailly' (2008) framework highlight the programme level decisions, it is assumed that the same questions can be applied to a marketing course level equally. The course plan outline designed for the learning intervention can be found in Appendix 1.

A learning intervention plan is developed to be implemented in an International Marketing Strategy; Planning and Implementation course in the International Business programme at HAAGA-HELIA University of Applied Sciences. The scope of the course was 6 ECTS and the length of it was 16 weeks. There was one contact session per week lasting total of three hours.

In setting the course level *learning objectives*, several decisions need to be made. The course's learning objectives are incorporated to a curriculum designed for an international business programme and to support HAAGA-HELIA's vision as well as the broad goal of educating through entrepreneurship.

In setting learning objectives for the course, I needed to consider *contents* and the learning process for the course. I chose to approach marketing from an entrepreneurial marketing perspective, which originates in the interface between marketing and entrepreneurship. The dimensions of entrepreneurial marketing are proactive orientation, opportunity driven, customer intimacy, innovation focused, risk management, resource leveraging and value creation (Morris, Schindehutte and LaForge 2002). These dimensions presented make marketing a dynamic process, which also fits well with the efforts to develop students' entrepreneurial behaviour and skills. In addition, I took ideas from traditional marketing. I chose to include the concept of a marketing plan to indicate the need for planning marketing activities. But I wanted to use planning as a tool, not as the main outcome of the learning process, as often used in traditional marketing management courses. This overall plan for learning marketing is supported by Bjerke and Hultman (2002), who argue that most new jobs are created in small businesses, where marketing is different from large companies. In smaller companies, individuals need to be more flexible, response times are fast, customer intensity and cash–flow sensitivity are focused, and personal and business matters get mixed.

In order to further develop the learning objectives and the frame for the learning intervention, I combined the ideas from marketing to Rae's OCL and OCE models. I modified Rae's (2003; 2007; 2010) models by calling the model with its original name OCL for the reason not to confuse students with entrepreneurship courses. In this study, a modified OCL model is adopted and depicted in Figure 13.

As a key building block for the construction of a model, the modified OCL model provides a learning process for the learning intervention. In the first

phase, each individual reflects his or her learning needs, goals, motivations and strengths, which are later integrated into a group's learning goals. In the second phase, groups are formed and they start seeking ideas for new products and service ideas by creative thinking and exploration. In the third and fourth phase, a group plans for the opportunity and tests the opportunity in practice.

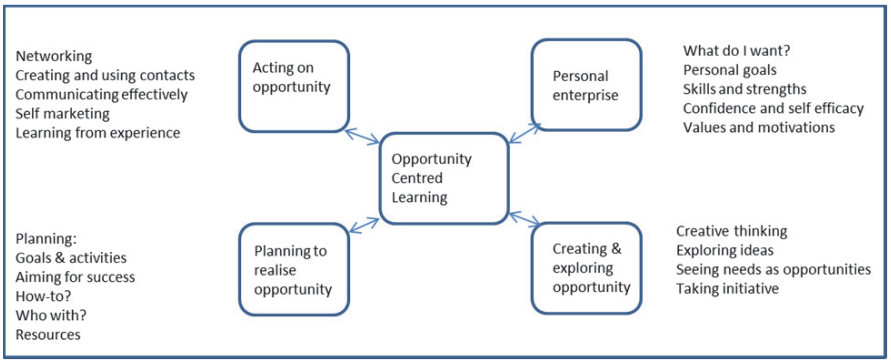

FIGURE 13 Opportunity Centred Learning model (modified from Rae 2003; 2007; 2010)

Final course learning objectives combine marketing and elements of an entrepreneurial process described in the modified OCL model as following:

- We learn to be innovative (to seek novel and creative solutions to customer problems and needs)
- We learn to scan the environment for identifying trends and developments to find marketing opportunities
- We learn to plan customer solutions and experiences to create customer value
- We learn to prepare marketing plan considering global context (goal setting, marketing mix decisions, profitability calculations etc.)
- We learn to implement the marketing plan in an authentic business situation (selling, negotiating, establishing relationships with customers and stakeholders)

The objectives emphasise the 'we' form, which indicated that the learning is collaborative and students are allowed to suggest changes during the learning intervention if such needs arise. The 'we' form also facilitates the ideas of student centeredness where responsibility and control of learning is with the students not only with the teacher.

According to Fayolle and Gailly (2008), course learning objectives are integrated to the competence of the *target audience*. Students who attended the course were the third year students' in the International Business programme. The student body consisted of students with a variety of cultural backgrounds

and expectations. The age range was between 20 and 45, both males and females. The majority of students were degree students, but exchange students were also enrolled on the course. The degree students receive the Bachelor of Business Administration degree after graduation. Students who enrolled on the course were not oriented toward entrepreneurship, but expected to learn marketing.

According to Ramdsen (2003, 65-72), students' interest, knowledge base and previous experiences in teaching and learning influence on students' perceptions of a course. Conflicts can be created when students' perceptions of teaching and learning differ from the teacher's perceptions and actions.

The choice of *learning methods* aims to support the entrepreneurial learning approach, which is action oriented, creative and experiential (Carswell and Rae 2000), and where experiential, reflective and collaborative learning are integrated in an open learning environment characterised by complexity and uncertainty (Gibb 2005; Pittaway and Cope 2007; Kyrö 2008). The choice of learning methods depends on how appropriate they are to achieve the learning objectives. As there is no right way of teaching entrepreneurship, many possibilities are available for teachers to use (Fayolle and Gailly 2008, 579). The learning methods selected for the course are described below.

The main method of learning is project work in teams. **A team involves two or more** individuals who interact socially, share one or more mutual goals, work together to complete a task, are interdependent in terms of workflow, goals and outcomes, have different roles and responsibilities, and are embedded in wider organisational settings and task environment (Kozlowski and Ilgen 2006, 79.) Within an organisation, an individual belongs to a team, and teams interact with each other. Therefore, different levels can be identified: an individual level, an interaction level, team level, interaction among teams level, organisation level, and societal level. The overall system is complex and individual level problems can be caused by any of these levels or a combination of these levels. Team level conflicts are often caused by different interpretations that individuals give to these different levels and their impact on team performance. (Niemistö 2004, 34-41.)

Collaborative learning is not a learning theory as such, but enables understanding of how teams learn effectively. The terms collaborative and cooperative learning are often used interchangeably. The division of labour often differentiates cooperative and collaborative learning practices. In cooperation, participants divide work, whereas in collaboration participants work together. (Dillenbourg 1999, 8.) Collaborative learning combines individual and social learning (Hämäläinen, Manninen, Järvelä and Häkkinen 2006, 48). Participants construct shared meanings which is social activity conducted jointly (Stahl 2003, 1). Many researchers consider collaborative learning to occur during joint problem solving processes (Dillenbourg 1999, 4). Unfortunately, teams are not always capable of creating activities which lead to collaborative learning. The situation is collaborative when participants have similar status, they interact, negotiate and renegotiate shared goals and they

work together to achieve these shared goals (Dillenbourg 1999, 13). The quality of participant interactions influence on learning process and outcomes (Barron 2003, 307). Collaborative learning takes place in situations where certain interactions among participants occurs which trigger learning mechanism to influence cognitive processes (Dillenbourg 1999, 13). Collaboration can be stimulated in learning situations where work tasks can be solved and participants' goals achieved in different ways (Hämäläinen et al. 2006, 49).

Regardless of the benefits of collaborative learning it is challenging to achieve and many teams are dysfunctional in practice (Hämäläinenn et al. 2006; Järvelä, Näykki, Laru and Luokkanen 2007, 72). The participants' ability to take part in knowledge construction process is not an innate skill (Bluemink 2011, 18).

A main learning task in collaborative team project work is to plan a useful and creative service concept and implement it within the constraints of the course. The teams are also required to seek feedback for the creativeness and usefulness of the plan from a business person. A creative idea is defined as one that is both original and appropriate for the situation in which it is used (Amabile 1998, 78). The project work is considered to be completed when this feedback on a created service or product is received. The teams are also encouraged to develop a network with businesses. This idea is based on the idea that entrepreneurs learn all the time from different stakeholders (Pittaway and Cope 2007; Gibb 2005; Dew et al. 2005).

To facilitate a collaborative teamwork during the OCL process, several supporting learning methods were planned as follows:

Individual and team learning contracts
Individual learning log books
Class assignments
Mini lectures
Guest speaker
Teacher- team discussions
Team project report

These supporting learning methods are used during the modified OCL process. In the first phase, each student assesses their strengths, weaknesses, values, goals and interests in life and relates them to the course objectives. An individual learning contract (Appendix 2) was designed to help students to decide their own personal learning objectives for the course and how they were going to achieve them. A team learning contract (Appendix 3) is based on each team member's learning contract and it is designed as a tool for team members to set their team goals and rules for teamwork for the project. Together these contracts facilitate students to set their personal learning goals and integrate them to the team learning goals.

Individual learning diary or log book (Appendix 4) is designed to support a student's reflection of his or her learning and personal development in team

project work. Students do not learn from experiences themselves, but the meanings they give to those experiences in reflective processes. Without reflection learning does not occur. Reflection plays an important role in knowledge construction and the teacher's role is to support the students' reflection processes. An effective reflection can lead to the conscious thinking about one's emotions and interests, understanding one's belief systems and theories –in-use, profound self-inquiry and discovery process, and bring up unconscious experiences into the conscious level where they can be understood and dealt with. (Ojanen 2001, 76.)

Team project work is the main learning method supported by contact classes where a teacher can interact and observe students' learning processes. In contact classes, students prepare group exercises to support teamwork. Mini lectures by a teacher provide orientations to key themes and issues set in the learning objectives. In addition to the mini lectures, an entrepreneur is invited as a guest to visit and talk about experiences in entrepreneurship.

Team and teacher discussions during the course are planned to be organised to provide the teacher and the team members with time to reflect on team learning activities and to provide support as well as to challenge the students to reach their learning objectives.

At the end of the course, each team prepares a project report on their learning process. In the report they are asked to describe and evaluate the different tasks and activities conducted in each phase of the team learning practices during the learning process. The project work reporting instructions can be found in Appendix 5.

Assessment leans on the achievement of a course's learning objectives, which in turn are driven from broader objectives in entrepreneurship education. Entrepreneurship education aims to educate students to be active and to take responsibility for themselves and their actions as well as encourages students to generate new ideas and act on them.

Assessment is based on truthfulness with the use of versatile evidence and students' progress in learning. The role of the teacher is to provide continuous feedback during the learning process to facilitate students' awareness of their own thinking and behaviour and to understand their own learning. A student's assessment is based on personal development, which is a future oriented and continuous process. The use of different assessment methods as well as individual and group perspectives is involved in the assessment process (Antjonen 2011).

The course assessment is based on the continuous process assessment where multiple evidence is used to assess the students' learning processes. Each student sets his or her own learning objectives related to course learning objectives. A student reflects on personal learning and development by keeping a weekly learning log book. The teacher provides feedback on each student's personal learning log books twice during the course: once in the middle of the course and once at the end of the course.

The process assessment of teamwork is based on each team's learning objectives and rules set for team work. The teams are encouraged to engage in team learning reflection in team meetings. The team learning is reported in a final team report at the end of the course. Two teacher-to-team meetings are scheduled during the course to provide teams with a face-to-face reflection session with the teacher. This provides possibilities for both the teacher and the teams to reflect, question and challenge the teams about their learning practices in the project. Generally, in-process assessment is future oriented and provides opportunities for students to learn and develop themselves personally and as part of a team.

A post-course assessment is based on in-process of assessment both at an individual level, which can be verified in personal learning log books as well as at a team level. Team learning practices are assessed based on teacher-team meetings as well as the teacher's general observations of teamwork both in and outside the classroom. The team assesses its learning practices and report them in the team's final project report.

The students are encouraged to provide feedback during the course. This provides a teacher with the possibilities to deal with potential obstacles to students learning. At the end of the course, students are given an official HAAGA-HELIA course feedback form.

3.6 Research questions and framework for the study

The research questions direct the empirical research process toward the construction of a learning model through entrepreneurship. It adopts Rae's OCL model and shifts the focus from an individual level to a collective level in order to explicate the interactions and relationships between individual and collective level learning during the opportunity centred learning process as well as to integrate and explicate the role of the teacher as a facilitator in the process. This way the model can further develop understanding of the opportunity centred learning process and support teachers' work as entrepreneurship educators..

Rae's (2007) OCE model in Figure 14 is used as a base for the design of the research questions.

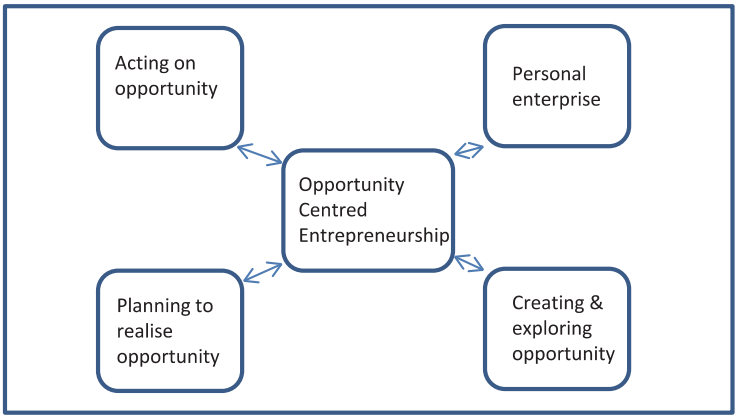

FIGURE 14 Opportunity Centred Entrepreneurship model (Rae 2007)

In Rae's (2007) learning model, four interconnected phases of Opportunity Centred Entrepreneurship (Learning) are described. In each of these phases, an individual learner interacts and influences and is influenced by collective level learning practices. In these interactions, the potential for collaborative learning practices can emerge as a key to effective team work.

The *main research question* is stated as follows:

How is it possible to revise the OCL model in higher education to make it opportunity centred and collaborative in order to enhance learning through entrepreneurship?

The sub research questions are as follows:

1 How does the process from an individual enterprise to collective enterprise emerge?
2 How does an idea emerge in a collaborative creativity and exploration process?
3 How does planning to realise a potential opportunity emerge in an Opportunity Centred Learning process at a collective level?
4 How do the team learning practices appear during a collective action to implement an opportunity?
5 How does the teacher influence a collective opportunity formation and exploitation process?

The framework for the research and for the construction of the learning model and its testing is depicted in Figure 15, which is based on research tasks introduced in the introduction chapter. The purpose is not to construct a totally new learning model, but to utilize Rae's modified OCL model as a building block for an interventional strategy to enhance entrepreneurial learning and

entrepreneurial behavior at a collective level and to explicate the role of a teacher as a facilitator of the students' learning process. The framework describes the process of the construction of the learning model and its market testing.

In the first phase, a practical need for learning models through entrepreneurship is recognised after the review on entrepreneurship education, teaching and learning literature. The construction of such a model would help entrepreneurship educators and teachers to support and train students' entrepreneurial behaviour at a collective level in higher education institutions.

In the second phase, a plan for a potential solution for a learning model is made by connecting existing theories to the design of a learning intervention plan. The third year marketing course at HAAGA-HELIA UAS, Finland is selected for the implementation of a learning intervention. The learning intervention plan is built on Rae's (2003; 2007) learning models as well as on theories from teaching and learning entrepreneurship and marketing.

In the third phase, a learning intervention plan is implemented in 2009 with the third year marketing course at HAAGA –HELIA University of Applied Sciences. During the learning intervention, data is gathered in the form of teacher generated field notes and the course material as well as the students' generated learning log books, exercises and team reports. The research is a qualitative case study and involves elements from an action research approach.

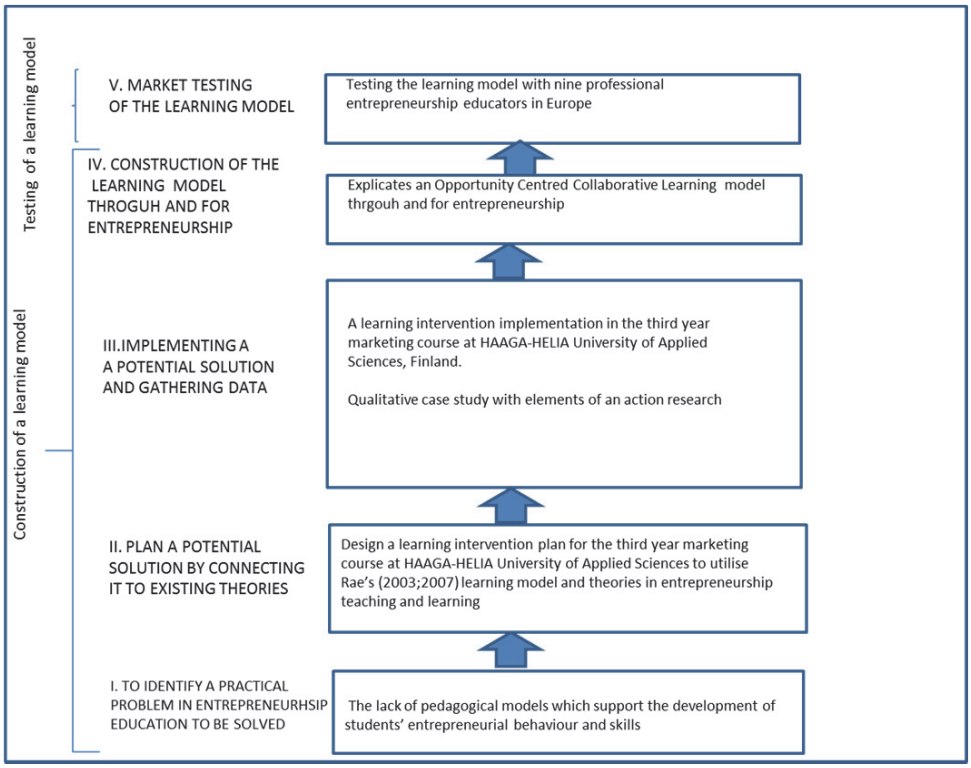

FIGURE 15 Framework for a research and constructing of the learning model and its testing

In the fourth phase, a qualitative data analysis and interpretation are conducted to operationalise the opportunity centred learning process at a collective level. As a result of this process, a learning model is constructed which is called an Opportunity Centred Collaborative Learning through and for Entrepreneurship. The constructed learning model revisits and fine tunes Rae's (2003; 2007) OCL model. By shifting the focus from individual to collective level learning, it is possible to explicate collaborative practices emerging in interactions among participants. In addition, the role of a teacher as a facilitator and as a co-learner of the learning process is explicated. In the fifth phase, the model is tested with nine entrepreneurship education experts in Europe to perform a weak market testing.

4 METHODOLOGY AND DESCRIPTION OF THE DATA

In this chapter, a constructive research approach (CRA) as a methodology is discussed, followed by an application of CRA to a case construction process. As an integral part of the case construction process, the actual research process, timetable, data collection, non-sampling procedures and ethical issues are described. After the data is collected, it is organized and analysed to produce a collective narrative to operationalise a collective learning process. Toward the end of the chapter, an interpretation process through iterative investigation of theory and practice is described to produce results presented in Chapter 5.

4.1 Constructive research approach

Constructive research approach (CRA) is a problem solving process through the construction of a model, plan or other procedure that can provide more a functional solution to managers in organization, or teachers in this case. The constructive research approach is a procedure through which new constructions are created. (Kasanen, Lukka and Siitonen 1993, 224.)

CRA is a rather new approach to scientific research and has gained a foothold especially in business studies (Lukka 2006, 129). It can be applied in diverse contexts and problems and has potential for narrowing the gap between theory and practice (Labro and Tuomela 2003; 428). CRA originated in managerial accounting research in the 1980s and is also applied in technical sciences, operations research, mathematics and medicine (Kasanen et al. 1993, 245), in educational research (Vaso 1998) as well as entrepreneurship education (Kyrö and Niemi 2008).

Central elements of CRA set criteria for the methodology (Figure 16). A relevant research problem and its solution need to have practical relevance and the problem and its solution are tied to a contemporary theoretical literature. The novelty of construction and its functionality is demonstrated in practice.

The construction is functional when it is relevant, simple and easy to use. The constructed model also contributes to theoretical discussion (Kasanen et al. 1993; Lukka 2000.) New constructions are socially constructed artefacts which can vary from simple models to complex management system designs (Lukka 2000, 115).

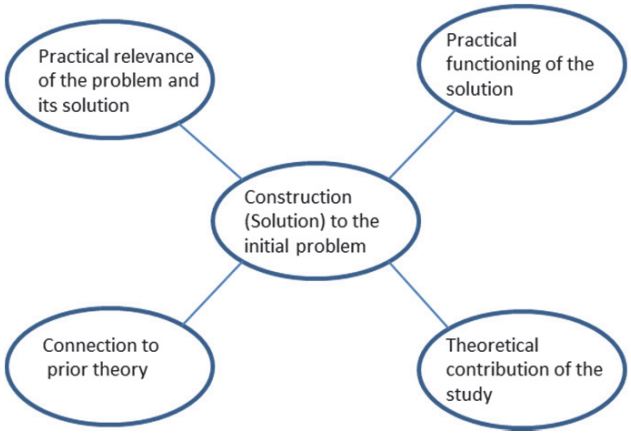

FIGURE 16 The central elements of the constructive research approach (Lukka 2000).

The key advantage of CRA over other research approaches is its potential to produce practical benefits for organisations through critical analysis of existing theories which are connected to the potential solution of a practical problem. Deep theoretical knowledge and understanding differentiate CRA from consulting (Lukka 2006, 126). In consulting projects, the problem and its solution are seldom integrated to existing theories, and there is no need to produce a theoretical contribution as long as a construction works in practice (Kasanen et al. 1993, 253). In sum, CRA produces 1) an innovative and theoretically argued solution to a relevant, practical problem, 2) a solution or findings function in practice, 3) a solution can potentially be shown to function in wider contexts (Kasanen, Lukka, Siitonen 1991, 316).

CRA is evaluated through criteria set for scientific study which are objectivity, criticalness, autonomy and progressiveness (Kasanen et al. 1993, 258). CRA follows a seven step-by-step research procedure where each step is reported allowing others to verify decisions and activities taken in the research process. This allows others to repeat the research in other contexts. The construction process is conducted independently from political, economic or other interests. The researcher holds a critical and neutral position during the research process. The researcher's role is reported in the research and the researcher is responsible for the critical analysis and evaluation of counter arguments. (Lukka 2000, 125.)

CRA can be considered to produce new knowledge when the problem is solved with a new construction which is tested and to be relevant, simple and

easy to use. The requirement of the functionality of a construct differentiates CRA from other research approaches. Philosophically, the functionality criteria bring CRA close to pragmatism, which considers the functionality of ideas as the notion of truth (Kasanen et al. 1993). In pragmatism, knowledge is produced in action and verified through action (Kyrö 2004, 62). James (1859-1952) believed that theories are functional and usable if they work in practice. Ideas become knowledge when they can be verified in practice. (Niiniluoto 2002, 126-127.) CRA applies to the correspondence notion of truth. The correspondence notion of truth refers to how beliefs and statements correspond to reality. If beliefs and statements correspond to reality they are true and if not they are not true. (Lukka 2006, 119.)

The practical usefulness of a new construction is validated on the market. Kasanen et al. (1993, 253) offer three attempts to validate a construction: a weak market test, a semi-strong market test and a strong market test. A construction passes a weak market test if a manager is willing to apply a construction in decision making, a semi- strong market test is passed if a construction is widely adopted by companies and a strong market test is passed when companies who adopt the construction perform better than those who have not. The market testing refers to the generalisation criteria of research findings.

Change occurs when a new construction is implemented and taken into use in an organization (Labro and Tuomela 2003, 428).The demonstration of a practical relevance of a construction in organisations can be challenging due to organisational barriers for change (Kasanen et al. 1993). On the other hand, when a new construction is implemented in practice it can free people from prejudices when they see which constructions work in practice and which not. This is in line with the scientific criteria of progressiveness, autonomy and criticalness. (Kasanen, Lukka and Siitonen 1993, 258.)

According to Haberman, scientific research is driven by a knowledge interest. He differentiated between three types of interests: technical, practical and emancipatory interests (Cohen, Manion and Morrison 2011, 33; Kyrö 2004, 62-63; Niiniluoto 1997, 71-72). Technical interest seeks knowledge on cause – effect relationships with the aim of control and prediction of humanity and nature. Technical interests are related to positivism and the quantitative research approach. Practical knowledge interest seeks knowledge for the interpretation and understanding of the meanings of a cultural phenomenon. Methodologically, it is based on hermeneutics, interpretation and understanding. Emancipatory knowledge interest is related to ideology critique. It seeks to gain knowledge to become aware of and disclosing existing social structures and relationships. It aims to change society and promote democracy (Cohen et al. 2011, 33; Kyrö 2004, 63; Niiniluoto 1997, 71). According to Kasanen et al. (1991, 319), all knowledge interests belong to science. They argue that both the research and research process consist of elements from technical, understanding and emancipatory interests.

The theoretical contribution of CRA can be produced in two ways. First, a new construction itself is such a novel construction that it produces new means

to achieve certain ends. Secondly, a constructive case study provides possibilities to test and refine existing theories and underlying positive relationships within the phenomenon. Pragmatic testing of a new construction can lead to the redefining or even discarding of theories (Lukka 2006, 118-119.)

Neilimo and Näsi (1980 in Kasanen et al. 1993, 257) classify methodological approaches as a nomothetical, decision-oriented, action-oriented (hermeneutic) and conceptual approach (Figure 17). The nomothetical is related to the positivist tradition with the aim of producing law-like generalisations. The decision oriented approach is based on similar assumptions as the nomothetical approach, but it is normative, and research results are produced to help management decision making. The action oriented approach is an alternative approach to the nomothetical approach. An analysis is focused on human beings with the aim of gaining a thorough understanding of subjects in a change process. The conceptual process aims to produce new knowledge through the method of reasoning". (Kasanen et al 1993, 256.)

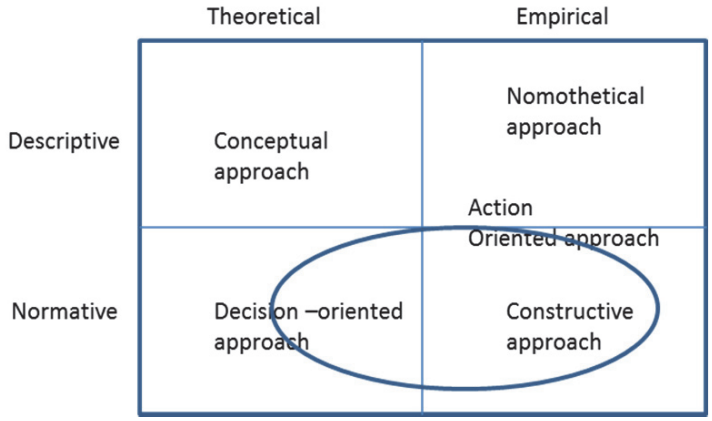

FIGURE 17 The location of the Constructive Research Approach in relation to other business research approaches (Kasanen, Lukka and Siitonen 1993, 257)

CRA is positioned in Neilimo and Näsi's typology of methodological approaches in business research as being normative and empirical**.** CRA has similarities to both the decision-oriented approach as well as the action oriented approach. The similarities of CRA to the decision oriented approach are that theories play an important role in the construction of a new entity. The difference is that decision oriented approach uses deductive reasoning whereas CRA is based on heuristic innovation with the aim of demonstrating the functionality of a construction in practice. (Kasanen et al. 1991, 317; Lukka 2006, 124-125.)

CRA has similarities to the action oriented approach. Both approaches are directly connected to empirical field studies and observations. They utilise a case study approach in an empirical research phase. Both approaches require a researcher to have good knowledge of organisational processes in order to succeed in an intended change process. Hence, the role of a researcher is a

change agent during the research process. The main difference between these approaches is that action research does not aim to construct new entities to solve practical managerial problems. (Kasanen et al. 1991, 317; Kasanen et al. 1993, 256-257; Lukka 2006, 124-125.)

In this study, the CRA methodology is used as a general approach to research. Within this approach, a qualitative case study is constructed to gain a deeper understanding of the dynamics and behaviours of collective learning practices which are used to construct a learning model. Elements of an action research can be found in the general approach to a learning intervention. The main characteristics of both case study and action research are discussed next.

Hirsjärvi, Remes and Sajavaara (2005, 15) summarise the typical characteristics of qualitative research: it is a holistic approach to data collection in a natural setting; an inductive approach is used to explore unexpected events and processes; appropriate methods are used to hear the perspectives and "voices"of participants; it allows a judgmental sampling and a flexible research plan; and each participant is handled as an unique individual in the research.

The focus of *qualitative research* is the socially constructed nature of reality where a researcher is interested in how social experience is created and given meaning. A researcher has a close relationship with the target of the research and situational factors constrain and influence the research process. Qualitative research is value- laden. (Denzin and Lincoln 1998, 8.) A social constructionist research is interested in how people come to be and know the world in interactive and relational processes with others. The focus is on dialogues, exchanges, conversations, relations, joint acts and co-ordinations of people where entrepreneurial practices are constructed. Social reality as well as people are constantly becoming and emerging in relation to other people, societies and cultures. (Fletcher 2007, 162-167.)

Eisenhardt (1989, 534) defines a qualitative case study as *"a research strategy that focuses on understanding of the dynamics within single settings."* The case study allows the focus on a particular situation or process. A case can be identified as an integrated system with certain features and behaviour patterns belonging to it. It is not always easy to tell which features and behaviours are within the boundaries of a case and which stay outside of a case. (Stake 1994, 236.)

Stake (1994, 237) identifies three types of case studies: intrinsic, instrumental and collective case studies. An intrinsic case study is interested in a particular case itself and not necessarily other cases. An instrumental case study focuses on the general understanding of a particular case, and a collective case study extends instrumental case studies by examining several instrumental cases and focuses on the coordination between them. This study applies an instrumental case study with the aim of gaining general understanding of dynamics of collective learning practices through entrepreneurship.

A case study with a use of qualitative methods provides an in-depth understanding of multiple perspectives of participants, their interactions and influences on each other, in a complex and unique project or programme in a

real-life context (Yin 2011, 7). A case study utilises multiple sources of evidence and data collection methods can be varied (Yin 2011, 8). Qualitative case research utilises typically field interviews and observations as data gathering methods.

Participant observation is often combined with other data collection methods and it allows a researcher to stay on site over a long period time to observe how events evolve and the dynamics of the situation occur in their natural context (Cohen et al. 2011, 466). Baily (1994 in Cohen, Manion and Morrison 2011, 298) describes the advantages of participant observation in case studies: 1) non-verbal behaviour can be observed, 2) on-going behaviour can be observed and central features can be recorded, 3) a more intimate and informal relationship with participants can be established compared to surveys or experiments, 4) observations are less reactive than other forms of data collection methods such as surveys and experiments. In naturalistic observation, such as participant observation, a researcher does not know beforehand what to observe (Cohen et al 2011, 464).

Sampling in qualitative approach is based on purposeful sampling which is different from quantitative research which aims for empirical generalisations. The aim of purposeful sampling is a selection of information intensive cases for in-depth analysis and understanding. Cases which provide most information are selected for study. (Patton 2002, 230-233.)

In data analysis, qualitative case study assumes that each case is unique. A researcher immerses oneself in the details and specifics of the data to discover the patterns and themes and relationships through inductive analysis. The researcher aims to understand the whole complex and dynamic phenomenon holistically rather than through the sum of its parts. The results are placed in its social, historical and temporal context. (Patton 2002, 41.)

The characteristics needed of a qualitative researcher are an open and enquiring attitude, an ability to listen and to be sensitive as well as seeking contradictory evidence (Robson 2002, 168). Yin (2011, 270) argues that a researcher is a research instrument and needs to explicate circumstances which can lead to potential research bias and influence findings of a study. A researcher's cultural orientation can have an influence on the interaction with the culture of the people in the particular study. Also, a researcher's physical attributes, motivations, interests and views influence people. Yin (2011) suggests explicating the way the researcher has gained access to a research site.

Patton (2002, 64) talks about reflexivity as a researcher's need to take ownership of their perspectives, to be self-aware, and to have cultural and political consciousness. One way to facilitate reflexivity is to keep a personal journal of feelings and reflection during the research process which can help to reveal researcher biases. Reflexivity is one way to increase the validity of research. Valid research refers to the accuracy of research findings to describe or explain the research phenomenon, and findings as derived from the empirical data (Eriksson and Kovalainen 2008, 292).

Triangulation improves the validity of research. Triangulation is a strategy to deal with threats to validity. Robson (2002, 174) describes different ways of conducting triangulation: Data triangulation refers to the use of multiple data collection methods; observer triangulation utilises more than one observer; methodological triangulation combines both qualitative and quantitative research approaches, and; theory triangulation aims to use multiple theories (Robson 2002, 174).

The reliability of a piece of research is about the consistency of research and the ability of another researcher to replicate the research process and to produce similar results (Eriksson and Kovalainen 2008, 292). Making generalisations based on the case about other cases is problematic due to the small number of informants. The case study is primarily interested in understanding a particular case itself rather than making generalisations to other populations of cases (Stake 1995, 8).

Knowledge produced in a case study has certain limitations. A researcher's findings are subjective interpretations often from a single case which can lower the validity and usefulness of findings which on the other hand can impact possibilities to use them for policy making.

Action research has an emancipatory research interest and focuses on bringing change to existing structures. Participants are actively involved in the research process even though the degree of involvement can vary (Robson 2002, 545). In action research, an action takes a central role in research, whereas more traditional research favours distance between the researcher and the research setting (Anderson and Herr 2005, 3).

According to Anderson and Herr (2005, 3), there are many disagreements over the definition of action research, but most researchers agree that "*action research is an inquiry that is done by or with insiders to an organization or community, but never to or on them. It is a reflective process, but it is different from isolated, spontaneous reflection in that it is deliberately and systematically undertaken and generally requires that some form of evidence be presented to support assertions.*"

Action research utilises some form of intervention to a research site to improve practice or make a social change. This approach appears to be in conflict with traditional research which aims to keep a research setting intact (Anderson and Herr 2005, 5). Kemmis (1982 in Anderson and Herr 2005, 5) proposes a spiral of action cycles for interventions:

- to develop a plan of action to improve what is already happening;
- to act to implement the plan;
- to observe the effects of action in the context in which it occurs;
- To reflect on these effects as a basis for further planning, subsequent action through a succession of cycles.

During the action research process each spiral of action leads to further understanding and hopefully a solution to the initial problem. In this study the applied methodology is a constructive research approach. The research process produces a learning model which is socially constructed. Knowledge is

acquired in a dialogic and interactive relationship between a researcher/teacher and participants (students). The notion of truth is based on pragmatism. The research is qualitative and a single case study approach is applied and implemented in it. The research design has also elements from action research.

4.2 Constructive research process applied to a case construction process

CRA involves a development process of a construction which is tested in practice. CRA aims for a change in the real life situation which is opposed to those methods which aim not to disturb the research setting (Lukka 2006). CRA is experimental (Lukka 2006, 113). A researcher and participants have close interactions as they learn experientially (Lukka 2006).

A CRA involves a seven-step process which can vary in different research. The steps are as follows:

1) Find a practically relevant problem which has research potential,
2) Examine the potential for long-term research co-operation with the target organisation,
3) Obtain a general and comprehensive understanding of a topic,
4) Innovate - in other words construct a solution idea,
5) Demonstrate that the solution works,
6) Show the theoretical connections and research contribution of a solution concept,
7) Examine the scope of applicability of the solution. (Kasanen et al. 1993; Lukka 2000; Labro and Tuomela 2003.)

A seven-step CRA process is applied to the research process in Figure 18. A case study approach to research is applied in data gathering, analysis, interpretation and the construction of a learning model.

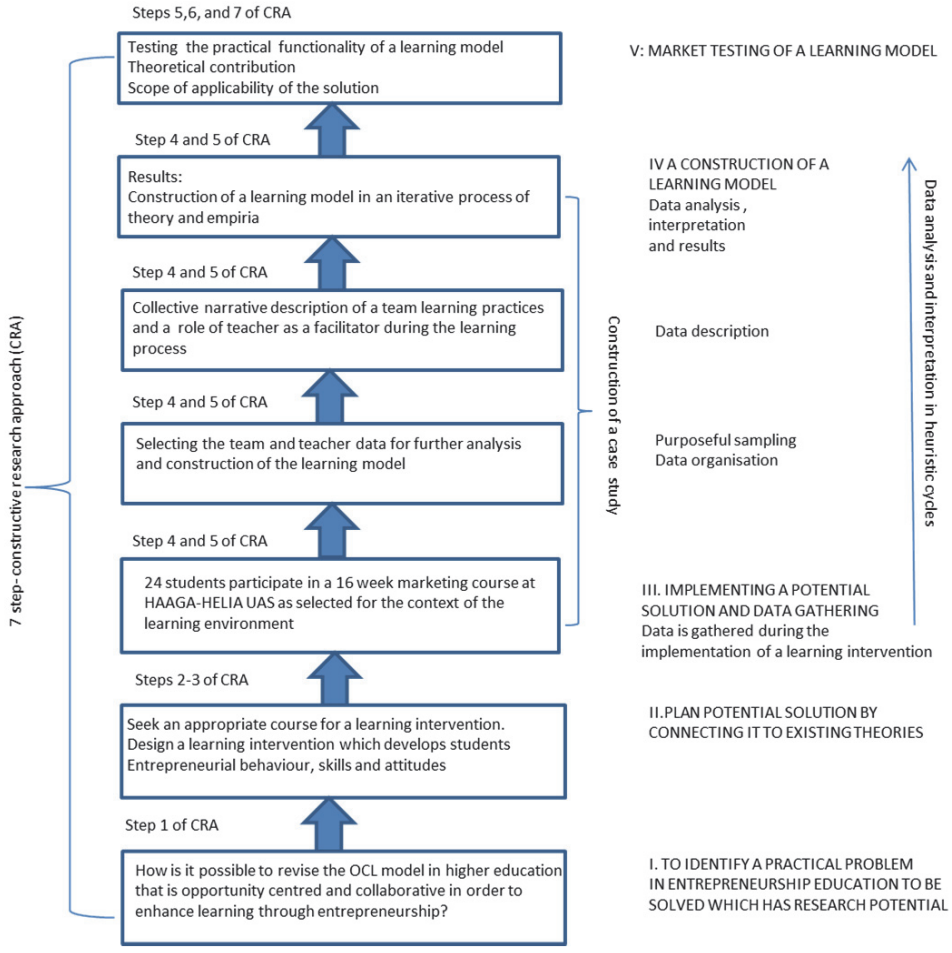

FIGURE 18 Constructive research approach and a case construction process (based on the process of Lukka 2006; Labro and Tuomela 2003)

In the first step of CRA, a researcher finds a practical problem which has a research potential (Lukka 2006; Labro and Tuomela 2003). After a review of the literature and from practical experience, I understood that teacher oriented teaching with the emphasis on management theories and cognitive learning in entrepreneurship courses does not support the development of students' entrepreneurial behaviour or capabilities for entrepreneurship. Even though teamwork projects are used extensively in universities, students' team learning is not supported, but students behave as individuals who divide workload and later combine different parts together (See more e.g. Holmer 2011). Students' learning often lacks reflection which is a necessary component for personal development. Hence, my interest was to construct a learning model which focuses on a student centred learning, develops students' entrepreneurial

behaviour and related skills and attributes in a team setting where the role of a teacher is to facilitate the learning process.

In the second step of CRA, a researcher examines the potential for long-term research co-operation with a target organisation (Lukka 2006; Labro and Tuomela 2003). As a researcher, I'm a marketing teacher in an International Business programme at HAAGA-HELIA University of Applied Sciences, therefore, I have access to a potential student body where a learning intervention can be planned and implemented. The International Business programme is based on a functional curriculum with one teacher responsible for each course. I decided to design a learning intervention for one of my own courses, International Marketing Strategy; Planning and Implementation.

In the third step of a CRA, a researcher obtains a comprehensive understanding of the topic (Lukka 2006; Labro and Tuomela 2003). I familiarised myself with the literature on entrepreneurship education, entrepreneurial learning and teamwork.

In the fourth step of CRA, a researcher constructs a solution idea (Lukka 2006; Labro and Tuomela 2003). After familiarising myself with the literature, I developed a plan for learning intervention which utilises a student centred learning approach. It had the aim of learning not only marketing but also promoting students entrepreneurial behaviour and related behaviours and attributes in a teamwork setting. I adopted Rae's (2003; 2007; 2010) Opportunity Centred Learning model as a building block in the construction of a learning model.

In the fourth step of CRA, I implemented the learning intervention in the context of the third year marketing course. As a researcher, I was also a responsible teacher for the course. A student body that participated in the course had a heterogeneous background in terms of their ages, educational and cultural backgrounds.

A case study strategy is applied in the fourth step of CRA. In all, 24 students who participated in the course took part in the data gathering process. In addition, I wrote field notes during the learning intervention. After the completion of data gathering, I familiarised myself with all the student produced data and performed a purposeful sampling by selecting one multicultural team consisting of four members for further analysis and construction of a learning model. In addition to that I used data that I had produced during the learning intervention.

I constructed a collective narrative description of team learning practices during the learning intervention which also includes my role of the teacher facilitator during the learning process. In the analysis and interpretation phase, I tried to make sense of data to form themes and interpret them. I sought references from literature to support my interpretations. As an outcome of the research process, I constructed a learning model.

The fifth step of CRA involves a demonstration that the solution works (Lukka 2006; Labro and Tuomela 2003). An experiment during the learning intervention in 2009 demonstrated already that the learning model works in

general. I faced many challenges during the learning intervention, but my implementations in 2010, 2011 and 2012 have proved that the construction works in practice. In addition to my own experiments, I tested the model with nine expert entrepreneurship educators in Europe. In general, I received comments how to develop the constructed model, but none of these experts found any major flaws with the logic of the model.

The sixth and seventh steps of CRA, theoretical contribution and the scope of applicability of a solution in other contexts are examined.

4.3 The research process and timetable

The overall research process with timetable is depicted in Table 3. I initiated the research process in autumn 2008 by familiarising myself with the literature and by participating in doctoral level courses in entrepreneurship education and learning. In spring 2009, I made a decision to plan and implement a learning intervention to support students' entrepreneurial behaviour and skills on a marketing course. I received permission from the management of HAAGA – HELIA, University of Applied Sciences to conduct a learning experiment in my course.

The actual planning of the learning intervention took place in spring and summer 2009. I chose one of my courses, International Marketing Strategy; Planning and Implementation as a target for intervention. The extent of the course was 16 weeks and the scope of it 6 ECTS. One ECTS point equals 26 hours of students work. I chose this particular course because its contents and learning process reflected a linear and dualistic business planning process often criticised in teaching and learning entrepreneurship. I also used to assess students' learning based on the quality of the content of a team report more than on students' learning process.

At the time of planning for the learning intervention, I developed a research plan which provided an outline for a learning intervention and a research process. I presented a plan at the European Summer University (ESU) in Italy, in August 2009. I received feedback and made the needed modifications to the plan.

TABLE 3 Research process and timetable

Year	RESEARCH PROCESS	CRA step	Data gathering method
	ORGANISING AND PLANNING A LEARNING INTERVENTION		
2008 and 2009	Familiarisation to literature, participation in doctoral level entrepreneurship education courses	Step 1 Finding a relevant problem Step 3 Obtain a comprehensive understanding of a topic	
spring and summer 2009	Planning a learning intervention	Step 4 Innovate a solution idea	
spring 2009	Permission from HAAGA-HELIA University of Applied Sciences to run a learning intervention	Step 2 Co-operation with target organisation	
autumn 2009	Presentation of a learning intervention at European Summer University (Italy)	Step 4 Innovate a solution idea	
	IMPLEMENTING AND EVALUATING A LEARNING INTERVENTION		
September-December 2009	Implementation of a learning intervention	Step 4 Innovate a solution idea	Teacher's field notes in contact sessions Teacher's course material Students' exercises Students' personal learning log books Students' team project reports Official course feedback Teacher's reflections with a colleague
spring 2010		Step 4 Innovate a solution idea	After course learning reflections from four team members
	2nd PHASE OF DESIGN OF A LEARNING MODEL		
spring 2010	All data was first reviewed and a purposeful sampling was applied. A student team was selected for further analysis and the design of a learning model	Step 4 Innovate a solution idea	
spring and autumn 2010	Organising, reducing and describing a collective narrative	Step 4 Innovate a solution idea	A collective narrative of a team and teacher learning processes
autumn 2010	Second implementation of the course provided a reflections base for research	Step 4 Innovate a solution idea	Official course feedback
spring 2011	Discussions and reflections of a model with teachers and an entrepreneur	Step 4 Innovate a solution idea	Reflections with colleagues and an entrepreneur
spring 2011	Visit Lincoln University. Observations of teaching practices at the University. Participation in a doctoral group at Lincoln University.	Step 4 Innovate a solution idea	Reflecting and participating in an entrepreneurship course and a doctoral seminar
spring and autumn 2011	Developing a learning model with the help of literature	Step 4 Innovate a solution idea	
	3rd PHASE TESTING A LEARNING MODEL		
spring 2012	Testing a learning model with university professionals in entrepreneurship education	Step 5 Testing a solution	
	4th PHASE WRITING A RESEARCH REPORT		
spring and summer 2012	Applicability of a learning model to UAS, HH, EE Finalising a research report	Step 6 Theoretical contribution Step 7 Examine a scope of applicability	

I started to implement a learning intervention in the marketing course in late August 2009 and continued until December 2009. I had a colleague who helped to reflect learning activities during a learning intervention. In all, 28 students enrolled on the course and 24 of them completed the course. The student body was multicultural in nature with an age range between 22-35 years of age. Among the students, there were degree students who studied part-time as well as exchange students, hence the student body was heterogeneous in terms of backgrounds and expectations. I asked all students for their permission to use the data for research purposes, and all agreed to this.

I started data gathering during a learning intervention in late August 2009 in forms of documents which were mainly students' personal learning log books, team reports and exercises as well as the teacher's field notes and course material produced for the course. I finished the data gathering process in December 2009 when the course ended.

In spring and autumn 2010 I read all data produced in the learning intervention. I made purposeful sampling by selecting a multicultural team of four students as an informant team of my research. In addition, the teacher's experiences and notes are part of the data. I organised and reduced data into a collective narrative which describes the role of a teacher as a facilitator and a team learning process during a learning intervention.

In June 2010, I contacted those four multicultural team members to make post-course reflections to gain data on important or critical factors that had influenced their learning practices during the learning intervention.

In autumn 2010, I implemented a student centred learning approach for the second time to the International Marketing Strategy; Planning and Implementation course. I used my reflections from the first implementation to improve the contents and learning processes in the second implementation. The second implementation allowed me to reflect on students' activities and my own role as a teacher during teaching and learning processes. I did not collect any data during the second course implementation except the official students' post-course feedback which helped me to observe potential improvement areas from first course implementation.

In spring 2011, I organised a reflection session with a group of teachers from varied departments in HAAGA-HELIA UAS to reflect on the preliminary results and a possible learning model. In addition to teachers' reflections, I organised a reflection session with an innovative entrepreneur to discuss the preliminary results and how the results could be applied in real world entrepreneurship.

In addition, I have reflected on my research with my thesis supervisors as well as attended national level seminars on entrepreneurship education during 2010-2011 to present the current situation in the research. All reflection sessions were organised to improve the validity of research.

In spring 2011, I visited Lincoln Business School University for one month to participate and observe teaching and learning in entrepreneurship courses. I

also had the opportunity to take part in a doctoral group at the university to present my own research.

In spring and autumn 2011, I started with an intensive analysis process by searching for themes and patterns from the collective narrative. With the help of the literature, I was able to make sense of data and interpret it. Gradually, in autumn 2011 and spring 2012, an Opportunity Centred Collaborative Learning Model started to emerge as a main finding from a research.

During the spring 2012, an Opportunity Centred Collaborative model was tested with nine professionals in entrepreneurship education to test the functionality of a model for entrepreneurship education.

4.4 Purposeful sampling and organising the data

A qualitative case research can utilise different data gathering methods such as interviews, focus groups, texts, or observations. The data gathering methods are chosen based on their usefulness to answer research questions.

Documents used in this research are a valid data gathering method in qualitative case research. Documents are often prepared for personal or official use, and they can take a variety of forms. Personal documents are for example diaries, memos and field notes whereas official documents can include annual reports and other official documents. The relationships with other documents, or their intersexuality, make them a useful source of data (Atkinson and Coffey 2011, 90).

The reading and interpretations of documents requires an understanding of the context. Derrida (1978) argues that the meaning of a text is located in the writing and reading of the text, not in the text itself. When the text is reread in new contexts, new meanings are given to it. (Hodder 2000, 156-157.)

Documents were used as the main data source in this study. Data was collected during a learning intervention during a period from late August to December, 2009. The following documents were gathered: the teacher's field-notes, course and lesson materials, students' personal learning log books, team reports and other documents such as exercises and the official course feedback. All data is written in English language except some of the teacher's own field notes contain accounts written in Finnish language.

Students' personal learning log books and project reports formed a main body of gathered data in terms of its volume. This form of data gathering allowed gathering individual, subjective data on students' learning experiences and interactions in social processes.

I instructed students to keep personal learning log books weekly and to write approximately one page reflections on their learning every week during a 16 week time period. I emphasised to the students that they should reflect not only on new theories or knowledge they have learnt but also on skills and attitude development in relation to the learning objectives set for the course. The aim of reflection was to help students to critically reflect on the activities they do and how their activities contribute to their learning and personal

development. Students were free to choose what experiences they discussed and reflected on in their personal learning log books. Students participating in the course returned their personal learning log books twice. The first time on 16 October, 2009 and the second time at the end of the course on 18 December, 2009. This allowed me to view students' progress and reflections on the learning process. Many students had difficulties to write about their learning reflections. I had anticipated this, therefore I supported students' efforts by providing feedback for their learning reflections. We also discussed reflection in class a few times during the course.

As a teacher and researcher, I was a participant observer during contact classes during the intervention. After each contact session I recorded immediately the general atmosphere of the course, my experiences and discussions with students. In addition, I made reflections on my emotions, insecurities, motivations and challenges which I experienced during the course. During the implementation phase of the learning intervention, I had colleagues from the university who helped me to reflect on my learning activities and experiences during the intervention.

As a teacher, I made my observations and reflection notes after each contact session. These field notes are my subjective experiences of activities that I observed. My abilities to observe during the course were also limited by my responsibilities of organising and implementing teaching and learning activities in each contact session. My field notes provide an additional perspective to students' learning processes even though Cohen and Manion (1994, 110) argue that potential problems of observations are that they are subjective, biased, idiosyncratic and lacking quantifiable measures.

My observations in the classroom and field notes provided overt observations of classroom activities whereas students' personal and team documents provided an inside view to students' experiences during the intervention.

In all, 28 students started the course and 24 completed it. The 24 students produced approximately 320 pages (A4) of learning log book material and 150 pages of team report material. Not all the data in personal learning log books could be used, therefore, after purposeful sampling a four student multicultural team and their learning log books were selected for further analysis and the construction of the learning model.

Data gathering was completed in December 2009. The first task was to organise data and select which data is to be selected for further analysis. I combined each student's learning log books with those of the other team members. I started to read each learning log book as well as the team reports. In the first phase of the reviewing and screening process, I paid attention to each student's level of reflections on learning as well as how entrepreneurially the team as a whole had behaved during the course. In some learning log books, students were not able to or willing to reflect on their learning. They were focusing on writing theories rather than their activities and interactions with others. For some students, it appears, learning means an increase in theoretical

knowledge rather than abilities to do something or changes in attitudes. On the other hand, there were many students who were able to reflect on their learning and open up the underlying assumptions of their thinking and behaviour.

In the second phase of the screening process of the data, I decided to select teams in which each member had reasonably good learning reflections as well as a team which as a whole had demonstrated entrepreneurial behaviour during the learning process. An entrepreneurially behaving team means that each team member was able to collaborate and to reach learning goals set for the course. After the second screening process, one team was selected to represent student team learning practices in the construction of a learning model. A teacher generated data was used to present a teacher's perspective in the construction of a learning model.

The selected team for further analysis and the construction of the learning model had four student multicultural team with ages between 22 and 28. The final criteria for selecting the team was based on the following criteria: 1) the team members represented both Western and Eastern cultural backgrounds as two female students were from Western Europe and two female students were from Asia 2) the team members demonstrated abilities to collaborate in a multicultural team 3) the team members were able to behave entrepreneurially during the course which was shown in their self-directive approach to idea identification, planning and exploitation, 4) the team members were able to reach the main goal set for the course which was to test the idea in practice, present the idea for a potential partner and to get their partners' feedback for the idea. 5) each team member's personal learning log books contained learning reflections that were deep enough to provide versatile data for analysis and model construction. The extent of the team members' learning log books were as follows:

1. team member A 20 pages,
2. team member B 12 pages,
3. team member C 15 pages
4. team member D 15 pages.
5. team report had 39 pages
6. team post-class reflections 4 pages

The teacher's field notes contained approximately 20 pages of discussions and reflections during a 16 week period. In addition to that the teacher produced considerably more data in the form of course material; a course plan, timetables, instructions for reflections, learning contracts, project work instructions, assessment as well as other material for each contact session. Students also received feedback on learning log books in writing. The two main categories of teacher produced data are as follows:

7. teacher's field notes 20 pages
8. course material

The variety of sources of data allows data triangulation. Team reports together with students' personal learning log books can be used together in verifying the team's learning practices during the intervention.

In addition, I organised reflection sessions with teachers and an entrepreneur and implemented the same course in the autumn 2010, 2011 and 2012 which all increased my understanding of learning activities and improves also the validity of the research.

4.5 Ethical issues and the researcher's role in the research process

Different research approaches have different ethical challenges. Ethical issues in research with field or participant observations depend on the power and control of the researcher over the research setting. As the researcher/teacher has the power and control over students. In this study, the researcher/teacher saw students as free and responsible actors who can keep their individual qualities. Therefore, I tried not to force students to do anything, but tried to explain and motivate students to take an active role over their own learning process. I tried not to tell students what is right or wrong, but wanted them to test their ideas in practice. I organised team sessions where teams could discuss their learning practices and potential challenges. In those discussions, I took a facilitator role of asking questions rather than telling them what to do.

I also actively asked students to provide suggestions of issues which could help them to develop their learning process. Hence, I did not try to force students to change, but tried to motivate and support this change if they were willing to engage in it.

I purposefully created a learning environment which was filled with uncertainty and insecurity. Students' learning activities took place beyond the classroom setting, but they were not placed under any danger during the learning process. The role of teamwork was also to provide support for individual students.

I could exert power in the assessment process. I explained to students the criteria used in the assessment. The assessment which is based on personal development is a more demanding form of assessment than assessing contents and decisions made in a marketing plan or the ability for a student to answer correctly in an exam.

I was as honest and accurate as it is humanly possible during the data analysis phase. The data analysis is always a subjective process which can lead to researcher biases. The anonymity of participants should be maintained, but case studies which investigate a single phenomenon and use purposeful sampling may contain problems of anonymity (Merriam 1998, 217). In this study, a single multicultural team of students was chosen. I do not use any of the names of the students and try to talk about their personal characteristics only in general terms. The team members, as well as other students, were asked

for their consent with regard using the produced material for the research purposes. All gave their consent.

As a teacher and researcher, my own background and values influence the planning, implementation and assessment of a learning intervention as well as data analysis and interpretation phases which are predominantly subjective processes. Hence, it is important to make an attempt to understand my background and values which guide me in my decision making and interpretations.

In my childhood, I was actively involved in competitive tennis. After my graduation from high school I moved to the United States of America where I studied and played on a university tennis team for four years. In those years, I developed an understanding for hard work and goal orientation as well as an interest for personal development.

In my private life, I took part in starting up and running a family business during 1998-2006. I learnt to understand the requirements of entrepreneurship for individuals and family. At the same time, I also taught business classes at HAAGA-HELIA UAS and I often reflected on how the different things we teach to students compare to what is actually demanded in practical business life, especially in small businesses. At that time, I started to question what is taught to students and how things are taught to them.

Currently, I have been teaching marketing and other business related courses at HAAGA-HELA for 12 years. I have learnt that my personal development orientation continues to be strong and it is not only focused toward me but also toward an organisation. Sometimes, I have experienced that an organisational life does not always change as quickly as I have wanted, but an organisation and its managers have given me freedom to experiment with teaching and learning in my own courses.

During this research process, my values toward teaching and learning have changed. At the beginning of the research process, I made a conscious decision to change from a teacher centred toward a student centred learning approach. During the planning phase for the learning intervention, I prepared myself to orient positively toward students, allow them to make their own decisions and learn from their own mistakes. As a teacher, I could be an expert when needed, but my main duties were to ask questions and support and challenge students' learning processes. I did not believe that learning takes place through force or control of students' learning processes.

After the learning intervention, I have learnt to believe that the teacher needs to have enough pedagogical knowledge to explain to students the benefits of learning and design learning environment in order to make it interesting enough for students to realise the benefits for learning. I accept that I cannot motivate every student to take responsibility for their learning process, but I believe that the current educational system supports more of those learners who have skills to learn theoretical knowledge and perform well in exams rather than those who are more practically oriented. In my opinion, too little emphasis is placed on those students who have learning difficulties. In

general, I have a positive attitude toward students' abilities to learn and the willingness to develop personally when they are given a chance and when they themselves realise the benefits of a learning process. I also believe that current organisational structures such as timetables, classroom learning and a functional curriculum place major hindrances on the learning and motivation of both teachers and students.

4.6 Collective narrative description

Data analysis overlaps with a data gathering process in a naturalistic research process. A thick description of data provides a starting point for analysis and reporting. A thick description of data open ups a world to readers to make their interpretations of what is significant and meaningful. (Patton 2002, 437-438.) In this section, the analysis process to describe the collective learning process as a collective narrative is discussed. This is followed by the description of a collective narrative itself (4.6.1). The collective narrative operationalises the collective learning practices during the opportunity centred learning process. The collective learning process combines the teacher's as well as the team's learning practices during the opportunity centred learning process.

All data prepared by the multicultural team members and teacher were in free flowing text form. In the first phase of data analysis, I started to read each team member's personal narratives (learning log books) many times. I underlined words and themes in personal narratives. I experimented with data and tried to make sense of it and understand it. Each personal narrative provided an authentic individual experience related to different phases of the learning process during the intervention. In inductive analysis, a researcher is often sensitised to prior theoretical concepts even though them are not used to guide the analysis process (Patton 2000, 390-400; Eriksson and Kovalainen 2008, 129).

Sometime a team member's individual experiences or actions aligned with others experiences during the learning process, and sometimes they produced a new perspective or angle on events and situations. When most informants provide the same reference to an event it can generally be said to be valid (Alasuutari 1994, 41).

As Rae's learning model was adopted and used in organising the learning process during the intervention, data started to emerge as similar to Rae's model even though my first intention was not to organise data according to Rae's learning process. I transferred data chunks from each team member's personal narrative and grouped them together around Rae's main four phases. These data chunks from each team member's personal narratives, contained paragraphs and sentences, not individual words related to common themes that the team member had experienced during the learning process. In this process, I marked a code on each transferred data set in order to check the content later from the original text if needed.

I continued to read one document which contained all data chunks from each team member's personal narratives and started to reduce the data. While I continued the analysis in order to describe a case, the research questions were still not fully formed and I used questions such as the following: What do the students as well as the teacher say they have experienced? What did they say they have learnt during the learning process?

After I had conducted several rounds of data reduction, the collective narrative description emerged as an inductive analysis process from the data. It operationalises the roles of the teacher and the team's learning practices during an opportunity centred learning process.

A collective narrative is described in the following sections. The reporting is based on modified OCL (2003; 2007; 2010) model. Each phase starts with a teacher's activities followed by a team's learning practices in this phase. The team learning process is not a linear but rather an iterative process. To help the reader to follow the text, a linear approach is needed in reporting of the collective narrative.

4.6.1 Orientation to the course

In **the orientation part** of the course, I introduced a course implementation plan with learning objectives, contents, learning methods and assessment.

I started the course with a brief orientation on the importance of marketing skills and knowledge in a globalised world. I encouraged and motivated students to take an active role in their own learning to develop the behaviour, skills and attitudes needed to work in marketing in a globalised world. I explained the roles of the teacher and students in a learning process, giving them possibilities to take control of their own learning. I emphasised the practical role of learning by doing and encouraged students to take an active role in providing feedback and to openly discuss issues in the classroom that can improve their learning in the course.

I oriented students to a collaborative teamwork and project task in the course. The team learning task was to identify and develop a creative and useful product or service in an open learning environment. The usefulness of the product or service needed to be tested on the market. I emphasised the role of collaboration in a project work and we discussed the elements of successful collaboration. We discussed how a poorly working team not only influenced its members' learning but also its abilities to be innovative and self- directed. The team members' abilities to collaborate was used as criteria for the team's learning assessment, hence shifting the focus of assessment from purely contents to team behavioural processes. To support the team's collaborative learning practices, I had scheduled two feedback and reflection sessions for the team during the course.

After orientation lectures, I had mixed feelings of whether I was able to succeed in motivating and explaining the course learning objectives, methods, and a process and assessment criteria. In the learning intervention, I felt unsure about whether students understood what I had set as being the requirements to

complete the course. I had given a lot of information, which can take time for students to internalise. It seemed that some students are more interested in it than others. The most concern was whether students would start to behave according to my plan. Many students came from a variety of backgrounds and their expectations of the course varied.

In the team formation process, I allowed students to form teams freely, but encouraged students to have at least one person in each team who is familiar with the local business climate and language since the project required students to step outside of the classroom to meet potential partners and organise project activities. To freely form teams is based on the idea that entrepreneurs can choose those people they like to work with to accomplish goals.

The team formation process is an important learning experience which influences on the rest of the learning process. Students have expectations about other students and they like to join teams where each student's expectations are in line with other students' expectations about learning goals. A team member (M) reflects on the team formation in the class:

> The first situation that is still in my mind was when we (the students) had to make groups of four to five people. I was quite sure that being in a group with natives would make it much easier to fulfill. Therefore I wanted to be in a group with at least with one Finn. Well, the groups were quickly clustered-those who had known each other already from other courses got together. So there were on one hand groups of exchange students and on the other hand groups of Finns. I made a group of with [A] whom I had known before the course, [Z] and [D]. Somehow it turned out that we all believed being in a group with a native would make a course easier (as we had great respect for this course after being heard introduction). In retrospect I think this same point of view made us stick together- we ambitiously wanted to make the best out of the situation, we wanted to do our best in order to achieve a good grade and to show ourselves that also non-natives can succeed (member M).

The team formation was rather a disorganised process and some students were more successful than others in finding suitable team members. Team members felt disappointed about the team formation process, but they turned these negative feelings into motivational beliefs to succeed in the course even though they did not have a native student in the team.

In the orientation part of the course, each **team member prepared their personal learning goals and performance standards** which are briefly presented here. The team consists of four female students, two from Western Europe and two from Asia with the age range of 22-28 years.

The first team member, A, is an Asian female and a degree student. Her long-term goal is to become an entrepreneur in the future. In her view, a teacher's role is to provide basic marketing concepts. She is interested in learning marketing theory and applying it in practice. She is interested in people from other cultures. She is willing to work hard, try her best and be confident. For successful teamwork, she believes that team members cooperate, share information and ideas with each other. She sees herself as a team member who is willing to help others by supporting and motivating them, and sharing her experiences.

The second team member, B, is an Asian female and a degree student. B's main learning goal is to implement the team project in practice which provides her an opportunity to learn marketing theories and gain practical experiences which are needed in her future career as an entrepreneur. She considers the project to be important and she takes it very seriously. Specifically, she wants to learn problem solving, risk management, customer analysis and customer relationship development during the course. She believes that successful learning is based on communication and collaboration with teachers and peers. She wants to share information and is willing to provide information to others. Her strengths are in problem finding, critical view, observation capabilities, communication, collaboration and motivation.

The third member, C, is a Western European female and an exchange student. Her learning goals are to develop her skills in creative thinking and idea finding, to be sensitive to both customer needs and environment, to create and implement a marketing plan, and to identify and assess risks. In order to reach these goals, she will read marketing related books and newspapers, observe consumers in authentic environment, and analyse business situations carefully. She is ready to be prepared for lectures and pay attention to them. She likes to hear real-life experiences from a teacher and peers. She considers herself to be open-minded, active, and supports the learning environment to facilitate learning. She expects team members to be honest and reliable. She appreciates that the diverse views and experiences of team members will help her to understand consumers in the 21st century. Everything that she expects from other team members she also expects from herself.

The fourth team member, D, is a Western European female and an exchange student. Her goals are to develop her marketing competence in identification of customer needs, identification of trends and opportunities, creative thinking, project implementation in practise, risk and resource management, and establishing and developing relationships and networks. In order to reach these goals, she will take part in lectures, group work and study independently. She considers that it is important in teamwork to share information and experiences as well as everyone contributing to a motivating learning environment. She wants to take the course seriously and is willing to provide constructive feedback to others and to share her knowledge, experiences and ideas to stimulate others' thinking and learning.

4.6.2 Personal and collective enterprise

The aim of the personal and collective enterprise phase (Figure 19) is to relate an opportunity to both individual and team learning goals. Main learning methods used in this phase are:

1. Lecture
2. Individual and team learning contracts
3. Team formation and collaborative learning in teams
4. Reflection

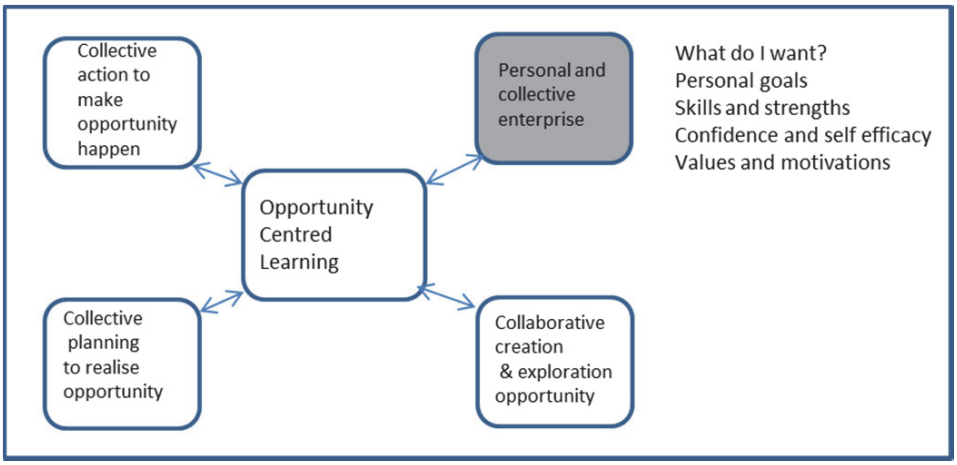

FIGURE 19 Personal and collective enterprise

As Rae's (2003) learning process starts by assessing personal goals, skills and strengths, confidence and efficacy, values and motivations I prepared a variety of learning methods to facilitate students' active learning processes. An individual learning contract as a method was used to set individual level learning goals and performance standards, and a team learning contract was used to integrate individual level learning goals and performance standards into team level learning goals and standards. A personal learning log book was introduced as a method for learning reflection. It was also used as an assessment method during and after completion of the course.

To facilitate an individual student's learning goal setting, I asked students to assess their current level of marketing knowledge, skills and attitudes in relation to the course learning objectives. Through this process students were able to see potential gaps in their current and future marketing competence. This exercise supported students to become familiar with course learning objectives, and to integrate their learning goals and performance standards to course objectives. Performance standards means in this study, those behavioural standards that students need to apply during the course in order to achieve individual learning goals. In the discussion with students about their current competence in relation to course objectives in class, I realised that the students needed more time to internalise the course material as well as the learning approach.

Each team member's individual learning goal setting took place outside of the classroom where they had more time to reflect on their individual goals and competence. When compared each team member's learning goals and performance standards, they appear to be more similar than different. All team members emphasised the important role of collaboration for successful teamwork. Collaboration is expressed as a willingness to share information and experiences with others. All team members' individual learning goals and

performance standards refer to a positive attitude to work hard. They express an interest in each other and are willing to learn from each other's experiences and cultures.

There are some minor differences in individual learning goals and performance standards which are based on cultural differences. Asian students were interested in entrepreneurship as a future career even though I said very little about entrepreneurship in the course. Western European members emphasised more individual learning methods even though they also recognised the importance of team work in the course.

A team learning contract is prepared in a kick-off meeting set by the team. In this meeting, team members discussed each other's goals, interest, values in general and in this course. Team member D describes this meeting:

> We met at the cafeteria at […] campus where we started to introduce ourselves to get to know each other better. It was very interesting to hear about the others' lives and working experiences and I think that we complement each other well (member D).

In a team meeting, a mutual interest toward each other facilitated discussion and a team learning contract was written and team learning goals set. The team wanted to develop creative thinking, customer communication, planning and the implementation of a marketing plan in an authentic business environment.

4.6.3 Collaborative creation and exploration of opportunities

The aim of the collaborative creation and exploration phase (Figure 20) is to create and explore ideas for potential business opportunities. Rae (2003; 2007; 2010) emphasises in this phase creative thinking, exploration of ideas and taking initiative. The main learning methods used in this phase are:

1. Experimenting with creativity tools
2. Independent search for marketing trends and unsolved customer problems
3. Team idea generation and exploration
4. Teacher – team feedback sessions
5. Reflection
6. Lecture

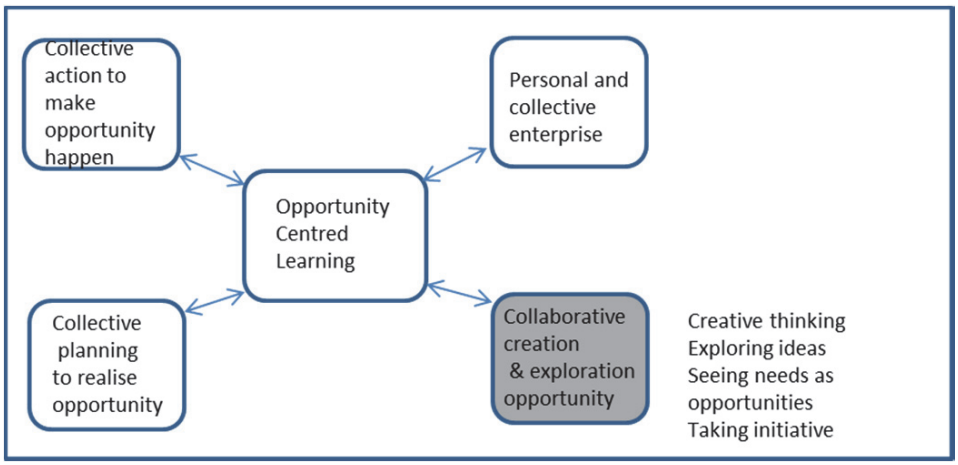

FIGURE 20 Collaborative creation and exploration of an opportunity

A teacher's orientation in the phase of collaborative creation and exploration. I encouraged teams to conduct searches for ideas by actively reading books, newspapers, Internet and by making observations. I especially emphasised seeking out unsolved customer problems in the home, school, work place and related to hobbies.

I planned a reading assignment, video clip and exercises to support students' awareness and skills in creativity and creative thinking. In class discussions, we discussed everyone's creative potential and defence mechanisms which create barriers for creativity.

The idea of the creativity exercise was to focus on unsolved customer problems as potential business ideas which can be found everywhere, at home, work and hobbies. In the exercise, students first identified potential unmet customer problems, secondly they thought how these customer problems were solved currently with existing products or services on the market, and thirdly, students generated new product or service solutions to solve customer problems. This structured exercise involved a creative problem solving process of finding problems, identifying and analysing current solutions and generating alternative new solutions to solve a problem which is different from solutions currently on the market.

As an outcome of this creativity exercise, students were able to generate many unmet customer problems and identify products and services currently available for solving these problems, but they had problems in generating creative new product and service ideas, even though they tried hard. The exercise supported students' understanding of the role of creativity in new service and product idea generation. It also demonstrated challenges in finding creative solutions to unsolved customer problems, and not merely solving them with existing products and services.

We practiced creativity with the use of *creativity tools.* These exercises supported students' brainstorming skills and abilities to associate and combine ideas together to produce new ideas.

Through observations on the students' performance during creativity exercises in the classroom, it appears that students have created barriers for their creativity to some degree. One reason for this is that some educational institutions emphasise more logical and rational thinking than creative thinking. Creativity tools can encourage students to be creative, but if not practiced systematically over longer period of time, these techniques often have a short-term impact on students' creativity and creative thinking.

The team process to create and explore an opportunity was started through individual member's *systematic search* for ideas in newspapers, books and with the practice of creativity exercises introduced by the teacher. Each team member had set a goal to learn creativity. It was also a shared learning goal in their team. Individually, students used different approaches to learn creativity.

Team member A reflects on her learning process of becoming aware of the relationship between creativity and entrepreneurship while watching a movie about a lady who used personal creativity to recognise a business opportunity:

> I had watched a France movie, the name is "Exclusive beauty parlor"…The worse happened, she had a car accident, her car hit with a big truck, she just lost her job and she need to buy that old big truck as well. But avoided to go to police station, she chose to buy that old big truck. Luckily her brother is a car repairman, she don't need to pay the repair fee for the car. After the truck repaired, she suddenly comes out with the idea, she wants to use this big truck to open an exclusive beauty parlor, like moving exclusive salon… What I most impressed is that her brave heart and her creative. Even she just a normal woman, but she did something not every woman can do. There is no doubt she is creative thinking person, and has imagination, never give in. Life is full of surprise, we just need to use our imagination, and opportunities, and fortune to find out what unique we can have (member A).

Team member A is inspired by a movie. One of her learning goals was to learn marketing in practice to develop her skills for her potential future career as an entrepreneur. By watching the movie she is capable of recognising the role of creativity as part of an entrepreneurial process. A movie can be an effective learning method due to the ability to transfer messages to an audience by its visual and audio capacities.

Team member D as well as team member A looked for role models who have been successful business people, and how they have used creativity to generate new ideas and make business prosperous. Team member D read a book about Sam Walton, the founder of Wall Mart. She was fascinated by Sam Walton who was described as a person capable of thinking outside of the box:

> In his [Sam Walton] entrepreneurial style, he combined many obvious ideas to form a loyal customer base. The main sources of his ideas were his competitor's stores (member D).

Team member C took a more systematic approach to idea search and creativity training. She searched through different sources to recognise changes and trends in the business environment, and emerging business opportunities. In addition to a systematic search, she developed creative thinking through creativity tools. She explains:

> By reading this website I came across one useful approach to think outside of box. This technique is called PSI and stands for equation Problem+Stimulus=Idea. You have to start with thinking of the problem in many different ways, using different words and thinking backwards (member C).

Team members are active in independent learning. It appears in this phase that students with learning orientation are able to self-regulate their own behaviour, actively search for opportunities and train their skills. Students appear to learn better when they can choose what they learn and how they learn.

After the individual search for business ideas and training individual creativity, team members held a meeting to discuss ideas together for team idea generation. They continue the idea generation and creation process together with the help of a creativity tool. In this process, each individual student's knowledge and skills are available for others as resources to generate new ideas. Team member C describes the team creativity session:

> When brainstorming all those ideas and potential solutions to them, the team members used the method "Idea Space" to stimulate their creative thinking by making the factors 'resource', 'information', 'attributes', and ' environment' explicit and then connecting this information in new ways helped the team to imagine new possibilities by shifting the team's perceptions of reality , even if no practical use or innovation results from the creative insights (member C).

In this shared experience, team members share knowledge and an understanding of how creative ideas are generated in a team process. They also recognised that not all ideas are feasible for further development generated by a team's creative effort.

The team created a total of 11 ideas that seemed to have some potential for further idea development and market testing. For each of the 11 ideas, the team developed a simple business concept in order to explore each idea further and make decisions about the feasibility of each idea as a potential business opportunity. None of the 11 product and service ideas were breakthrough products, but represented interesting modifications of existing products and services on the market. After a long discussion and exploration of ideas, the most interesting idea starts to emerge in the team discussion. Team member C explains:

> …idea was a gum paper which is a paper block on which people can stick their used chewing gums. This hardware is fixed on bus stops, street lamps, railings or similar street furniture and its unique design shall encourage people to take more personal responsibility towards the environment so that the street pavements don't get dirty by chewing gum litter (member C).

The idea emerges in a team interaction process where both explicit and implicit knowledge are shared and used to create new ideas. The new idea is socially constructed in collaboration and dialogic interaction among team members.

Even though one idea emerges as the most feasible one for further exploration and development, all the ideas were critically evaluated for their feasibility as the potential business opportunity. These ideas were discarded because they were too large projects in general, took too much time, or required too much capital to plan and implement.

Before the team made the final selection, they explored the idea from different sources to find arguments to support the selection. The benefits of 'a gum paper' idea focused not only on the feasibility of the business opportunity but also on the viable solution for environmental concerns, and the potential for team members to identify with the idea and utilise their varied skills in planning and testing the idea later on the authentic market. Hence, the idea of 'a gum paper' was selected based on the following arguments 1. Gum litter makes streets dirty and it is difficult and time consuming to clean, 2. 'A gum paper' offers a low cost solution to a gum litter problem, 3. Every team member is able to integrate and identify their interests and values to the idea. Hence, the idea selection process cannot only be made from business perspectives, but also the values of society, environment and personal are all considered. The idea is big enough for team members to use their skills as resources to plan and later test it on the market. The idea is challenging enough but not impossible for the team members to handle.

The team idea identification, creation and selection process supported the collective identity construction process around the 'a gum paper' idea. Each individual team member's knowledge, skills, values and interests are integrated into the idea. Team member D reflects back to that process:

> The main reason is that everyone of the team can identify herself with the idea, meaning that at the very beginning we came up with the idea together by reflecting the team members' personal skills, needs and attitudes. We did not edge anyone of the team aside, nobody felt overlooked. Therefore we all had a very positive attitude towards our idea and its implementation process (member D).

As the account shows, the commitment and positive attitudes toward the idea and respect for one another provides the needed energy for the team to move forward in the process.

4.6.4 Collective planning to realise the opportunity

Planning to realise the opportunity (Figure 21) is a form of learning which is a future oriented, problem solving process. Students develop strategic thinking and a vision for the venture. (Rae 2003; 2007.)

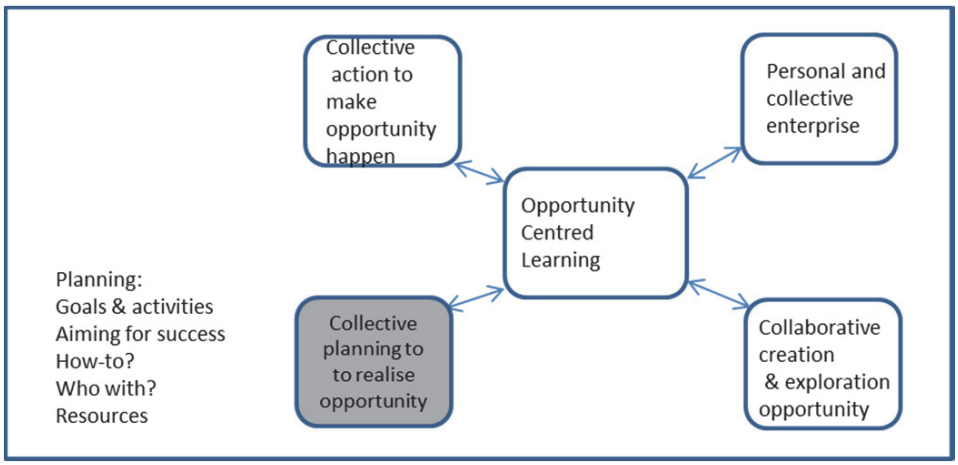

FIGURE 21 Collective planning to realise the opportunity

The main learning methods used in this phase:

1. Literature package with reflective questions
2. Self-directed and collaborative team learning
3. Reflection
4. Class presentations for feedback

A teacher's orientation in the phase of collective planning to realise an opportunity contains different methods to facilitate students' further planning of an idea and its testing in an authentic market. In the planning phase of this intervention, I made a decision not to engage in a traditional marketing planning process since the team idea was only in its development phase. Any detailed marketing plan in this phase would have not provided the flexibility needed to develop an idea into an opportunity. Hence, the main theme in the planning process was to design a service and to make a plan for testing the idea on an authentic market. The plan for testing required planning the contents for the idea and organising a testing event and feedback collection system. Variety of feedback was believed to facilitate the idea development into an opportunity.

To facilitate students' planning process, I prepared *a reading package* which looked at contemporary service marketing theories and models. I held mini-lectures to orient students to readings, but I also used a questioning method to facilitate students' understanding of readings to oneself and to a team. The questions that I used in the reading package were as following:

1) What are the main facts and concepts of an article?
2) What is your first personal impression of the article?
3) Do the different themes of the article have any meaning for your project work?

4) What are the first steps you and your team can take to implement these issues and themes into the project? When? By whom?

These questions supported students' abilities to understand theories and their potential relevance and application in practice (project work). The contents of articles aimed not only to help students' idea development process, but also initiated team discussions and dialogue to share knowledge and understanding.

As in a student centred learning process, where students are responsible for their learning and achievement of learning tasks, I encouraged students to *seek relevant information for their unique project* needs, because it is not possible for a teacher to cover all the necessary issues needed in different team projects. Team member D reflects back on her readings and independent work process as:

> We were not taught that we should do the thing in this way or in that way. We were encouraged to try many ways to handle a problem. During problem learning process, we had to read a lot and observe the surroundings as well. In this case, I had to read a lot; there was no way that I could continue the study without reading many relative articles (member D).

In this account, the team members studied not only the material given to them by the teacher, but also material to solve problems arising from the context. When students are given freedom and responsibility over their project work, they are motivated to work hard to find the necessary information to solve problems and move toward the achievement of a learning task.

I experienced the role of a teacher as a facilitator rather difficult at times. I tried not to lecture too much but still I felt unsure as to whether the students were learning for instance enough theories. I was in a transition process from teacher centeredness toward student centeredness. In this transitional process, I moved beyond my comfort zone which was due to the uncertainty involved in the process. I was not in control of the process, but I had been given the responsibility of learning to student teams. I felt uneasy most times and I need repeatedly to remind myself not to move back to a teacher centred approach. I did not always trust students' capabilities to take responsibility for their own learning.

In this learning intervention, although I have over 10 years of teaching experience, I was an inexperienced teacher who attempted to move to a student centred learning approach. Due to this inexperience, I was insecure about what to do in most parts of the learning process, and this insecurity was most likely noticed by the students as well, even though I had already discussed with them about the learning objectives, methods and process. I was not successful in getting all the student teams to work as independently as the team which is in focus in the narrative. Partly, this was due my inability to confidently explain the learning goals and general benefits of the student centred learning approach, but also some students were not focused on learning but rather performing based on their earlier experiences and expectations of the roles of a teacher and students in a learning setting.

It is difficult for the teacher to know how students perceive teaching and learning in any given situation due to differences in students' backgrounds and expectations. Team member D reflected the role of a teacher in her account as:

> Moreover, I liked the fact that you [teacher] didn't stick to any marketing strategies that anybody can be read in literature. You gave us, let's say, the basic tools to realize our ideas, the rest was left to take care of ourselves. We could decide on our own what research base we wanted to build upon. So, I believe through this students' involvement you achieved my buy-in (member D).

In this account, the team member appreciates that the teacher gives basic direction for the student work, bus she enjoys also the freedom of action given to them to realise the opportunity.

My inexperience as a facilitator was important for my personal development as a teacher. I had clear principles for the roles of the teacher and students during the learning process and I kept them in mind at all times and I did not go back to a teacher centred approach. In this learning process, both the teacher and students move beyond their comfort zone which creates discomfort and insecurity which need to be tolerated and problems solved when they arise. It is important to listen to students actively and not to give up in cases where students would like to move back to a teacher centred approach.

In retrospect, I have come to understand my teaching and students' learning heuristically. I have realised that it takes time to learn to tolerate uncomfortable teaching situations, like the ones described above. Through practice, a teacher learns to transform oneself from the space of discomfort into the space of comfort where the teacher's insecurity is transformed into a teacher's confidence. It is not only that the teacher knows the substance knowledge well, but more importantly that they have the ability to lead student teams in a learning process.

In **the team learning process during the collective planning phase to realise the opportunity,** the team members turned 'the gum paper idea' into 'the gum up campaign'. In this action oriented problem solving process, the team members plan contents for a campaign, make necessary arrangements to test the campaign with real customers and leverage resources by contacting potential business partners to test and realise a campaign. Open and uncertain environmental influences on team learning, which is dynamic and complex due to a continuous stream of problems arising from the context.

The team utilised mind maps and other tools and theories provided in the reading package to create contents and processes for 'a gum up campaign'. In the team meeting, team members interact, listen to each other's different perspectives and make team decisions by integrating different ideas and opinions into compromises which can be accepted by everyone. Team member B describes the situation as:

> In my opinion, individual interests eventually will integrate into group interest and generate better solutions for the teamwork. If the team members can't combine their opinions, I will listen to others, and agree with them about someone else's solutions (member B).

Even though team members were tolerant to each other's opinions and perspectives in team meetings, cultural clashes between diverse cultural backgrounds were unavoidable. Team member B reflects back on the interactive team discussions:

> In terms of teamwork, the most important thing would be a cultural shock. A [name deleted] and I are from China, C [name deleted] and D [name deleted] are from Western Europe [country deleted and Western Europe added]. We had very different way of thinking ideas and handling problems. For example, C was always very straight and direct. She expressed her thinking straight ahead. Therefore, it was unavoidable to hurt A's and my feeling sometimes, even though we knew that her opinion was not personal. The reason is that Chinese are not always direct. Through this course, I learn different culture and tried to be patient and work open-minded (member B).

As she struggles with cultural differences and occasionally hurt feelings, she works hard to adapt to situations and learn to be more patient and open-minded in order for the campaign to succeed. Team member C, on the other hand, is aware of her tendency to make quick decisions and move fast forward in the project. She had learnt to patiently communicate and to take into account different views, perceptions and habits of team members from different cultural backgrounds. She reflected in her account as follows:

> Patience is another very important skill I'm learning in this project. I love things to move on very quickly but I had to realised that with that you are forgetting to speak about other issues that might be important. Once again I can see that communication is everything and that with visible patience communication in a group can improve. In our group cultural diversity is maybe not so obvious as in other groups as we are presenting two nationalities with four persons. However, I believe that it really makes a difference to group work. I wouldn't actually say it makes it harder, but it makes it more diverse and includes more points of views than usual, as it is also adding the habits and perceptions of other cultures (member C).

Even though two team members are from China, they do not think about cultural issues exactly in the same way. Team member A recognises that cultural issues need to be considered in all communication situations, not only when people represent clearly different cultural backgrounds:

> During the teamwork, we are a team with two cultures, widely can say European and Asian. But actually I wasn't feel very much culture shock in our team, maybe some agreements and thinking ways sometimes little different, but that's normal things, even you come from the same place, but your thinking also different from each other. Different person look at a same thing will show different opinions and attitude on it. But the most important thing is to have respect each other, and listen (member A).

Team communication practices appear to be challenging at times, but team members learn communication skills from each other. They have generally a positive attitude, respect and the willingness to learn and to adapt to communication situations. The team members' active interaction and dialogue enables both explicit and tacit knowledge to be shared. The team members

develop shared mental models of a campaign plan and its implementation which facilitates effective coordination of teamwork later in the process.

Despite differences in opinions and communication styles, the team members work hard together to reach the same goal of testing the campaign in the real market. The team leads itself and creates collective motivation through shared goals and work role division. Team member C explains how the team maintains a high level of effort and motivation:

> …it is very important that people with different backgrounds have a common vision and goals to reach in order to be able to work together as a group. And I think we are a highly motivated group and another reason why we work well together is because we recognised that every one of us has strengths and weaknesses and due to this we separated our workload and our project is now able to profit from the strengths of the group. Also the strengths of someone are usually the tasks he or she likes the most. So with this technique the motivation can definitely be held on (member C).

The contents of the campaign process and campaign material are planned together. In this process an opportunity emerges as a new creative solution to an existing problem. In this process, team members integrate team goals, values and interests into a brand name and the graphical design of campaign material which expresses the team identity. Team member C reflects:

> As a brand name "GumUp" has been chosen because the team wants to reflect the idea of the solution for a chewing gum litter. From the streets the chewing gum should move to the notes and then to the bin. That is why "Up" was chosen. The created logo reflects every aspect of the aims the team is following with the idea. "With the green colour and attached leaves the ecology of GumUp shall be expressed. The colour of the word "Up"shall reflect streets. Giving the chewing gum this bright pink colour as well as the other inclusion of the other colours to increase the awareness towards the campaign and reflecting the fresh, appealing and different approach of GumUp. All in all the logo shall as well mirror the dynamic of the campaign and the willingness to make a change (member C).

An opportunity is expressed as a new creative solution to a problem which causes a change to the existing situation. The problem of gum litter is solved with the new creative solution of a chewing gum awareness campaign which involves different material such as posters, 'gum notes', and blogs. Even though the contents of the campaign appear well thought out, team member A doubts the value the campaign offers to the market in the long run:

> This week since not really easy for us, we have to work out what we can offer to the market? Actually what GumUp can offer to a market? We are willing to make this happen as a campaign, and what a campaign can offer to the market? There is no doubt that we want to achieve our goal, and campaign is the way we going to use, but except this what we can offer (member A)?

In the same token she reflects and transfers the same question to her own life and what she can offer:

> …but indeed what is my pain? And what I can offer? Maybe I am still finding my way. And try to work it out someday. Perhaps what will gonna to happen in your life is an uncertain factor. May be this moment will be more important thing is to

> prepare yourself. Maybe someday when pains come, we know how to handle the situation (member A).

Team member A recognises that the future is uncertain and it is better to live in the moment and learn from it to be better prepared for the future. In this reflection, team member A explores who she is and what she can become, hence creating her identity in social processes.

Students were encouraged by the teacher to seek resources by contacting potential partners who could provide the needed resources. For the campaign testing, the team members decided to contact a school manager to get a permission to run a testing and to get help with the printing of the campaign material. In addition, they decided to ask a Finnish confectionary manufacturer to sponsor chewing gums for the testing of the campaign with real customers and to see how well the campaign works in practice.

Before meeting and presenting the campaign idea to the partners, the team practiced the presentation and their selling skills to make an effective presentation. Team member C explains how team members rehearsed the presentation and selling together:

> In general people have difficulty to find flaws by themselves. With others help mistakes can be found easily. According to this technique, we spent couple hours for practising the presentation, one presenting, the rest giving opinions. In this way we felt that our presentation skill was improved…With each other's encouragement and clear speech, the presentation was successful (member C).

Through mutual goals and collective motivation, the team's support toward each other increases confidence and trust among team members. Through collective practice, convincing presentations were made to potential partners who supplied the needed extra resources for the campaign. The school manager allowed the team to run the testing campaign at school and a Finnish confectionary manufacturer provided 500 packs of chewing gum for the testing event.

Team presentations and feedback received from a variety of sources not only developed team members' presentations skills, but also improved their confidence in believing that they had a viable opportunity. Hence, constructive feedback was used for further development of an idea into an opportunity. An interest expressed by others toward the idea provided energy for the team to try even harder to realise the opportunity. The team member D and C express the role of presentations and feedback as vital for the development of the idea:

> In my opinion the presentations that we held over time were a crucial part of the project-we held presentations in front of our fellow students, in front of a HAAGA-HELIA staff member and even in the front of Helsinki City's Staff. These events made me more self-confident/positive about our joint performance. The feedback we got was very valuable especially in the improvement potential on our own, so that we tried to make the presentation the next time better than before. The more presentations we conducted the more used and confident I got-so also my presentation performance improved a lot throughout the course (member D).

> We learnt already a lot in the preparations for the presentations concluding everything what we have so far and also after the presentation, seeing where we really are. …To see that also others outside our classroom believe in the potential of our project gave us new strength and pushed our ideas even further. The aspect that this project could really be realised turned around our thinking a lot, taking it more serious (member C).

Feedback from different sources is not only to provide important improvement ideas but also to provide a channel for questioning underlying assumptions team members hold about the idea and their thinking. Team member C reflects in her account:

> But in this presentation we saw once more that we are stuck with our beliefs and that our project will only improve to a stable and good positioned idea, which can be put into reality, if we take feedback from others more into account. We have to question our reasoning over and over again and we have to take other characteristics and perceptions account as well (member C).

In this account, the team member shifts perspectives from a team perspective toward a customer perspective. An ability to see the world in the eyes of a customer rather than from an individual or a team perspective opens up possibilities to question the assumptions the team has made on the campaign idea. An ability to change thinking and consequently behaviour is important for effective idea development, team learning and personal development.

4.6.5 Collective action to make the opportunity happen

A collective action to make an opportunity phase (Figure 22) is an action oriented, experiential team learning process. The main learning methods used in this phase are:

1. Self-directed and collaborative team learning
2. Teacher – team feedback sessions
3. Reflection
4. Project report and final presentation

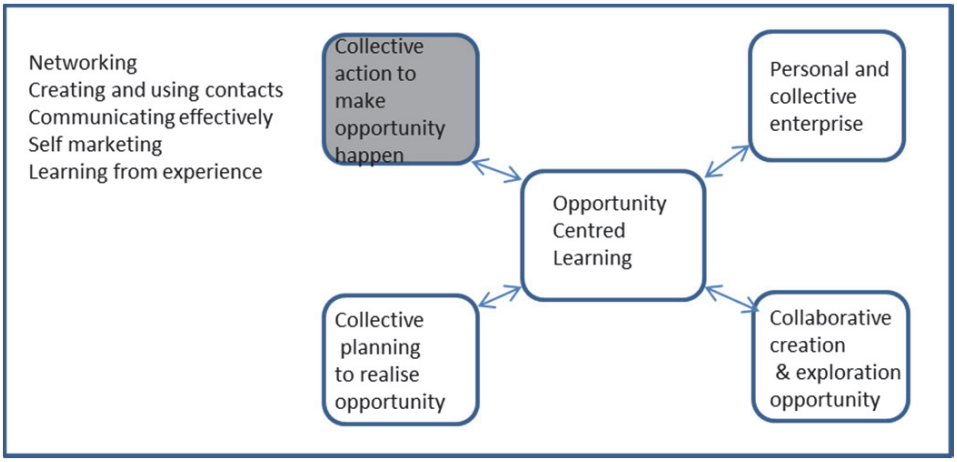

FIGURE 22 Collective action to make the opportunity happen

In the teaching orientation of the phase of collective action to make it happen I need to allow students to act jointly to test the idea in an authentic market situation.

At a beginning of the course, I as a facilitator permitted students to have autonomy and control over their own project work and learning. Gradually, teams learn to work together. They solve problems that they face during the process and develop the idea further. When a team accepts a student centred learning approach they become empowered.

In the *teacher team reflection sessions*_that I organised, I was capable of observing team collaboration as well as helping students to reflect on their learning practices. Not all teams were capable of a student centred learning approach. Often team members had conflicting interests and goals even though team learning goals and rules were set at the beginning of the learning process. Due to different motivations, it is not always possible to support and help teams to work together.

Team action phase to make opportunity happen. Team members tested the campaign idea with potential customers at school. Before the actual testing event, the campaign material was produced and an event organised based on a plan made earlier. Time management was a constant challenge in the action oriented, problem solving process. The team managed time by putting themselves under time constraints:

> It was really good that we put ourselves under time pressure at all the time because like this we managed to handle the time. We had to cut and stick our notes together within one week, besides all the other stressful exams and assignments for university at the moment (member C).

Learning is by doing and making sense of situations dominate this phase. Due to the contextual nature of learning process, many challenges occurred which were not expected:

> There are so many things you have to think of it is amazing. We are coming up with things we have to consider or still clarify before the event every minute. It is amazing that we didn't think so many things before, but I have to say that time is really our dearest enemy with our project. In real life actually wouldn't do it differently (member C).

Hence, the action oriented phase of team learning practices are close to real life learning situations which are complex and contextual. Knowledge and understanding are created in context through solving problems. Problems are unexpected and unstructured in nature, therefore, the team created a strategy for solving problems as team member C explains:

> I would always try to stress about the idea and try to move forward as quickly as possible because I could see that by getting more concrete, making the idea more visible and tangible many new questions come up (member C).

Thus, time pressure and problem solving integrate. Time was saved when problems were anticipated to be solved as soon as possible the moment they arose from action. Hence, a plan made earlier serves as a guide for testing the idea, but instant modifications to a plan are needed and communication among team members is important. Even though the team communication and interaction were keys for collaboration. Time pressure caused problems which eventually were based on miscommunication and misunderstandings among team members. Misunderstandings were mainly based on cultural differences rather than a lack of communication. One team member made a mistake in cutting some campaign material which created an emotional shock among other members:

> We were really shocked when we saw it and of course she as well…But it seemed that there was again a communication problem. We were pretty depressed on Thursday because we all know how much work it is to cut more than 1300 quotes and to put them together just before we hang them up. As we wanted to start our campaign on Monday there was again the question of time (member C).

In this phase, action led to a situation which was emotionally depressing at times. But, the problem was solved when the team member took responsibility for her mistake and promised to work during the weekend to correct the problem she had caused.

By the time the testing of the campaign was about to start, everything was ready. All campaign material was positioned in different places at school to promote the campaign. An information booth was set up for providing information to customers about the awareness of the effects chewing gum litter has on the environment. Chewing gum provided by a sponsor was available for demonstrating how to wrap used chewing gum before throwing it into a rubbish bin and not on the ground. At the booth, team members were ready to provide information about the problems of gum litter to interested people, but not many people were interested. The team members decided to take action and approach people themselves. Team member C describes the situation and change in strategy to approach people as follows:

> We distinguished people from their walking speed and look, and then stopped the people who were not in a real hurry and asked them politely if they had time…we managed to introduce the campaign briefly and to get an answer to a questionnaire (member C).

The team's expectations about the success of the campaign was not on a high level on the eve of the event, but as soon as the campaign testing started, 'gum notes' or wrapping notes on walls with quotations from famous people written on them started to disappear. It indicated that people had seen them and knew about the campaign and had become interested in it. The team was able to measure which places were more successful than others for the campaign material to gain awareness:

> …the wrapping notes were popular in certain places, but we found the notes in the corners were untouched. It is understandable why this happened; the frequency of people passing by or gathering around corners is less. We did a quick change, removed the notes from corners to visible places (team project report).

Team learning practices are collaborative, experiential and experimental in a social context. The team gathered information and made sense of it to know it and understand it. Despite the positive observations of people's interest in the wrapping notes, the team realised an important issue about consumer behaviour:

> …people were collecting our quotes instead of using them to wrap their chewing gum and although we explained with huge letters above the notes the purpose of the notes many people didn't know it …The only problem I see is that they are not paying enough attention to the real purpose. Although this I cannot really understand (member C).

The team's potential inexperience with consumer behaviour lead to the situation where team members expected customers to behave rationally and based on factual information they were providing in campaign materials. These team learning practices were not only cognitive but also emotionally charged experiences. Shared experiences among team members strengthen efficacy beliefs not only at a collective level but also at an individual level as described in team member D's account:

> I am very proud that my first logo was a great success because it was my first logo that I designed for a print advertisement (member D).

Thus, team members can get feedback on their individual skills and performance which strengthen beliefs in one's capabilities to perform. Feedback is authentic and develops individual confidence to perform.

Learning by doing involves varied challenges arising from the context where outcomes are difficult to predict. Team member A explains how learning in action through experimenting in different ways to solve problems, willingness to try in spite of potential failures and willingness to work hard eventually make is possible to reach team goals.

> Action always needed. Actually no matter how great project idea you might have, or a perfect project plan. Eventually all we need is action, and what action can be done, and what might harder to achieve, and what seems impossible to complete. But we believe that we have to keep trying every possible ways, if not we fail because of ourselves. For example the sponsorship from [name of a company], at the beginning we thought that might be difficult to reach, but we tried, and we made it. And meanwhile we have listed out many possible cooperation companies, and sent out all the invitation as well. And finally we got a presentation invitation from [name] city environment department, honestly this one we thought might be little difficult to reach, but we just keep tried the changes we can, and we made it. We care about the results, but we more focus on our trying effort. In this action part, for myself, I am really so appreciate that I have had such great team members, I truly realized that keep trying even you might fail, better than fail for not even try (member A).

The team succeeds due to its ability to work hard, to trying different ways to solve problems and to trying even some issues that seem impossible to achieve. She also recognises that failing is part of a learning process.

Through shared experiences and collected feedback, the team revised the campaign material and developed an idea into an opportunity. New elements were added to the campaign idea and decisions were made of how to make money from the campaign idea. An annual membership fee was a feature to earn money from the campaign idea.

The teacher challenged the team to seek feedback from a potential partner on the feasibility of an awareness campaign. The team contacted partners by e-mail, and while waiting for an answer from one of the partners, team members completed other course work. Team member A describes how emotionally frustrating the situation was due to time constraints:

> …we are waiting the reply from companies. Until now we are still waiting there, and time is passing away. We are getting nervous. Seems our hope is dashed. Waiting 2 weeks and nothing happen. We want to present our idea to a company and get a feedback. What knew that we have to be patient and the time not really allow us to slow down (member A).

They waited two weeks before one partner replied to an e-mail message and invited the team members to present the idea at the office. A situation changed from frustration to joy as team member A describes the situation as follows:

> But when we intended to change our plan, we got a reply from [name deleted] City Environment office- At that moment we nearly cry. I felt a lucky light shining on us again. GumUp saved (member A).

The team meets the managers at the office to sell the idea to them. The managers provide positive feedback to a campaign idea and they want to cooperate with the team members in the coming spring to carry out the campaign in a real business environment. The window of opportunity has opened up for the team to start the business or at least to practice entrepreneurship in a real business environment.

The team members had discussed the potential to turn the idea into a real business project earlier, but the trigger from the managers at the city's environmental office, heightened this discussion. The team members' beliefs on

an individual and team level to start a business as well as the feasibility of the idea to have business potential are thought through at an individual and team level. Uncertainty of future outcomes and risks involved in starting the business becomes very real. The team members need to make choices about what they want to do in their future, which in part requires them to make sacrifices. Team member C pondered over the desirability and feasibility of the team and the campaign idea to be acted on in a real business environment. She felt stressed and emotional as she raised real questions about starting the business.

> We, as a team, have already thought about the possibility to create our own company with this project, but now it was the reality. It was the request of [name deleted] City and there was now no way back from here. Somehow I felt the big pressure coming on me. Do we really want to go ahead with this project? What are our next steps? And the most important question was who is really willing to carry this project into reality? It is really a challenge and we know that we are as well facing some risks. Grown from a small idea for a problem to this project has taken a great shape, with our motivation and passion towards it. This project has been developed in a team and also if not everyone wants to continue we will have to reward everyone if the project is really going to be success in real life (member C).

The team was capable of creating an opportunity from an idea through collective motivation, passion and team support. When the team started the project they did not intend to start a business, but to simply learn marketing in theory and practise. Suddenly, they experienced a situation where a potential business opportunity could be realised, and many decisions were needed to be made as to whether to start a business. Team member C critically assessed the situation through questioning the feasibility of an idea and the demands of it:

> To make a company out of this concept are already real question in its own. Not only do we face some risks, but we also have to commit ourselves even more to the idea. Will it still leave time to follow our studies in appropriate manner? How will our temporary stay here in Finland affect the company? How fast will we move on with the company? How can we do business without any networks here in Finland? How will we master the language barrier? How are we going to be able to finance the start of the company? And who is going to write a business plan? All these questions are really tough to answer and this is really giving me sleepless nights. …I am not sure if I can cope with that responsibility already at this point (member C).

An initial idea about an awareness campaign has grown into an opportunity for students to start real business operations. The questions that team member C presents are ones that every entrepreneur or a team of entrepreneurs needs in order to answer when starting a new venture. In this learning intervention, the team learning practices led to the situation where these experiences became real.

As this learning intervention was designed for learning and developing marketing and entrepreneurial behaviour at a team level through an entrepreneurial process, it appears that this learning model can be used for learning for entrepreneurship. This is also the aim of Rae's (2007; 2010) learning model.

Teacher's closing of a learning intervention. An assessment of each student's performance was based on both in process assessment as well as on the end of the course assessment. An individual's numeric grade was based on

their own learning and development as well as their contribution to the teamwork.

After the completion of the course, I assessed each student's learning progress by using multiple evidence. I combined each student's personal learning log book accounts with my observations on a student's contribution to teamwork in contact sessions, on teacher-team reflective learning discussions and on a team's own assessment of team learning practices. Also a team report was used as part of the assessment. An individual's learning assessment is not an easy task and no accurate measure is available to assess it. Also, learning is both individual and social which makes it even more difficult to separate an individual level learning from a team level learning.

In an individual learning log book, the focus of assessment is on the depthless of personal abilities to reflect on one's learning and personal development. Students vary a lot in their abilities to reflect on their learning and development. Some students are capable of questioning their thinking and behaviour whereas some students can only list and describe theories without application to practice or personal reflection. Generally, many students have some challenges to reflect on learning due to little time and support given to it during studies.

At the team level the focus of assessment was on the team's abilities to be self –directive, collaborative and to achieve the project task. The assessment was based on the teacher's observations of the team learning practices in contact sessions, team-teacher reflective learning discussions as well as the team's own assessment of learning in the final project work.

At the end of the course, I took official course feedback from students. The overall rating of the course was 3.8 on the scale from 1 to 5. Generally, I'm content with the course rating because the course was experiential and a student centred learning approach was adopted. Even though the course had its challenges it also tells about the interest and needs of students to learn in a more practical way. This approach is very useful in Universities of Applied Sciences. The students were third-year students in the study programme, therefore this approach fits well for students who already have knowledge from different business functions.

4.7 Interpretation of the collective narrative

Interpretation provides meanings for findings for example by offering explanations, drawing conclusions, or making inferences. In an interpretation process, a researcher searches for meanings by studying data and asking questions like what does this mean and what does data tell about the phenomenon. In this process, the researcher seeks for evidence and understanding of her own perspective by trying and testing different alternative interpretations against data. (Patton 2002, 477.) Hermeneutical circle is an analytical process and necessary condition for interpretation where the

understanding of the meaning of the parts helps to understand the whole (Patton 2002, 497).

After I had formed a collective narrative as a case description, I started an iterative process of reading theory and applying it to a collective narrative to understand the meanings of team member interactions and experiences and teacher practices during the learning process. As the selected multicultural team behaved entrepreneurially at a collective level, I shifted my focus from an individual level learning to a collective level. In the analysis and interpretation process, four themes appeared in each phases of Rae's modified OCL model (Figure 23). I become interested in these underlying activities that nurture the collective level learning practices. It appeared that collaborative learning behaviours rather than individual learning practices explained entrepreneurial behaviour at a collective level. Hence, theories on individually oriented learning and entrepreneurship could not help in understanding and interpreting entrepreneurial behaviour and learning at a team level.

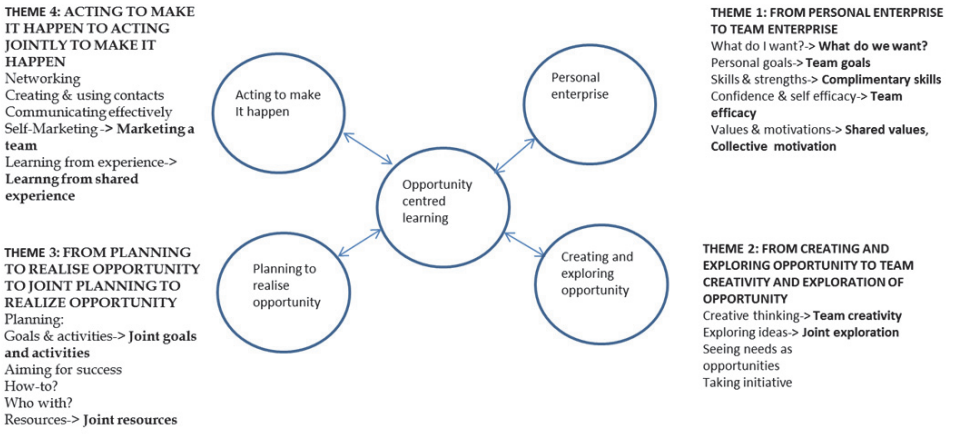

FIGURE 23 Four themes as outcomes of an inductive analysis

The results of this study are presented in the next chapter which presents the Opportunity Centred Collaborative Learning Model as a result of this study.

5 RESULTS: A LEARNING MODEL

The results of the study are presented in Figure 24. An Opportunity Centred Collaborative Learning Model revisits and fine tunes Rae's (2003; 2007) OCL and OCE models. The learning model consists of four interconnected learning phases which form an overall opportunity centred, collaborative learning process. It is in these interconnected phases of learning where student teams develop personal and collective enterprise, collaboratively create and explore new opportunities, collectively plan to realise an opportunity and take collective action to implement an opportunity in practise. The four interconnected phases of an Opportunity Centred, Collaborative Learning Model, are formed by adopting Rae's models and shifting the focus from an individual level to a collective level learning. This shift in the focus was a result of an inductive analysis described in Figure 23.

An inner circle in the learning model depicts students' collaborative learning practices in the learning process, which is cyclical and dynamic. Collaborative learning practices are influenced by the variety of factors such as the project task, the learning environment, the interactions among team members, other students, the teacher and the partners involved in the learning process. The processes; negotiated enterprise (Rae (2005; 2006), patient communication, team empowerment (Kirkman and Rosen 1999) and shared leadership (Pearce and Conger 2003) emerge as key drivers of collaborative learning practices in the learning process. It is in these collaborative learning practises where students develop entrepreneurial behaviours, skills and attitudes. The role of a teacher is to orient, motivate, guide and challenge students' collaborative learning practises. In addition, the teacher becomes a co-learner and develops her entrepreneurial behaviours, skills and attitudes in the learning process.

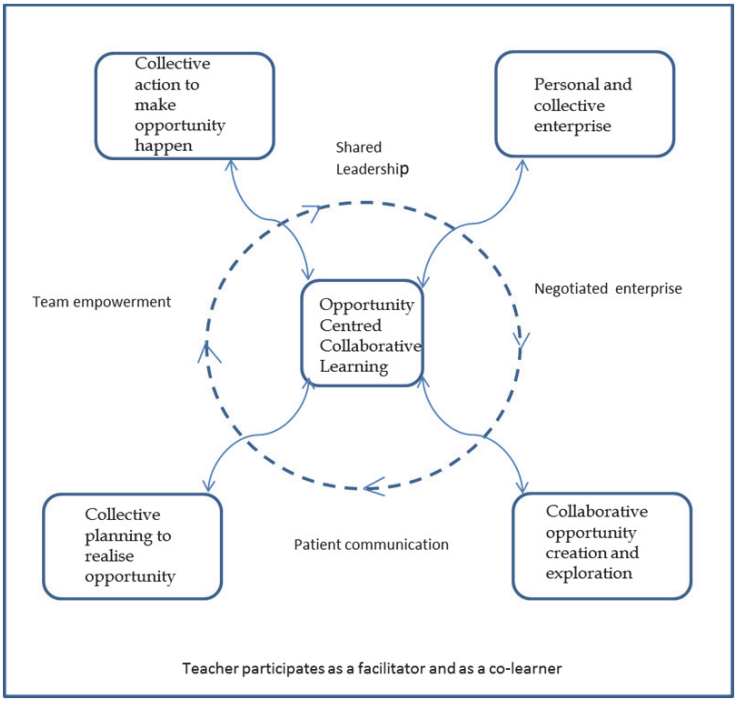

FIGURE 24 Opportunity Centred Collaborative Learning Model through and for Entrepreneurship

In Section 5.1, the results to the first research question are produced. It explicates the team processes of moving from a personal enterprise to collective enterprise. The process of *negotiated enterprise* (Rae 2005; 2006) emerges in this initial phase and develops throughout the learning process. The feelings of social interdependence facilitate the process of integrating personal enterprise into collective enterprise. In Section 5.2, the results to the second research question are produced. It explicates the team's collaborative opportunity creation and exploration process. In Section 5.3, the results to the third research question are produced. It explicates the team planning activities prior to the testing of an idea in practise. The concept of *patient communication* emerges as key driver for team collaborative learning practises during the planning and the idea creation and development phases. In Section 5.4, the results to the fourth research question are produced. It explicates the team action learning practises when the developed idea is tested in a market. The concepts of *team empowerment* (Kirkman and Rosen 1999) and *shared leadership* (Pearce and Conger 2003) emerge as key drivers for collaborative learning practises and effective entrepreneurial action. In Section 5.5, the results to the fifth research question are produced. It explicates the roles of the teacher as *a facilitator* and *a co-learner* in a learning process.

5.1 From personal enterprise to collective enterprise

In this section, the first research question is answered**:** How does the process of going from a personal enterprise to a collective enterprise emerge in team learning practices?

5.1.1 From personal learning goals and performance standards to collective learning goals and performance standards

In this process of assessing one's personal enterprise, each individual team member reflects on their current competence and compares those to those of the course's learning objectives. Setting one's personal learning goals, helps a student to focus on knowledge, skills and attitudes that they consider personally important and motivating. The process of setting personal learning goals is influenced by the student's learning needs, perceptions of learning objectives, learning environment and task. When a student can personally set learning goals, she is more likely to be more motivated and to take responsibility for her own learning. The process is also democratic by allowing each student to set goals that one considers important for learning and personal development.

The process of setting own learning goals are based on students' learning needs rather than the teacher setting the goals for the students' learning. This process is influenced by a student's earlier learning experiences and expectations for teaching and learning which influences her overall learning orientation. A student who is used to a teacher centred learning may have challenges to self-regulate her learning compared to a student who has more experience of student centred learning processes. (Ramdsen 2003, 81.) Hence, the student's self-regulation influences on goal setting, and later for the use of appropriate learning strategies, performance monitoring, self-efficacy beliefs, effective time management and the ability to assess one's learning.

In a personal goal setting process, each student also sets her own performance standards for learning. This requires a student to think about factors which facilitate and which create barriers for her learning. By setting personal performance standards, a student sets criteria and rules for her learning which facilitate the achievement of personal learning goals in the team project work. It appears that a student's cultural background in this case study has a slight influence on how they set personal learning goals and performance standards for their learning.

Based on personal learning goals and performance criteria, all team members seem to favour learning orientation rather than performance orientation even though team members indicate that grades are important for the team. Ames and Archer (1988, 269) identify two broad goal orientations: a mastery goal orientation (i.e. learning orientation) and a performance goal orientation. They propose that students who emphasise the mastery goal orientation are positively motivated and interested in learning and developing

competence and skills. Students recognise that learning new skills is dependent on their own effort. Students who emphasise a performance goal orientation are concerned with their abilities to perform a task; they are positively motivated to outperform others to show their abilities and get good grades. Based on Ames and Archer's (1988,260, 264-265) study, it was indicated that students who use mastery goal orientation also use more effective learning strategies, prefer challenging learning tasks and have a more positive attitude toward learning. Students consider success to be based on their own effort. On the other hand, students who emphasise performance goals focus on their abilities to perform tasks. They evaluate their abilities often negatively and consider failures to be based on their lack of abilities to perform tasks. According to Ames and Archer's findings, a classroom climate has important implications for the development of students' self-regulation, involvement and interest toward learning. As a word of caution, it is difficult to know accurately the varied and complex reasons for why an individual student studies at university, which has an influence on her learning orientation and what the student learns eventually (Beaty, Gibbs and Morgan 1997, 86).

A team meets to negotiate and integrate each individual's and the team's learning goals. The team members discuss and listen to each member's prior experiences, skills, values, interest and motivation. This discussion allows team members to share an understanding of each team member's skills, learning needs and motivations. They recognise the similarities and differences between the team members' skills, learning needs and motivations. After discussions, a set of shared learning goals are negotiated together for the project. They emphasise the need to learn creativity and marketing in practice. According to Kayes, Kayes and Kolb (2005, 342), individuals do not know each other at the beginning of the team learning process, therefore they need to learn to know each other and establish a set of shared goals. Shared goals are necessary for a team to get motivated and to direct its effort towards the achievement of those goals (Edmondson 2002).

Team members' learning goals and willingness to get good grades provide room for positive interdependence to emerge in the team. Positive interdependence results from mutual goals and can lead to higher achievement and productivity (Johnson and Johnson 2005; 2009). Shared goals or a sense of purpose facilitates the team formation and allows individual goals to be aligned with the team goals. A common purpose or shared goals allow team members to focus on teamwork. Many problems in teamwork lay in individuals' lack of commitment to the team purpose or goals as individuals are more interested in satisfying their individuals' goals. (Kayes et al. 2005, 341-342.)

In addition to sharing and setting team learning goals, team sets high performance standards for team learning practices. They consider reciprocal relationships among team members to be a key factor for successful performance in a team learning process. They, in particular, emphasise the role of communication for the successful accomplishment of a learning task and personal development. Team members describe reciprocal learning as sharing

knowledge and experiences, providing constructive feedback to each other and having a positive attitude. The reason that two team members are Asian origin can explain partly the need to communicate and share ideas. The process of setting team performance standards represents sort of a social contract between a teacher and learners or between learners that may lead to collaborative learning practices (Dillenbourg 1999, 5).

The negotiation process of collective goals and performance standards represents a situation where participants have equal status, knowledge and skills, which facilitate collaborative learning practices to emerge (Dillenbourg 1999, 7). During negotiations, the members start to recognise and understand the team members' complimentary skills. Team members' differ in their skills and experiences and the team's tasks can be divided according to each team member's strengths and skills. The team members' shared understanding of similarities and differences in their competence allow role division and role expectations to emerge which facilitate teamwork coordination. Division of work based on capability improves student motivation because each member can do those tasks which she is good at and knows how to do well. This improves overall task performance. According to Kozlowski and Ilgen (2006, 81), role expectations and group norms facilitate interpersonal interactions within the team. The interactions can lead to collaborative learning if team members work together rather than individually (Dillenbourg 1999, 8). When team members have different roles, each member's contribution to the task is important, and a high interdependence among team members exists which in turn requires task coordination (Zaccaro, Rittman and Marks 2001, 457). Effective team coordination is also influenced by shared mental models (Cannon-Bowers, Salas and Convers 1993; Klimoski and Mohammed 1994).

Deutch's original research on social interdependence theory in 1949 and 1962 explains the shift from self-interest to mutual interest at a collective level. The basic premise of the social interdependence theory is the ways in which participants' goals are structured in a situation which influences the participants' interactions with each other, which in turn, influence the outcomes of the situation. In a situation with a positive interdependence, participants perceive to attain their goals only if others attain their goals. Negative interdependence occurs when participants perceive that they can achieve their goals only if the others whom they are working with fail to achieve their goals. No interdependence among participants occurs when there is no correlation between participants' goal achievements. (Deutch 1949 in Johnson and Johnson 2005, 288- 295.)

Interaction is defined as "individuals' simultaneous or sequential actions that affect the immediate and future outcomes of the individuals involved in the situation"(Johnson and Johnson 2005, 292). The type of interaction that team members used was based on a promotive interaction. In the promotive interaction, participants bind to actions which increase the likelihood of achieving the joint goals. On the other hand, in oppositional interaction, participants bind to actions which decrease the likelihood of achievement of

joint goals. In case of no interaction, the actions of others have no influence on the achievement of others' goals. (Deutch 1949 in Johnson and Johnson 2005, 288-295; Johnson and Johnson 2009.) According to Johnson and Johnson (2005: 2009), positive social interdependence is mediated in promotive interactions, trusting each other, sharing information and providing assistance, exerting effort to reach mutual goals and benefits, providing feedback, listening to different perspectives and taking them into account. Social interdependence among team members makes this group of students a team rather than a collection of individuals.

Social interdependence facilitates joint goal setting and effective communication in the team. It allowed a variety of and diverse perspectives to be presented which in turn facilitated creative problem solving. The communication style accepted by the team members facilitated each team member's confidence to express their opinions and discuss them in the team.

5.1.2 From self-efficacy beliefs to collective efficacy beliefs

In a personal learning goal and performance setting, each team member compares her personal learning goals to her capabilities to attain those goals. In this process, the team member starts to develop self-efficacy beliefs. According to Bandura (1997, 3), perceived self-efficacy refers to "beliefs in one's capabilities to organise and execute the courses of action required to produce given attainments." Self-efficacy beliefs determine the level of effort an individual exerts in a given learning situation and is a good predictor of an individual's future learning behaviour. Self-efficacy beliefs regulate individual motivational, affective and cognitive processes. (Bandura 1997.)

Team members' efficacy beliefs influence the negotiation process of a team's learning goal setting. In this process, team members form collective efficacy beliefs. Collective efficacy has its roots in individual self-efficacies, but is not the sum of all individual members' self–efficacies. A team can consists of members who have varying degrees of self-efficacy beliefs from high to low, but collective efficacy as Bandura (1997) defines it is "a group's shared beliefs in its capacities to organize and execute actions to produce a desired goal."

Katz-Navon and Erez (2005, 437- 438) investigated task interdependence as a structural factor for the emergence of collective efficacy in teams. The results of their laboratory tests revealed that task interdependence is a necessary factor for collective efficacy to emerge as a team level construct. A collective efficacy, not self-efficacy, influences on team performance in a highly interdependent task. According to Katz-Navon and Erez (2005, 459), a highly interdependent task requires close interaction and coordination of effort where individual actions are difficult to separate. A low interdependent task does not require such effort, and in fact, self-efficacy rather than collective efficacy explains individual performance in the low interdependent tasks. Collective efficacy perceptions develop when teams have time to interact, share knowledge and learn about each other's strengths.

The team's collective efficacy beliefs developed throughout the learning process. Collective efficacy beliefs developed in shared discussions where each member's opinions were listened to and respected. Each team member performed tasks in which she was able to use her strengths.

In a highly interdependent task, through interaction and coordinated effort, team members develop shared mental models or beliefs of their collective efficacy which are outcomes of mutual experiences and involvement (See Cannon-Bowers and Salas 2001).

A team's collective efficacy beliefs do not develop at once, but their development continues throughout the learning process. Shared experiences and dialogue among team members are factors which influence the development of collective efficacy beliefs.

Katz-Navon and Erez (2005, 459) argue that past experiences are the most important sources for collective efficacy beliefs under tasks which require high interdependence. An efficacy-performance-efficacy spiral occurs in team processes where earlier team experiences influence future experiences. Especially positive feedback and observable successes of teamwork played a role in the development of efficacy-performance-efficacy spiral processes.

Various research findings show a positive relationship between collective efficacy to group performance (e.g. Scott-Young and Samson 2009: Stajkovic, Lee and Nyberg 2009; Kozlowski and Ilgen 2006). Collective efficacy is similar to group potency. According to Kozlowski and Ilgen 2006, 90), collective efficacy or team efficacy beliefs are task specific beliefs whereas group potency is a shared group-level belief in its general effectiveness in performing different tasks in different contexts. Collective efficacy beliefs influence teamwork and determine whether the group initiates action, sets the level of effort that is invested, and how long the group can sustain their effort and performance (Stajkovic, Lee and Nyberg 2009, 814).

In summary, each team member sets personal learning goals and performance standards for learning and starts to form self efficacy beliefs. In the processes of negotiating and integrating personal and collective learning goals and performance standars, social interdependence starts to emerge. The need for increased interdependence, team members coordinate tasks based on the strengths and interests of team members and collective efficacy beliefs start to form. Social interdependence explains the sift from self-interest to mutual interest at a collective level (Deutch in Johnson and Johnson 2005). Collective learning goals, performance standards, efficacy beliefs and team roles are not static, but need to be negotiated and renegotiated throughout the learning process.

According to Rae, an initiation and development of a new venture is an outcome of process of negotiated enterprise. It explains how people involved with a new venture work with each other and negotiate meanings, structures and practices and build relationships within and around the business. People develop roles which change when the business grows. (Rae 2005, 329-331; 2006 49-52.) Hence, the process of *negotiated enterprise* (Rae 2005; 2006) emerges in

collaborative learning practices in this initial phases of the learning process and continues throguhout the learning process when other people become involved and influence on the process.

5.2 Collaborative creation and exploration of an opportunity

In this section the second research question is answered**:** How does an idea emerge in a collaborative creativity and exploration process? The team learning task with clear learning goals and performance standards facilitates the proactive process of idea creation. In this section, an individual and collective idea search, creation and selection processes are descried.

5.2.1 From individual to collaborative idea creation and exploration

The idea generation, creation and exploration process is a highly proactive process triggered by opportunity centeredness of learning. As Rae (2007, 8) argues, learning connects to opportunities through an individual's curiosity to find out more about opportunity and act on it. This curiosity is inspired by the nature of opportunities which are characteristically creative, future-oriented, positive and provide personal benefits.

A team's idea search and creation process starts out with an individual search for potential ideas in the markets. This process also reflects a discovery view to opportunities (Shane 2003). Individual team members are novice entrepreneurs and their business expertise and experiences are limited. Their search is directed to familiar areas such as hobbies, family, work and educational environments. The team members' existing knowledge, skills, interests and values direct the search for ideas. In this process, each member taps into her own knowledge and expertise (Baruah and Paulus 2008, 31).

To practice creativity is one of a team's learning goals, and each student engages in it differently during an individual search process. When one member practices creativity through creativity tools another member watches a movie to gain a deeper understanding of human creativity and its behavioural consequences. Hence, each team member chooses different methods for learning creativity when she is free to choose the method based on her individual preferences and styles.

After an individual search for ideas and the practice of creativity a team meets for a creative idea generation session where the ideas of each member are collected and further brainstormed and developed by combining existing ideas together and imagining new possibilities. In this active and creative process, a team utilises a creativity tool to facilitate the idea generation. In an interactive and creative group, a group synergy occurs when team members stimulate each other cognitively, motivationally and socially. Sharing ideas in a group stimulates cognitive processes and the high performance of other team members and can lead to an increase in the motivational level of others to

generate ideas (Baruah and Paulus 2008, 34). It is sometimes difficult to say whether new ideas created by a team are outcomes of individual talents or group interaction (Baruah and Paulus 2008, 30). A team's idea generation phase is followed by an idea selection phase. In contemporary creativity literature, the concept of creativity is seen as a social phenomenon rather than individual effort. John-Steiner (2000, 2) argues that:

> The notion of solitary thinker still appeals to those molded by Western belief in individualism. However, a careful scrutiny of how knowledge is constructed and artistic forms are shaped reveals a different reality. Generative ideas emerge from joint thinking, significant conversations, and from sustained shared struggles to achieve new insights by partners in thought.

Idea creation for developing potential opportunities in a team is a collaborative and creative process where new knowledge is created in participation in a team's dialogical process. The knowledge creation process requires both individual and collective effort. Knowledge creation is a dialogical process. Through thinking and language, team members share, contest, argue, and develop understanding (Rojas-Drummond, Albarran and Littleton 2008, 177). Hence, knowledge is socially constructed and critically elaborated. Participants build on one another's ideas and produce new ideas and understanding, which were not available for any of the participants initially (Eteläpelto and Lahti 2008, 227). According to John-Steiner (2002), the commitment of participants toward shared goals and their trust in each other, are the main antecedents that allow dialogical interaction to occur in a team.

5.2.2 Collaborative idea selection

In the idea selection phase, team members collaborate through interaction and dialogue. They discuss and assess the feasibility of each new idea for further opportunity planning and development. The team decides a selection criteria for the idea assessment, and ideas are assessd in three phases. In the first phase of an idea selection, the time or capital requirement of an idea is assessed. Those ideas that can not be implemented during the course or require too much capital are discarded. In the second phase of idea selection, ideas which team members are capable of implementing within the timeframe are accepted. In the third phase of idea assessment, ideas are screened for the benefits they produce for the customer and social environment. The final idea is selected based on the 'fit' between team memebrs' capabilitites and the possibilities to plan and exploit an idea in a market within the timeframe of a course. The idea, an awareness campaign against the chewing gum littering, was chosen as an idea for the further opportunity planning process. During the selection process, the team members' values of ethical thinking and social responsibility stand out as collective team values which are integrated into the idea creation. After selecting the final idea, the team makes a decision to continue with the idea and leaves out the other ideas.

5.2.3 Opportunity creation and exploration as a collaborative and creative problem solving process

The idea creation and selection processes involve knowledge creation throguh dialogical interaction. In the initial phases of team idea creation and selection, both processes of divergence and convergence occur. The ideas emerge through interaction among team memebrs and it is difficult to say who dicovered or recognised an idea. According to Dimov (2007, 724), in entrepreneruship literature different terms are used to describe how opportunities come into existance. Terms such as discovery, recognition, identification, enactment are often used terms to describe such a situation. It is notworthy to mention that each of these terms contains a set of implicit assumptions underlying the nature and proccess of opportunitiy. Dimov (2007) continues that opportunitites are not a single insight but a continuous process of shaping and developing ideas in contextual and social processes where new knowledge is created to solve problems surrounded by the idea. Each problem which is solved lessens uncertainty inherent in the process of transforming the creative idea into the opportunity. Creative ideas and useful ideas, as Amabile (1998) describes creativity, are not enough for entrepreneruship to exist. Entrepreneruship can be said to exist when an idea is acted upon which leads to the opportunity development process (Dimov 2007, 720). Team members' interest in creating new business ideas are important triggers for learning.

In summary, a search and selection process for opportunities is a proactive process involving both individual and collective effort. In an individual search process, existing knowledge and interests are tapped into finding unsolved problems and opportunities. An individual's ideas are used as resources in further generation and development of ideas within a team. In a collaborative creativity and exploration process, team members generate ideas by sharing, contesting, arguing and developing ideas together in interactive and dialogical processes. Group synergy occurs when team members stimulate each other cognitively, motivationally and socially. New ideas and new knowledge are socially constructed in participation in a team's dialogical process. Through this process, a selected idea is integrated to the knowledge and interests of each team member which supports the idea development in the later phases of the learning process. An opportunity formation is not a single insight by one member but a continuous process of shaping and developing an idea in interactive, contextual and social processes. This process has similarities with a creation view to opportunities in which opportunities and resources are created in interaction with stakeholders driven by an entrepreneur's imagination (e.g., Read et al. 2009).

5.3 Collective planning to realise an opportunity

In this section, the third research question is answered: How does planning to realise a potential opportunity emerge in an Opportunity Centred Learning process at a collective level? The key team activities in a planning phase are to set team objectives, resources and an action plan for a testing of an idea in practice.

The goal of planning is to test the service idea on an authentic market as soon as possible so as to observe how an idea functions in practice and to gain feedback to develop the idea further. The role of the teacher in this phase is to orient students to learn and seek theories and models which facilitate planning and development of an idea into an opportunity. The teacher encourages and challenges students to make necessary plans and to take risks in finding and negotiating resources with potential partners. In this phase, no specific service or product opportunity exists yet, therefore there is no need for a team to engage in an extensive traditional marketing planning process.

The planning phase is actually an active team process where they learn marketing skills to sell a service idea and to negotiate with partners about resources available to organise a small-scale testing event where customer feedback is collected. Time management skills are learnt in an open learning environment pressured by continuous time constraints. Planning facilitates team members to develop a shared understanding of a service idea and how to test it in practice.

Team members create and maintain a climate in a team which promotes positive interdependence and achievement of team learning goals. A team's positive climate facilitates information processing, cooperation as well as decreases the number of conflicts within the team (Zaccaro and Klimoski 2002, 4).

Team members coordinate and cooperate effectively. Glue which ties these behavioural processes together is the so-called "*patient communication*"strategy within the team. The team recognises already at the beginning of a learning process that they can only succeed if they communicate with each other effectively. Patient communication means that team members listen to each other's different opinions and perspectives and allow everyone to take turn when others listen patiently. When different opinions are shared, a final decision is made based on integration of different individual opinions into a group opinion and solution. Hence, individual ideas and thoughts are integrated into team level decisions through patient communication shared and accepted by all team members.

A patient communication strategy involves collaborative learning. Individuals' reasoning is not always without limitations; for example, inferences made from incomplete data or emphasis on initial ideas, are just a few examples of these limitations. Therefore, the validity of individuals' ideas needs to be tested against the reasoning of others. Collaborative learning occurs

when individuals cooperate and confront others' ideas in a positive atmosphere where they try to increase understanding of the ideas together and do not try to compete with others' ideas. Collaborative learning has its limits, but provides improved learning compared to individual learning activities. (Dixon 1994, 109.)

Team discussions are not conflict free. Conflicts arise not only from different opinions but also from communication problems originating from differences in communication styles among a culturally diverse team. The communication problems arise more often and involve more emotions when the team engages in activities which take place outside of the classroom where they are not always in control and where there is more stress involved due to a need for more risk taking. The team members solve communication conflicts by accepting mistakes and taking ownership and responsibility for mistakes.

The team members learn to develop their patient communication strategy through shared experiences. A team's communication strategy allows team members to express their opinions safely. The psychological safety is described in one team meeting when team members rehearse together for an important presentation to meet a potential sponsor. Team members feel safe to give and receive feedback from each other to improve, not only their own, but also the other team members' presentation skills. Here is an example of a team account for psychological safety:

> In general people have difficulty to find flaws by themselves. With others help mistakes can be found easily. According to this technique, we spent a couple of hours for practicing the presentation, one presenting and rest giving opinions. In this way, we felt that our presentation skill was improved. With each other's encouragement and clear speech, the presentation was successful.

Edmondson (1999, 350) defines psychological safety in a team level as "a shared belief held by members of a team that the team is safe for interpersonal risk taking." In a psychologically safe team, its members respect the competence of the others and care about each other as individuals. Psychological safety at a group level refers to a climate that group members create in their interactions and discussions with each other. Psychological safety is an internal feeling of being able to express one's ideas. Trust, on the other hand, is external or an individual's trust in other people's actions. Edmondson (2002) differentiates psychological safety from cohesiveness. A cohesive team is not the same as a psychologically safe team, hence in the cohesive team, members may be reluctant to question each other's ideas, and they are unable to take interpersonal risks in communication.

Psychologically safe teams engage in learning behaviour such as seeking and giving feedback, discussing errors, sharing information and experimenting. In a psychologically safe climate, members can detect problems and solve problems earlier than in groups where the climate does not support a safe climate for interpersonal risk taking. Team or collective efficacy on the other hand is not related to this interpersonal risk taking, and does not necessarily influence team members' engagement in feedback seeking and giving,

discussing of errors, information sharing and experimenting. (Edmondson 2002, 7; 1999, 375-376.)

Team 'patient communication' strategy allows for the learning of competence. The team's ability to communicate safely forms a barrier for defensive behavioural routines that are common in many school and work project teams. Argyris (1993, 15) defines a defensive routine as "any policy or action that inhibits individuals … and groups… from experiencing embarrassment or threat, and, at the same time, prevents the actors from identifying or reducing the causes of the embarrassment or threat." Defensive routines, such as pretended agreements, unsolved power struggles and social loafing, create barriers for team learning. Defensive routines start to develop in childhood, and people are often not aware of them which can easily lead to situations where people do not discuss them but consider them a normal part for team work. (Holmer 2001, 591.) When team members trust each other and they feel safe to talk about mistakes and problems, the team is able to learn (Kayes et al 2005, 344).

The teacher's role is to provide feedback for students during the learning process and not only at the end of the course. Feedback is in the form of questions rather than direct advice of how to do things. Through questioning the teacher can facilitate students to find the underlying assumptions of their thinking and action.

In summary, the concept of *patient communication* emerges in collaborative learning practices as a key driver for collaborative learning practises in this phase of the learning process (Figure 24). Team members develop the shared understanding of a service idea by developing plans for the idea testing in practice. Planning is not only a plan writing exercise, but an action oriented team process where necessary plans are prepared to test the idea in practise as well as concrete business partners contacted to sell the idea and to negotiate extra resources. A team develops a patient communication strategy which glues team members' actions toward the common goals. Patient communication facilitates safety in interpersonal communication which in turn promotes learning behaviours such as seeking and giving feedback, discussing errors, sharing information and experimenting.

5.4 Collective action to make an opportunity happen

In this part the fourth research question is answered: How do team learning practices appear during a collective action to implement an opportunity ? In a collective action to make an opportunity happen is to test a service idea in practice. Team learning practices take place in the real world context where learning practices are action oriented, contextual, experiential, and involve continuous reflection in action. Team learning is a holistic process in social processes where not only new knowledge is constructed, but also motivations and emotions are born.

In a real world learning environment, uncertainty and complexity increase, which require team members to tolerate ambiguity A team moves away from a safe classroom context toward a real world context, where unanticipated problems, potential failures, successes and surprises cannot be planned beforehand, but which provides ample opportunities for both individual and team reflections to develop a service idea, and triggers learning needs in practice.

5.4.1 Collective motivation and team empowerment

Collective motivation and team empowerment are key factors for effective collective action to test a service idea in an authentic market. The maintenance of high motivation in a multicultural team is the responsibility of each member. The team's shared vision and goals, which were decided at the beginning of the learning process, continue to be the driving force to move the team performance forward. The team's collective motivation strategy guides the team performance as described in the following account:

> ...it is very important that people with different backgrounds have a common vision and goals to reach in order to be able to work together as a group. And I think we are highly motivated group and another reason is why we work very well together is because we recognised that every one of us has strengths and weaknesses and due to this we separated our workload and the project is now able to profit from the strengths of the group. Also, the strengths of someone is usually the tasks he or she likes the most. So with this technique the motivation can definitely be held on.

According to Chen and Kanfer (2006 in Klassen and Krawchuk 2009, 102), collective motivation is a process of instigating and sustaining motivation in a goal directed team's interactions. Team motivation beliefs are formed in shared experiences and tend to become steady over time (Kozlowski and Ilgen 2006). In Klassen and Krawchuk's study (2009, 115), collective motivation beliefs included both collective efficacy and group cohesion which influenced a student group performance.

The seeds for an empowered teamwork are planted already at the beginning of a learning process and facilitated by a teacher during the learning process. The teacher can facilitate team empowerment by creating a learning environment where the team needs to take responsibility of their own learning and have authority over their own decisions. The team empowerment takes time to develop and is influenced by the team beliefs whether the teacher trust them to take responsibility over their own learning.

An empowered team experiences the feelings of potency, meaningfulness, autonomy and impact. Potency is the collective feeling of capability of working effectively together, meaningfulness involves the feelings of caring about shared tasks, autonomy involves team beliefs that they have freedom to make decisions, and impact is the degree to which team members feel they can make an impact on organisational processes. (Kirkman, Rosen, Tesluk and Gibson 2004,176; Kirkman and Rosen1999, 69-71).)

Beairsto and Ruohotie (2003) have studied empowerment in organisations. They argue that empowerment requires both technical and psychological empowerment. Technical empowerment is easier to establish and changed in organisational settings. It involves the creation of shared vision, feedback systems, promotive organisational structures and reward systems. On the other hand, psychological empowerment is a more challenging task for managers or teachers in this context. Psychological empowerment is a worker's or a student's voluntary thinking process to engage in the creation of a new understanding of oneself which can lead to personal growth. Empowerment, therefore, cannot be achieved by acquiring new information or instructing students to become empowered. Feedback is important for helping individuals to create psychological empowerment. (Beairsto andRuohotie 2003, 120-122.)

Empowerment has traditionally been studied as an individual construct rather than a team level construct. In addition, more research has been focused on self-managed teams rather than team empowerment. The concept of a self-managed team is narrower than team empowerment where self-managed teams have autonomy, but an empowered team has all four dimensions of potency, autonomy, meaningfulness, and impact. (Kirkman and Rosen 1999.)

5.4.2 Action learning

In a collective action to make an opportunity happen is a phase where a team tests an idea in an authentic market filled with uncertainty and complexity. Team learning practices occur in problem solving processes where problems arise from the context. Information involved in the process is reflected both individually and collectively.

A collective action phase has elements of action learning where a group of colleagues solve problems in a workplace. Marsick (1990) argues that action learning involves three overlapping processes: action, reflection and the development of one's own theories. In an action oriented project work, learners gain experiences and learn from these experiences. Action learning emphasises finding the right problems and investigating them to produce information which is then reflected on. Reflection can vary from simple reflection to critical reflection. Theory building is based on trusting one's own reactions and integrating them with intuition, rational thinking and the expertise of others. (Marsick 1990, 32-35.)

In the collective action, to make an opportunity happen, team members actively act during a testing phase in an authentic market. Through action, team members force anticipated and unanticipated problems to arise from the context. This is described in the team member C learning account: "*I would always try to stress about the idea and try to move forward as quickly as possible because I could see that by being more concrete, making the idea more visible and tangible, many new questions arose.*" This action strategy is not only a strategy to force problems and questions to arise from the context to be solved by a team, but it also develops into an individual's own theory of practice.

By actively taking action in practice, a team learns to manage time effectively. The team's time management strategy develops as described below in the team member C learning account: "*It was really good that we put ourselves under time constraints at all times because through this we managed to handle time.*" Hence, both action and time are related to each other. To control time, a team needs to act in order to get problems to arise from a context so they can be solved in time.´

Problems that arise in practice are not standard problems with standard answers, but they are complex and ill-defined. Team members frame problems by cues given in a situation and members frame problems differently. Theories learnt in the classroom may not be appropriate or easily applied to these problem situations. Schön (1987, 26-36) argues that an practitioner's ability to reflect-in-action or learning by doing and continually learning through problem solving with the help of a couch is key to the development of professional knowledge

When team members solve problems in action and receive feedback from different audiences, they produce information which is reflected on. Individual and team reflective practices vary from a simple reflection to a critical reflection during a collective action phase.

Self-reflection refers to an individual's ability to become aware of one's own internal thinking processes. It is an individual's ability to take distance from oneself, and to examine and interpret one's knowledge, skills, beliefs, intentions and motivations. Through self-reflection, the individual can achieve knowledge about her own actions and the causes of those actions even though reflection does not always lead to correct interpretations of one's intentions and actions. An individual who is responsible for one's learning and motivated to achieve the goals are most likely to develop self-reflection skills compared to students who are passive receivers of information. The individual's self-reflection opens up opportunities for the individual to transfer knowledge and skills into new contexts. At a team level, members learn self-reflection skills in a positive learning environment where each student reflects on one's ideas, presents arguments, and analyses the differences between others ideas. (Rauste –von Wright et al. 2003, 70.)

An uncertain and action oriented learning environment during a collective action phase creates opportunities for critical reflection. Critical reflection tests each team member's individual mental models as well as the team's shared mental models developed during the team learning practices. In a team's critical reflection sessions, meanings to their experiences are shared and discussed. Critical reflection is not only important for the idea development phase, but also provides possibilities for the team members to change their thinking and behaviour if needed. Critical reflection is a key for personal awareness and development**.**

Individuals change their existing frames of references due to critically questioning the basic assumptions and beliefs underlying their actions. In discussion with others, the validity of new meanings for experiences is critically

evaluated. This is what Mezirow calls transformative learning (Mezirow 1990, 35). According to Argyris (2002, 206), a single loop learning occurs when a learner corrects errors by changing one's behaviour which is incremental and adaptive in nature. In double loop learning, the learner is able to change those governing values of a learner which has led to the behaviour initially and caused the error to occur. Governing values are critical for learning since they form action strategies which are used to produce intended consequences. If the learner is unable to change governing values, the change in behaviour either fails immediately or it is not preserved over a long time.

5.4.3 Shared Leadership

Throughout team learning practices, the team developed strategies which facilitated the shared leadership to occur. Team strategies were developed to lead the team toward the achievement of its vision and goals. Pearce and Conger (2003, 1) define shared leadership as a"*dynamic, interactive influence process among individuals in groups for which the objective is to lead one another to the achievement of group or organizational goals or both*." In shared leadership the source of leadership influence is the team itself, rather than a team member who emerges as a team leader, or an appointed leader who through authority, influence and control leads others to reach the team's goals (Cox, Pearson and Pearce 2003, 52). Empowerment is a necessary condition for shared leadership to emerge in a team (Pearce and Conger 2003, 12).

Leadership activities were shared among team members. A shared vision and goals were developed at the beginning of the learning process. The feelings of task and social interdependence among team members tied team members to their goals. The team roles and tasks were divided based on each member's strengths and interests which facilitated work coordination and developed collective motivation. An initial service idea was integrated to team members' strengths, values and interests which helped each team member to identify with the idea. It also increased commitment of team members toward its goals. The team members interacted regularly and developed a communication strategy which supported interpersonal risk taking and creative problem solving. Each team member's different views were listened to and respected and team decisions were based on consensus. Team communication and interaction were not conflict free, but the adopted 'patient communication strategy' facilitated conflict solving within the team. During a collective action phase, action strategies were developed in team to solve ill-defined problems and manage time. Team learning practices in a collective action phase were similar to action learning which was based on action, reflection and development of personal theories.

In teams without a clear leader, leadership is distributed among team members where individual members, with different expertise and backgrounds, take leadership roles when the situation demands it in the different stages in the life cycle of a team project work. Shared leadership exists in the team which actively engages in a leadership process. (Pearce and Conger 2003, 2.) Dialogue

is an important tool for leadership to occur. It enables organisational learning and adaptive change to occur (Fletcher and Käufer 2003, 35; Yukl 1998).

The teacher is the leader of the course but distributes leadership activities to the teams. A team assumes the leadership role and different team members take different leadership roles during the learning process based on their individual strengths, motivations and skills. Even though shared leadership improved performance in this study, there is no direct positive relationship between team leadership and performance (Gupta, Huang and Hoy and Niranjan 2010, 345).

The concepts of *team empowerment* (Kirkman and Rosen 1999) and *shared leaderships* (Peirce and Conger 2003) emerge in collaborative learning practices in this phase of the learning process (Figure 24). In summary, a collective action to make an opportunity happen has elements of action learning and is driven by shared leadership. Team learning practices occur in a real world project which is based on action, reflection and development of learning theories in practice. Shared leadership requires an empowered team which has feelings of potency, meaningfulness, autonomy and impact.

5.4.4 Roles of a teacher in a learning process

In this part, the fifth research question is answered: How does a teacher influence on the collective opportunity formation and exploitation process? A teacher influences students' learning practices during the learning process in different ways and the roles of the teacher change in different phases of the learning process during an intervention. The following different roles and tasks are identified during the process:

At the beginning of the learning process, the teacher orients the students to a student centred learning process by explicating the roles of the teacher and the students in the learning process. This way the students know the respective roles of the teacher and the students. The teacher needs to learn to trust the students to be self-directive and help them if they need support.

The role of the teacher is not to deliver the right knowledge to the students, but to support the students to construct their own knowledge in social processes facilitated by the teacher. The teacher support the students' individual and collective learning goal setting based on the needs of the students rather than setting the learning goals for them. As the Opportunity Centred Learning process is a creative process and new knowledge is constructed in social processes, it is not even possible for the teacher to know what knowledge students need in any given situation.

The teacher orients the students to the learning process by introducing the learning objectives, contents, learning methods and assessment methods designed to support the student centred learning approach. All these course elements need to be integrated and to support students learning processes.

The teacher initiates the learning process and motivates the students by creating a motivating team project task. The task of forming and exploiting an opportunity initiates students' curiosity to know and learn more about it (Rae

2003). Students get motivated when they are empowered by autonomy, responsibility and control over the whole learning process from an idea creation to idea testing in an authentic market situation. Meaningful and productive learning originates when learners want to find a solution or explanation to an intriguing phenomenon (Engeström 1994, 12).

The teacher supports the students to focus on learning both at an individual as well as the team level. Personalised learning contracts are designed to support these processes. An individual's continuous reflection and understanding of one's learning experiences are supported by personal learning log books and regular team meetings to help team members to reflect on their shared learning experiences.

A student's personal learning log book is designed for personal learning reflections, but it is also used by the teacher to provide feedback to students. The teacher's feedback concentrates on the depthless of the student's reflections on their learning experiences. Students' abilities to reflect learning experiences vary a lot. Some students are capable of simple reflections where they describe learning situations without a deeper discussion of the meanings of those experiences to the student. Some students, even though they are a minority, are capable of reflecting their assumptions and beliefs. Clearly both the teacher and the students need to practice more reflection skills to understand one's learning and personal development at a deeper level.

The teacher has two team reflection sessions with the teams during the course. These sessions provide both the teacher and the students the opportunities to learn from each other. The role of the teacher is not only to observe the collaborative activities among the team members but also to support and challenge the students to solve problems arising from the context. The role of the teacher is to provide an outsider's view to the teamwork. The teacher's questions and abilities to view issues from different perspectives facilitates the team learning practices. The role of the teacher is to facilitate students' understanding as opposed to delivering only contents (Kember 1997, 267).

The role of the teacher is to maintain a student centred learning throughout the process. Some students are more ready than others to assume a student centred approach. This shift of control learning to students is a learning situation for the teacher as well. The role of the teacher as a facilitator can only be maintained if the teacher assumes the new role as a co-learner in the process. The basic course learning objectives and principles set for the course by the teacher are important to remember when challenging situations with students occur. The teacher as a facilitator listens to students' ideas and recommendations, and makes changes to learning practices when necessary, but pleasing students when their demands are not appropriate, can become detrimental to the overall learning process. If the teacher starts to doubt the student centred learning approach and gives in to students' demands, the approach shifts back to teacher centred learning.

The teacher facilitates the students to recognise one's creative capacities individually and as a team. Rational thinking is emphasised in school learning and less training is provided for creativity. The teacher may introduce readings on creativity and introduce creativity techniques practiced in the idea generation phase. Individual defence mechanisms during creativity processes appear to be one of the most difficult challenges that a teacher faces in the process. On the other hand, the overall Opportunity Centred Learning process to identify new ideas and develop them into services and products is characteristically a creative process with the focus on creative problem solving in teams. Therefore, the teacher needs to support creative practices throughout the process not only during the idea creation phase.

The role of the teacher is to orient students to theories and models appropriate for a learning process. In different phases of the learning process, the teacher provides potentially useful marketing theories and models with the aim of facilitating the development and planning of a service idea. Teams choose appropriate theories and models and apply and test them to the project work. Each team project is unique and the teams are directed to search for more information relevant to each project's needs. The potential sources of information are customers, partners, other students, teachers, business books and the Internet.

Fiet (2000a, 1) argues that the cumulative entrepreneurship theory is not well developed, but it is important for students to learn theoretical content in order to develop their cognitive capacities to make entrepreneurial decisions. The teacher needs to develop a student approved system when teaching theoretical contents to students with the aim of practicing entrepreneurial skills (Fiet 2000b, 101).

Especially, in the collective action to make an opportunity happen, the role of the teacher is to support and challenge students in their effort to achieve their learning goals. This phase is not only cognitively but also emotionally and motivationally challenging. The teacher's role is to help the students to reflect problems and issues they face in their different types of problem situations. Questioning and viewing challenges from different perspectives helps a team to gain a better understanding of problem situations and enables them to learn.

At the end of the course, the teacher provides an overall grade for each student's learning. This is a challenging task since no specific book is assigned to provide contents to be tested in an exam. In this process, learning is a holistic process which involves cognitive, affective and motivational aspects of learning. Therefore, a teacher's own observations and student produced material together with each student's personal and team learning assessments help the teacher to provide final grades for each student. The student's ability to learn from practice and from the teacher's and others' feedback is an important ingredient in the final assessment of individual learning.

The teacher reflects on her own learning process and personal development in social learning processes. The teacher's own learning log book facilitates reflections of learning experiences and her own action during the

process. The interaction and communication with colleagues at the university are beneficial to gaining an outsider's view on the learning process. The implementation phase of a learning intervention is often very stressful, which influences the teacher's capacities to reflect on learning experiences. Both understanding of one's learning experiences and personal development takes time and often develops heuristically. This of course also applies to students' learning and development. The teacher plays an important role in promoting entrepreneurship education, and their learning and reflection are key activities in this process (Seikkula-Leino, Ruskovaara, Ikävalko, Mattila, and Rytkölä 2010, 125).

5.4.5 Teacher as the learner in a learning process

The teacher's learning and personal transformational process started in this study about a year prior to the start of a learning intervention. The teacher's learning and personal development process is initiated with an active engagement with the community of entrepreneurship practitioners and teachers by participation in seminars, conferences and entrepreneurship education courses. The discussions with peers and entrepreneurs, together with extensive theoretical readings on entrepreneurship education, learning and teaching, support the teacher to adopt a shared vision or ideology behind learning and teaching entrepreneurship. With the increased knowledge base, the teacher starts to develop a personal vision of how entrepreneurial teaching and learning practices can be created and organized into a learning programme. This vision is translated in the learning principles that guide the learning intervention planning and implementation process.

The teacher's vision on entrepreneurial learning and behaviour represents her understanding of the subject matter and the pedagogical principles at that time. Learning objectives, contents, learning methods and assessment methods are designed to meet the characteristics of the student body but also the requirements of the International Business curriculum. The overall course learning objectives are also linked to the vision and goals of HAAGA-HELIA University of Applied Sciences as well as to the broader objectives of national entrepreneurship education set by the Ministry of Education and Culture in Finland.

The teacher's vision and high level of internal motivation lowers the barriers to take risks and increases self-efficacy beliefs in teaching. Regardless of high motivation, the teacher feels uncertainty and insecurity inherent in experiments where risks of failing are present. Feelings of uncertainty and insecurity are unpleasant but are important ingredients in learning and personal development and should be accepted as a part of a learning process. The teacher's ability to take risks and make mistakes is possible when organizational structures support it. Therefore, the teacher learns to develop a vision, motivation and understanding by engaging into an inquiry and development work to develop her teaching in practice and supported by the organisation.

The teacher's personal learning and development are based on reflections of her learning experiences. Similar to students' learning the teacher also needs time and practice to learn to reflect on learning experiences. Therefore, the teacher's understanding and skills in teaching require a lot of theoretical and practical training as well as reflections of learning experiences.

Shulman and Shulman (2004, 260, 264) conceptualize a teacher learning model. They state that an accomplished teacher is capable of applying and integrating the vision, motivation, understanding and practice of teaching. The teacher's vision, understanding and willingness to teach are prerequisites for teaching, but the heart of teaching is the teacher's capacity for intelligent and adaptive action. The complexity of teaching requires teacher's capabilities to learn from experiences through critical reflection. (Shulman & Shulman 2004, 263.) The individual teacher learning level is depicted as an inner circle in Figure 25.

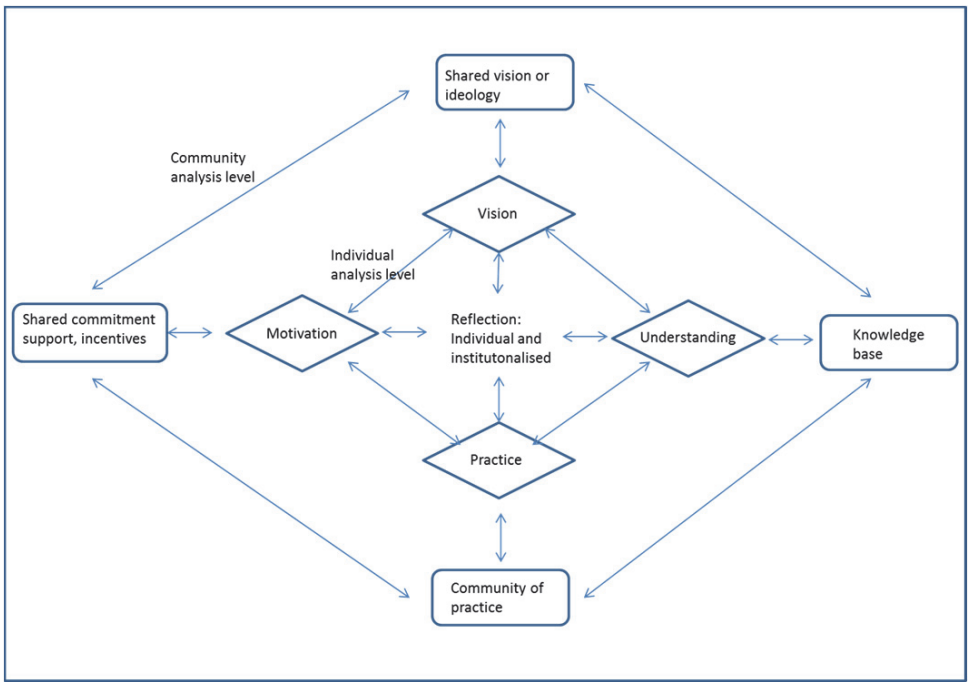

FIGURE 25 Learning communities at an individual and institutional levels (Shulman and Shulman 2004, 266)

In the teaching model above, the individual teacher is in interaction with the communal level which influences the teacher development, beliefs and practices. Teacher communities form shared vision, commitment, support, incentives, knowledge base and joint reflection which can enhance, inhibit or to be neutral to the teacher development. (Shulman and Shulman 2004, 267.)

In summary, two teacher roles: *a teacher as a facilitator and as a co-learner* emerges in the learning process (Figure 24). The role of a teacher varies and

different facilitator roles are utilized during different phases of the learning process. The teacher is a co-learner in social learning processes. The teacher's overall learning and development process is driven by vision, motivation, and understanding. The key element is the teacher's reflection of experiences in practice. For the teacher to learn the teacher needs to be creative, to take risks and learn interpersonal skills. The teacher learns also by interacting with the teacher community which influences on and is influenced by the teacher.

As a synthesis of results, the Opportunity Centred, Collaborative Learning model revisits Rae's Opportunity Centred Learning model and describes and explicates the interactions and relationships between individual and collective level learning practices. It also identifies the drivers for collaborative learning practises which support effective entrepreneurial action. In addition, it explicates the role of a teacher as a facilitator and a co-learner in the learning process. The study suggests that the developed model produces a framework for the opportunity centred learning, the mental collective development and growth through and for entrepreneurship with the teacher as a co-learner.

6 DISCUSSION

6.1 Summary

The role of entrepreneurship and entrepreneurship education are keys to the well-being of individuals, organisations and nations. The European Union promotes entrepreneurship education programmes in its member states with the idea of supporting the development of students' entrepreneurial mindset and skills at all levels of the education system. Business and technical schools currently provide the best possibilities for studying and learning entrepreneurship.

In this study, entrepreneurship is defined broadly based on the definition of the European Parliament and Commission (COM 2005). Entrepreneurship education has three broad goals: learning about, learning through and learning for entrepreneurship. Most students in business schools in higher education learn about entrepreneurship, which often involves the design of a business plan for a new venture. The students interested in starting their own business are offered e.g. incubator services aimed directly at creating new businesses. Based on literature, students lack opportunities to learn through entrepreneurship. This involves the design of a pedagogical process to facilitate an entrepreneurial way of learning and behaviour.

A closer look at current practices of entrepreneurship education has revealed that teaching rather than learning dominates in entrepreneurship courses. The teacher centred learning together with an ideal of individual cognitive learning practices continues to characterise the entrepreneurship classrooms in HEIs. (Kyrö 2005a.) Increasingly, strong calls are being made demanding more student centred learning approaches and entrepreneurial ways of learning and behaviour. Kirby (2007) discusses the need for a paradigmatic shift from a teacher centred toward a student centred learning. The purpose of this study is to join this paradigmatic shift from a teacher centred to a student centred learning by constructing a pedagogical model to support the development of students' entrepreneurial ways of learning and

behaviour and supported by the role of the teacher as a facilitator. Furthermore, in this study, the entrepreneurial way of learning and behaviour are integrated to a marketing course at HAAGA-HELIA University of Applied Sciences, bringing closer the traditional separation of entrepreneurship and marketing as different disciplines in HEIs. The lack of integration of the entrepreneurial way of learning and behaviour to non-entrepreneurship courses has been considered as one of the problems in entrepreneurship education (EU 2006).

A constructive research approach (CRA) methodology was applied in the research. Within the CRA approach, a case study was constructed. An integral part of the case construction process was the planning and implementation of a learning intervention. An action research approach was utilized in the implementation of the learning intervention where also the data was collected. The data consists of all material produced by the teacher and the students during the learning intervention. The teacher's data consists of the teacher's field notes and course material. Total of 24 students participated in the learning intervention. The students' data consists of personal learning log books and team project reports. Not all data could be used and purposeful sampling was applied. The data from the teacher and from the four member multicultural team was selected for further analysis. A collective narrative was formed to describe the role of the teacher as a facilitator and the team's learning practices during the opportunity centred learning process. Through iterative processes of reading theory and comparing empirical material, the result of the study in the form of a learning model was achieved. The constructed learning model was tested with nine experts in entrepreneurship education in Europe. The summary of the testing phase can be found in Appendix 6.

The main result of the study is the construction of an Opportunity Centred Collaborative Learning Model through and for Entrepreneurship (Figure 24). The constructed learning model has four interconnected learning phases which are formed by adopting Rae's (2003; 2007) learning models and shifting the focus from an individual level to a collective level learning. It is in these interactions among individual and collective level learning where collaborative learning practices emerge. The inner cyclical process in the learning model depicts the collaborative learning practices. Four interconnected drivers: negotiated enterprise (Rae 2005; 2006), patient communication, team empowerment (Kirkman and Rosen 1999) and shared leadership (Pearce and Conger 2003) emerge as key to the development of collaborative learning practises and entrepreneurial behaviours among the team members.

A team project task is to produce a creative and useful product or service and test it in practise and gain feedback from real business partners. *A personal and collective enterprise* phase starts a team learning process. In the processes of negotiating and integrating personal and collective learning goals and performance standards, social interdependence emerges, which increases the need to coordinate tasks based on the strengths and interests of team members. Social interdependence explains the shift from self-interest to mutual interest at a collective level (Deutch in Johnson and Johnson 2005). Collective learning

goals, performance standards, efficacy beliefs and team roles are not static, but need to be negotiated and renegotiated throughout the learning process. Hence, the concept of *negotiated enterprise* (Rae 2005;2006) emerges as a key driver of collaborative learning practises in this phase.

In a *collaborative creation and exploration phase*, team members create and explore business ideas contextually. Creative and subjective ideas are shared in a dialogue with other team members. A safe communication climate allows different viewpoints to be presented and new ideas to be created. Dialogue facilitates creativity and the generation of creative ideas for which everyone can identify with. Shared understanding supports the development of collaboration and strengthening the team vision for the project. New ideas and new knowledge are socially constructed in participation in a team's dialogical process. An opportunity formation is not a single insight by an individual but a continuous process of shaping and developing an idea in interactive, contextual and social processes.

In a *collective planning to realise an opportunity* phase, a team prepares plans for an idea testing in an authentic market, but more importantly, they actively contact partners, sell the idea and negotiate extra resources. Therefore, this phase is not only a plan writing exercise, but more importantly an action oriented team process where the concept of *patient communication* emerges as a key driver for collaborative learning. Patient communication describes communication practises where team members listen to each other's different opinions and perspectives by allowing everyone to take turn when others listen patiently. In the final decision, different individual opinions are integrated into a group decision. It increases understanding, creativity and the commitment of team members toward shared collective goals. Patient communication involves interpersonal safety which triggers learning behaviours such as seeking and giving feedback, discussing errors, sharing information and experimenting.

Team learning practises in a *collective action to make an opportunity happen phase* is based on action learning and contextual learning. The acceptance of uncertainty and risk taking by the team are needed when the learning environment extends beyond a classroom context to an authentic market context. The authentic market context creates problems that are unexpected, ambiguous and need to be solved fast. The team members learn to take risks and tolerate ambiguity both at an individual as well as at a collective level. The active and goal oriented team behaviour due to active interactions and patient communication supports the development of collective motivation and *team empowerment* (Kirkman and Rosen 1999). Team empowerment emerges as a key driver for collaborative learning and effective entrepreneurial action. In this phase, the team works independently and they consult a teacher only if need to hear an outsider's view to complex situations and problems.

Throughout a learning process, a team has developed different team leadership strategies to achieve its goals. *Shared leadership* (Pearce and Conger 2003) emerges as an outcome of the developmental process of the team. Different team members lead the team in different phases of the learning

process through leadership strategies the team has adopted in the process. In this final phase, the project task comes to its end and team practices and behaviours are critically evaluated and the final decision of continuing to work together is made.

A teacher plays a key role in the creation and maintenance of a student centred learning process. A shift from a teacher centred to a student centred approach is achieved when the teacher accepts and utilises different facilitator roles in the different phases of a learning process. The variety of learning methods can be used as long as student centredness is maintained. The teacher's role at the beginning of the learning process is to orient and motivate students for learning, but the teacher's role diminishes toward the end of the process, when teams are capable of leading themselves toward their own goals. In a student centred learning approach, the teacher is not only a facilitator but becomes a co-learner in social learning processes. Hence, the responsibility of learning is not only with students but equally with the teacher. The teacher learns and develops personal confidence on teaching entrepreneurship by becoming familiar with learning and teaching theories, experimenting, reflecting in practise and co-learning with students and colleagues.

The Opportunity Centred Collaborative Learning Model involves elements both from a discovery view (Shane 2003) and creative view (Sarasvathy 2001; Read et al. 2009) on entrepreneurial opportunities. The constructed model is cyclical, but it consists of pre-planned learning phases similar to a linear process found in the discovery view on entrepreneurial opportunities. As entrepreneurial learning is considered to be both individual and social process, an individual's cognitive learning and development cannot be ignored in the learning process totally. The constructed model is similar to a creation view on entrepreneurial opportunities with its emphasis on the construction of meanings in social learning processes. Opportunities emerge and develop in these creative social interaction and negotiation processes. A team's learning goals and resources are negotiated based on the needs of participants rather than the needs of the teacher. When the team interacts with partners outside of a classroom context, new resources and contacts are created which in turn can produce new opportunities. The social dimension of learning and creation of opportunities connects the learning model to the creative view on entrepreneurial opportunities.

An Opportunity Centred Collaborative Learning Model is different from a business planning project. Entrepreneurship is an inductive rather than deductive process (Sarasvathy 2001) where opportunities, both business opportunities and opportunities for personal development, are not isolated phenomena but the integral part of holistic learning process. Both individual and collective level creativity, motivation and innovativeness are involved in the learning process where logical and rational reasoning processes are disturbed by unexpected problems and surprises arising from the context. These contextual problems in the learning process are created by extending the learning environment beyond classroom learning. When students learn in

authentic market situations, they also face more complexity and risk taking. Hence, the overall learning process can be described as holistic, collaborative and dynamic rather than cognitive, individual and static.

An Opportunity Centred Collaborative Learning Model is applicable teaching tool in entrepreneurship education in higher education. The model supports not only learning new knowledge about entrepreneurship, but also learning through and for entrepreneurship. Hence, the model meets the goals of entrepreneurship education set by the European Commission and Parliament (2005) and the Finnish Ministry of Education and Culture (2005). By adopting the constructed learning model, teachers in universities of applied sciences and other higher education institutions can inculcate entrepreneurial attitudes, generate innovations, and nourish entrepreneurship during students' studies. However, it is not enough that teachers adopt new teaching and learning methods in entrepreneurship courses. It is equally important that the whole organisation behaves entrepreneurially and the top management is committed to the goals of entrepreneurship education in HEIs.

6.2 Evaluation of the study

According to a literature review, an apparent need for the construction of a new learning model through entrepreneurship exists. Hence, the topic and task of the research project is valid. The interdisciplinary nature of the research project is demanding and consists of appropriate theories from behavioural sciences, business sciences and education sciences. The literature sources are varied and valid. The definitions and terms used are accepted in these fields.

The empirical data was collected during the learning intervention. Team members kept personal learning log books for reflecting their learning and personal development with the aim of achieving their personal and team learning objectives. With the consent of the students this data as well as the teacher's data were directly usable for the research purposes. The data description, analysis and results have been made transparent to ensure that the findings and interpretation are derived from the data.

Data was collected during a 16 week period which allowed team members to gain learning experiences and reflect on them. Learning takes time and it is difficult to say what and how team members truly learn during the process. Learning and personal development do not stop when the course ends, but continues in the future. It is difficult for the researcher to assess whether team members exaggerate or eliminate challenges or issues in their personal learning accounts. It is the duty of the researcher to check the data for any inconsistencies. Otherwise, the researcher needs to trust that team members provide accurate descriptions of their experiences and the meanings they give to these experiences. To secure the validity of team members' accounts, a data triangulation was used. During the data analysis and the construction of the collective narrative, data triangulation was used to check inconsistencies in

team members' accounts. Some team members emphasised certain processes or events more than others, but no real inconsistencies were found in team accounts. Also, the teacher/researcher's own field notes and observations were used in data triangulation to increase validity of the data. Therefore, it can be said that multiple forms of evidence was used in the analysis, interpretation and construction of the learning model.

The role and presence of a teacher/researcher during a learning intervention can influence the data collection process and can cause bias. At the beginning of the learning intervention, the teacher/researcher explicated the roles of the teacher and students as well as the learning objectives, contents, learning methods and assessment criteria to students. Regardless of this effort, there are always students who consider that the teacher has more control and power over students in the learning process. Therefore, hierarchy between a teacher and students cannot be fully eliminated. Especially the role of a teacher as an assessor of students' performance clearly gives more power to the teacher. To avoid bias during the learning intervention, the teacher/researcher tried to behave according to the rules set for the roles of a teacher and students in a learning intervention. In general, it is difficult to establish a learning intervention which eliminates this bias in the research process.

The dual role of a teacher/researcher was demanding. During the learning intervention the role of the teacher was more emphasised than the role of the researcher. A large amount of energy was required to plan weekly contact sessions and other practicalities during the learning intervention. Therefore, the ability to reflect on learning practicalities was challenging. It was only after the implementation that thorough investigation and analysis could start. However, the dual role allowed closer real life experiences to be recorded compared to an outside researcher who does not participate in the action. The field work phase in CRA is a more demanding process than model design in a laboratory or the interviewing of research informants (Lukka 2000, 124).

In the selection of a purposeful sample, a researcher bias is present. The researcher selected the best performing team out of all the possible teams. The best performing team was chosen for the construction of a learning model which could be used by entrepreneurship teachers in their daily work. From this perspective, it does not make sense to choose a poorly performing team for the construction process. It can be argued that well and poorly performing teams could have been compared to provide variety and increase the validity of the findings. Unfortunately, in the empirical data of this study there appeared to be a relationship between poor performance and a lack of interest in keeping a personal learning log book. Therefore, there was no team data which could provide valid data on a poorly performing team in this research.

The researcher bias is present in the analysis and interpretation of the results. The researcher is a research instrument and analysis and interpretation are subjective processes where the researcher's own values influence on the process and subsequently the results. The researcher explicated how her background, motivations and interest can influence the interpretation and

results. She views entrepreneurial behaviour in a positive light which can cause potential bias in the interpretation of data. However, she has consciously tried to seek evidence from the data and present counter arguments when needed to avoid bias when possible.

To increase the validity of the research, the researcher used outsiders (teachers and an entrepreneur) to help to get a third person view and to reflect on the process during and after the learning intervention. Also, the researcher has implemented the learning model three times in years 2010, 2011, 2012 since the first intervention in 2009. In 2011 and 2012, she had a colleague who took part in the course as a co-teacher. On these two occasions, she was able to observe her colleague's behaviour and share experiences with the teacher during the learning process. Based on these reflections and the testing during the intervention (2009), it can be said that the basic model functions in the context of business studies at the University of Applied Sciences. Therefore, it can be said that the learning construction works in practice when implemented. This is the fifth step in the CRA process and proves that the research process has been successful and that its construction is technically feasible (Lukka 2000).

To enter the learning model for further scrutiny and weak market testing, the researcher sent the constructed learning model for feedback to 13 experts in entrepreneurship education in Europe. Nine experts commented on it. None of them found any internal flaws in the logic of the learning model. The comments the experts provided were considered and used to improve the learning model. The summary of these expert comments can be found in Appendix 6. It can be argued that the constructed model has at least passed a weak market testing when the original intervention (2009), three additional implementations and reflection rounds (2010; 2011; 2012) and the comments from nine experts in entrepreneurship education have provided support for the model's applicability for learning through and for entrepreneurship.

6.3 Benefits of research

The constructive research approach (CRA) that has been implemented in this study aims to show evidence for a theoretical contribution. According to Lukka (2006), the theoretical contribution can be produced in two ways. First, a construction itself is such a novel construction that it produces new means by which to achieve certain ends. Secondly a constructive case study provides possibilities to test and refine existing theories and underlying positive relationships within the phenomenon. The pragmatic testing of a construction can lead to redefining or even discarding theories. (Lukka 2006, 118-119.) *The theoretical contribution* of this study is the construction and testing of the Opportunity Centred Collaborative Learning Model through and for Entrepreneurship. It tests, refines and explicates Rae's (2003; 2007; 2010) Opportunity Centred Learning Model. This study showed that Rae's (2003; 2007; 2010) model works in other contexts and is theoretically valid. As refinement to

Rae's model, the underlying relationships and interactions between individual and collective learning practices were explicated and integrated into the opportunity centred learning process. It is in these interactions where the drivers for collaborative learning practices emerge. The processes of negotiated enterprise (Rae 2005; 2006) and patient communication emerge as preconditions for team empowerment (Kirkman and Rosman 1999). Team empowerment supports collective risk taking and effective entrepreneurial action. The team empowerment, on the other hand, is a precondition for shared leadership (Pearce and Conger 2003). These collaborative learning practices support the development of entrepreneurial behaviours and mental collective growth into entrepreneurship. In addition, the teacher's roles as a facilitator and a co-learner are explicated and integrated into the learning process. The key role of the teacher is to create a learning environment which permits collaborative learning practices and supports team empowerment to emerge. The model supports both teacher's and students' entrepreneurial ways of learning and behaving *through* entrepreneurship which also responds to the EU entrepreneurship education policy goals. In addition, the learning model can be used to learn *for* entrepreneurship (e.g. starting a new business) and *about* entrepreneurship (e.g. understanding the role marketing in entrepreneurship), therefore it meets all three broad entrepreneurship education objectives. As the concept of entrepreneurship is defined broadly in the study, it helps both teachers and students to understand entrepreneurship as part of their everyday life and not only as a process of creating a new business. The learning model as a tool is a welcomed addition to entrepreneurship educators who often rely on management theories and traditional teaching methods (e.g. lectures and business plan projects) in entrepreneurship programs and courses. The shortage of appropriate learning models in entrepreneurship education is also recognized by Kirby (2007, 21; 31), who encourages educators to engage in the paradigmatic shift from a teacher centred toward a student centred learning. It is, however, good to remember that a variety of student centred learning approaches are used in higher education institutions in teaching and learning entrepreneurship. For example, a problem based learning (PBL) approach is used extensively in entrepreneurship courses in higher education. PBL has similarities with an opportunity centred learning and both relay on student centred, self-directive small group learning. When an opportunity centred learning approach develops students' abilities to identify, understand and act on opportunities and learn related knowledge, skills and self-confidence, PBL develops students' problem solving skills and understanding of the problem and related knowledge needed to solve a problem. (Rae 2003, 544; Barrows 1996, 5-6.) As entrepreneurship focuses on opportunities and new value creation, an opportunity centred learning approach can be considered as a viable option to learn entrepreneurship in higher education institutions.

Methodological contributions are produced in two ways. The first contribution is a collective narrative. It is formed by combining individual and team reflection reports which are used as learning outcomes and the data. The

second contribution is to operationalise a collective learning process from idea development to its commercialisation in the market.

This study benefits both students and teachers and the model is applicable beyond business courses at the Universities of Applied Sciences. The model describes a student centred learning approach to opportunities which is of general interest in all fields of study, not only entrepreneurship courses. The choice to call the model the Opportunity Centred Collaborative Learning Model rather than the Opportunity Centred Collaborative Entrepreneurship model is an attempt to help all teachers to think beyond business and a new venture creation process and focus on students' collaborative and entrepreneurial ways of learning and behaving in search for opportunities in any context. The ability to find new opportunities and new ways of solving problems with new knowledge are keys to economic growth, innovation, employment and well-being of nations. Reacting to problems and solving them with the existing knowledge hardly brings about the necessary changes that individuals, organisations and nations face in an ever more globalised, complex and dynamic world.

Contributions to students' learning practices in entrepreneurship courses and programs are many. The learning model supports students' team work skills through learning by doing which both are seen important development areas in entrepreneurship education (Gustafsson-Pesonen and Kiuru 2012, 4). Students recognise that learning is not only an individual but also social activity. They learn to work in teams and to take responsibility for their own learning and team members' learning. They learn to initiate an innovative and collaborative project, to manage it and to assess learning and personal development throughout the process. When students' entrepreneurial behaviour is initiated, learning of other meta-skills such as creativity, communication, organisation, planning, networking, time management, leadership, selling and presentation skills as well as the application of substance related knowledge to practise become meaningful. When students recognise that they are capable of planning and managing real world projects, they develop self-efficacy and collective efficacy beliefs as well as become more confident in using their skills. In a student centred and action oriented learning process, students face challenges which involve risk taking and uncertainty. Challenges trigger critical reflection which in turn can lead to transformative learning. Learning entrepreneurial mindset and skills support students' abilities to adjust to changing situations and to take initiative to overcome barriers to achieve individual and organisational goals. Entrepreneurial individuals and teams are the cornerstone in the creation of new start-ups and the development of entrepreneurial activity in organisations which in turn create new wealth and prosperity in economy.

Contributions to teaching practices in entrepreneurship education are many. In this study, the teacher's role as a facilitator and as a co-learner in an opportunity centred learning process is explicated. The teacher's facilitating role in students' learning process is described as well as how to create a supportive learning environment for students' entrepreneurial activities. The

study supports teachers' understanding about her own learning and reflection needed in the change process from a teacher centred toward a student centred learning. The teacher needs to learn the entrepreneurial way of learning and behaving in order to make changes in teaching practices which in turn opens up opportunities for personal growth. Personal growth develops self-confidence and supports further risk taking and understanding in teaching and learning entrepreneurship. The teacher's learning methods are the same as students' learning methods which are among other things experimenting, experiencing, reflecting in action, solving problems creatively, and co-learning with students and colleagues. Therefore, learning is not only the responsibility of students but equally important for teachers. This model can be used in a teacher training to facilitate teachers' abilities in the use of appropriate tools and methods in entrepreneurship education. The lack of competence in the use of pedagogical tools appropriate in entrepreneurship education was found as one of the main barriers in a large scale entrepreneurship education project conducted in the Finnish education system during 2010-2012. (Gustafsson-Pesonen and Kiuru 2012, 3). In addition Seikkula-Leino et al. (2010, 126) points out the teacher's learning process has not received much attention in contemporary research even though it is essential to the development of entrepreneurship education.

The learning model sets a framework which can be utilised in the achievement of educational goals in the context of University of Applied Sciences. As a framework for developing entrepreneurial behaviour and skills, students with the support of their teachers and in cooperation with companies, can create new products and services for the benefit of business and society.

As in every study, not everything can be investigated, which leaves room for further research suggestions. The constructed learning model facilitates teachers' work as entrepreneurship educators by focusing on an entrepreneurial way of learning and behaviour. The learning process has elements of both the discovery and creation views of opportunities. Kyrö, Kurczewska and Osei-Bonsu (2011, 1) argue that no uniform method of teaching or learning should be adopted in entrepreneurship education. Therefore, further research needs arise for example how to utilize the effectual process introduced by Sarasvathy (2001) in teaching and learning entrepreneurship in higher education institutions. In addition, there is a need to study dysfunctional teams during the opportunity centred learning process and their impact on teaching and learning. As higher education institutions adopt team-based learning methods, it sets its own demands for team coaching, therefore, an interesting future research need is to study effective team coaching in entrepreneurial processes. Finally, the assessment of student's learning is challenging. Learning is both individual as well as collective and each student needs feedback to improve their learning as an individual and as a part of a group. Traditional exam based assessment is not effective in the process where the focus is on an entrepreneurial way of learning and behaving. According to Atjonen (2007, 20), an assessment should be part of a learning process rather than a separate activity. Hence, in the future

more research is needed to gain more understanding about the assessment and the ethics of assessment in the opportunity centred learning process.

YHTEENVETO

Tutkimuksen esittely

Euroopan unionin tavoitteena on erilaisten yrittäjyyskasvatusohjelmien kautta kehittää jäsenmaiden opiskelijoiden yrittäjämäistä ajattelu- ja toimintatapaa kaikilla koulutusjärjestelmän tasoilla. Yhtenä ongelmana korkea-asteen yrittäjyysopetuksessa on kuitenkin se, että yrittäjyys käsitetään kapeasti lähinnä uusien yritysten perustamisprosessina. Tässä tutkimuksessa yrittäjyys käsitetään laajasti (COM 2005), jolloin yrittäjyys tarkoittaa yksilön kykyä synnyttää ideoita ja hyödyntää niitä käytännössä. Laajan yrittäjyyskäsitteen mukaisesti ajatellen yrittäjyyden opetus kuuluu kaikkien opettajien eikä vain yrittäjyyden opettajille.

Yrittäjyyskasvatuksella on kolme keskeistä tavoitetta: oppia yrittäjyydestä, oppia yrittäjyyden kautta ja oppia yrittäjyyttä varten (Scott, Rosa and Klandt 1998). Korkeakouluopetuksessa käytettävä liiketoimintasuunnitelmaprojekti toimii hyvin opetusmenetelmänä, kun halutaan *oppia yrittäjyydestä*. Liiketoimintasuunnitelmaprojektit perustuvat usein opettajakeskeiseen ja kognitiiviseen oppimiseen. Yrityshautomot toisaalta tavoittelevat oppimista *yrittäjyyttä varten*, eli uusien yritysten luomista jo opintojen aikana. Näissä opinnoissa opiskelijalle pyritään antamaan riittävät tiedot ja taidot oman yrityksen aloittamiseksi ja kehittämiseksi. Kirbyn (2007) mukaan vain harvoin opiskelijoilla on mahdollisuus opiskella *yrittäjyyden kautta.* Yrittäjyyden kautta oppimisella tavoitellaan pedagogista oppimisprosessia, jossa hyödynnetään yrittäjämäistä tapaa oppia ja käyttäytyä. Oppiminen yrittäjyyden kautta edellyttää paradigman muutosta opettajakeskeisyydestä opiskelijakeskeisyyteen, jolloin opettaja toimii oppimisen mahdollistajana eli fasilitaattorina. Tämän tutkimuksen motiivina on löytää vaihtoehtoinen ratkaisu yrittäjyyden liiketoimintasuunnitelmapohjaiselle opetukselle.

Yrittäjyyskasvatuksen yhtenä suurena haasteena on saada opettajat innostumaan yrittäjyyspedagogiikasta omassa opetuksessaan. Tämä johtuu jossain määrin siitä, että yrittäjyys nähdään pikemminkin liiketoimintana eikä toimintatapana, mutta myös siitä, että meillä ei ole olemassa valmiita pedagogisia malleja tai esimerkkejä yrittäjyyspedagogiikasta. Tämän tutkimuksen tarkoituksena on rakentaa sellainen oppimismalli, joka tukee oppimista yrittäjyyden kautta. Tutkimuksessa rakentuvan oppimismallin tavoitteena on tukea oppiainerajoja ylittävää yrittäjyyteen oppimista korkea-asteella.

Tutkimuksen teoriapohja sekä tutkimuskysymykset

Tutkimuksen keskiössä on mahdollisuuskeskeinen oppiminen, joka pohjautuu Raen (2003; 2007) tutkimuksiin ja kehittämään malliin sekä yrittäjämäisen opettamisen ja oppimisen teorioihin. Mahdollisuuskeskeinen oppiminen on monitieteellinen ilmiö, jossa yhdistyvät käyttäytymistieteet (psykologia ja sosiaali-

psykologia), liiketaloustieteet (yrittäjyys) sekä kasvatustieteet (sosiaalikonstruktivistinen oppimisteoria).

Mahdollisuuskeskeisen oppimismallin rakentamiseksi tämän tutkimuksen pääkysymys muotoutui seuraavasti: Kuinka Raen (2003; 2007) oppimismallia voidaan kehittää siten, että oppiminen olisi mahdollisuuskeskeistä ja yhteistoiminnallista, ja tukisi yrittäjyyden kautta oppimista? Tutkimuksen alakysymykset johdettiin Raen (2003; 2007) oppimismallin vaiheista nostamalla oppiminen yksilötasolta kollektiiviseksi. Tutkimuksen alakysymykset ovat seuraavat:

1. Kuinka yksilön yrittäjyys muuntuu tiimin yhteiseksi yrittäjyydeksi?
2. Kuinka idea syntyy tiimin yhteisessä luovassa tutkimusprosessissa?
3. Kuinka tiimin yhteinen suunnittelu potentiaalisen mahdollisuuden hyödyntämiseksi ilmenee mahdollisuuskeskeisessä oppimisprosessissa?
4. Kuinka tiimin oppimiskäytännöt ilmenevät yhteisessä mahdollisuuden hyödyntämisprosessissa?
5. Kuinka opettaja vaikuttaa tiimin mahdollisuuden luomisen ja hyödyntämisen prosessiin?

Metodologia

Tutkimuksessa on käytetty konstruktiivista tutkimusotetta (esim. Lukka 2000), jossa pyritään uuden mallin, suunnitelman tai toimintatavan rakentamiseen tieteellisen tutkimusprosessin kautta. Konstruktiivisessa tutkimusotteessa on keskeistä, että valitulla ongelmalla ja sen ratkaisulla on käytännön merkitystä ja ne molemmat kytkeytyvät teoreettisen kirjallisuuteen. Rakennetun konstruktion eli uuden mallin uutuusarvo, toimivuus ja merkitys osoitetaan käytännössä, ja konstruktion tulisi olla helppokäyttöinen. Konstruktion tulisi lisäksi tuottaa uutta teoriaa.

Konstruktiivisen tutkimusotteen sisällä sovellettiin sekä tapaustutkimusta että toimintatutkimusta. Keskeinen osa tutkimusta oli opetusintervention suunnittelu sekä toteutus HAAGA-HELIA ammattikorkeakoulun International Business- koulutusohjelman markkinoinnin kolmannen vuoden kurssilla syksyllä 2009 (16 viikkoa). Opetusinterventioon osallistui 24 monikulttuurista opiskelijaa. Tutkimusaineisto koostui opettajan tekemästä kurssimateriaaleista ja kenttämuistiinpanoista, opiskelijoiden henkilökohtaisista oppimispäiväkirjoista ja opiskelijatiimien tehtävistä ja raporteista. Varsinaisessa oppimismallin konstruointityössä hyödynnettiin yhden monikulttuurisen tiimin tuottamaa aineistoa, josta muodostettiin kollektiivinen kertomus (narratiivi), jota tulkittiin kirjallisuuteen peilaten. Tämän prosessin tuloksena rakentui mahdollisuuskeskeinen ja yhteistoiminnallinen oppimismalli.

Konstruoitua mallia käytettiin opetuksessa uusilla ryhmillä vuosina 2010, 2011 ja 2012 ja sen toimivuutta ja hyödyllisyyttä yrittäjyyden opetuksessa reflektoitiin. Tämän lisäksi opetusmallia testattiin yhdeksällä yrittäjyyskasvatuksen eurooppalaisella tutkijalla 2012. Testausten ja reflektointien perusteella voidaan sanoa, että malli toimii yrittäjyyden opetuksessa korkeakoulutasolla.

Tutkimuksen tulokset

Tutkimuksen päätuloksena syntyneessä oppimismallissa (Figure 26) on neljä oppimisvaihetta, jotka on johdettu Raen (2003; 2007) mahdollisuuskeskeisen oppimisen mallista. Vaiheet luotiin nostamalla yksilöoppiminen kollektiiviselle tasolle, jolloin yhteistoiminnallisen oppimisen prosessit saatiin esiin.

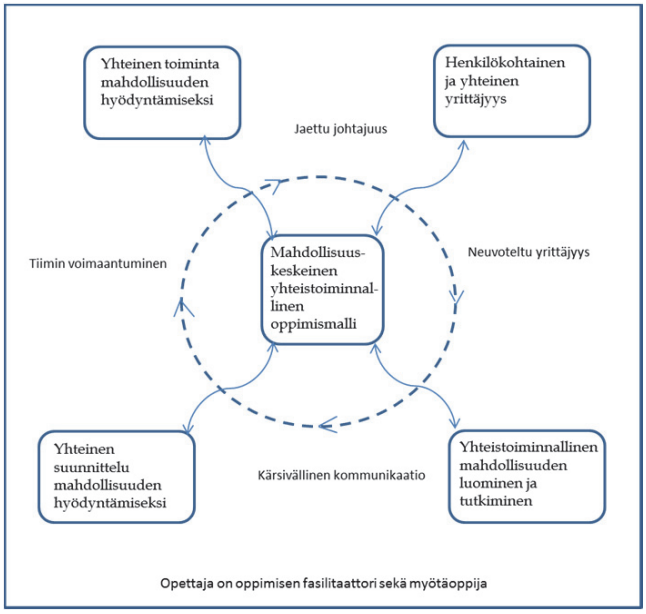

FIGURE 26 Mahdollisuuskeskeinen yhteistoiminnallinen oppimismalli yrittäjyyden kautta ja yrittäjyyttä varten

Oppimisprosessin päävaiheet ovat henkilökohtainen ja yhteinen yrittäjyys, yhteistoiminnallinen mahdollisuuden luominen ja tutkiminen, yhteinen suunnittelu mahdollisuuden toteuttamiselle sekä yhteinen toiminta mahdollisuuden hyödyntämiseksi. Oppimismallin sisällä oleva syklinen prosessi kuvaa yhteistoiminnallisen oppimisen käytäntöjä, jotka ohjaavat yrittäjämäistä kollektiivista toimintaa. Yhteistoiminnallisen oppimisen prosessissa nousevat esiin käsitteet: neuvoteltu yrittäjyys (negotiated enterprise) (Rae 2005; 2006) ja kärsivällinen kommunikaatio (patient communication), jotka ovat edellytyksenä tiimin voimaantumiselle (team empowerment) (Kirkman and Rosen 1999). Tiimin voimaantuminen on edellytys jaetulle johtajuudelle (shared leadership) (Pearce and Conger 2003). Opettajan keskeisenä tehtävänä on rakentaa sellainen oppimisympäristö, joka mahdollistaa opiskelijoiden yrittäjämäisen toiminnan. Tukeakseen tätä oppimistoimintaa opettaja tarvitsee erilaisia fasilitoivia rooleja eri prosessin aikana. Tässä tutkimuksessa oppiminen ei kuulu vain opiskelijoille vaan opettajasta tulee oppimisprosessissa myötäoppija. Oppimisprosessi perustuu jatkuvalle reflektiolle, joka mahdollistaa henkilökohtaisen ja kollektiivisen kasvun yrittäjyyteen.

Johtopäätökset

Lukan (2000) mukaan konstruktiivisessa tutkimusotteessa teoreettinen kontribuutio voi syntyä kahdella tavalla. Ensinnäkin konstruktio on sellainen uusi innovaatio, joka tuottaa uusia keinoja saavuttaa tietyt tavoitteet. Toiseksi kontribuutio voidaan tuottaa testaamalla tai jalostamalla olemassa olevia teorioita ja ilmiön sisällä olevia positiivisia yhteyksiä. Tämän tutkimuksen teoreettinen kontribuutio syntyy mahdollisuuskeskeisen, yhteistoiminnallisen oppimismallin rakentamisella. Tutkimuksessa testattiin ja kehitettiin Raen (2003; 2007) oppimismallia, joka toimi tutkimuskontekstissa ja on teoreettisesti pätevä.

Tutkimuksen avulla Raen (2003; 2007) mallia kehitettiin edelleen nostamalla yksilötason oppiminen kollektiiviselle tasolle, jolloin yhteistoiminnallisen oppimisen prosessit ja niihin vaikuttavat tekijät saatiin esiin ja liitettyä oppimisprosessiin. Yhteistoiminnallisen oppimisen prosessit mahdollisuuskeskeisessä oppimisprosessissa kehittävät toimijoiden yrittäjämäistä tapaa oppia ja käyttäytyä sekä kollektiivista henkistä kasvua yrittäjyyteen. Rakennettu oppimismalli kehittää oppimista yrittäjyyden kautta samalla kun se edesauttaa oppimista yrittäjyydestä sekä yrittäjyyttä varten. Voidaan sanoa, että rakennetun oppimismallin kautta kaikki yrittäjyyskasvatuksen tavoitteet yhdistyvät ja vastaavat EU:n yrittäjyyskasvatuksen haasteisiin. Tutkimus tuotti myös metodologista kontribuutiota operationalisoimalla tiimin oppimisprosessi idean syntymisestä sen kaupallistamiseen.

Mahdollisuuskeskeinen oppiminen perustuu opiskelijoiden itsensä luomien ja kehittämien ideoiden ymmärtämiseen, suunnitteluun ja hyödyntämiseen sekä samalla he oppivat yrittäjämäistä ajattelu- ja toimintatapaa. Oppimisprosessissa opettajan rooli on opiskelijoiden oppimisen tukijana, mutta myös myötäoppijana. Tutkimuksessa kuvataan opettajan oman oppimisen reflektion tärkeyttä opettajan muutosprosessissa kohti opiskelijakeskeistä oppimista. Opettajankin tulee oppia ja toimia yrittäjämäisesti, jotta hän voi tehdä tarvittavat muutokset omaan opetukseensa. Opettajan yrittäjämäinen tapa oppia kokeilemalla, tekemällä ja ongelmia ratkaisemalla yhdessä opiskelijoiden sekä muiden opettajien tukemana mahdollistaa asioiden tekemisen uudella tavalla sekä henkilökohtaisen kasvun ja itseluottamuksen kehittymisen. Rakennettu oppimismalli antaa työvälineen yrittäjyyskasvattajille, jotka joutuvat usein tukeutumaan johtamisen teorioihin ja malleihin sekä traditionaalisiin opettajakeskeisiin opetusmenetelmiin. Mallia voidaan käyttää opettajakoulutuksessa sillä opettajien kompetenssit käyttää erilaisia pedagogisia malleja nähdään yhtenä keskeisimmistä haasteista yrittäjyyskasvatuksessa (Pesonen ja Kiuru 2012).

Kehitetystä oppimismallista hyötyvät ennen kaikkea opiskelijat, jotka kehittyvän yhteistoiminnallisuuden kautta luovat ja kehittävät uusia ideoita ja ratkovat ongelmia luovasti ja ottavat riskiä yhdessä helpommin kuin yksin toimiessaan. Opiskelijoiden ideat kehittyvät jatkuvan palautteen avulla, joka motivoi opiskelijoita saavuttamaan tavoitteensa ja samalla heidän tietonsa, taitonsa ja itsevarmuutensa kehittyvät. Kun yrittäjämäinen tapa toimia tiimissä syntyy ja kehittyy, niin muut metataidot kuten kommunikaatio, organisointi, suunnittelu,

verkottuminen, ajanhallinta, johtaminen sekä oppiaineen soveltaminen käytäntöön tulevat merkityksellisiksi. Yhteisen yrittäjämäisen toimintatavan kehittyminen tiimissä auttaa opiskelijoita mukautumaan uusiin tilanteisiin ja haasteisiin sekä tukee yhteistä kasvua yrittäjyyteen. Yrittäjämäiset tiimit toimivat moottoreina uusien yritysten luomisprosesseissa sekä organisaatioiden uudistamisprosesseissa, jotka omalta osaltaan luovat uutta vaurautta ja työllisyyttä yhteiskunnassa.

REFERENCES

Alasuutari, P. 1994. Laadullinen tutkimus.Tampere: Vastapaino.

Alvarez, S.A. & Barney, J.B. 2007. Discovery and creation: alternative theories of entrepreneurial action. Organizações em contexto 3 (6), 123-152. http://scholar.google.fi/scholar?q=Alvarez,+S.A.+%26+Barney,+J.B.+2007.+Discovery+and+creation:+alternative+theories+of+entrepreneurial+action.&hl=fi&as_sdt=0&as_vis=1&oi=scholart&sa=X&ei=x7fNUMS0J-_E4gSz_oGIDQ&ved=0CC0QgQMwAA

Alvarez, S.A., Barney, J.B. & Young, S.L. 2010. Debates in entrepreneurship: opportunity formation and implications for the field of entrepreneurship. In Z.J. Acs and D.B. Audretsch (Eds) Handbook of Entrepreneurship Research. An Interdiciplinary Survey and Introduction (2nd ed.) Heidelberg: Springer.

Amabile, T. M. 1998. How to kill creativity? Harvard Business Review http://gwmoon.knu.ac.kr/Lecture_Library_Upload/HOW_TO_KILL_CREATIVITY.pdf. Accessed 15.9.2011.

Ames, C. & Archer, J. 1988. Achievement goals in the classroom: students' learning strategies and motivation processes. Journal of Educational Psychology 80 (3), 260-267.

Anderson, G.L. & Herr, K. 2005 The action research dissertation: a guide for students and faculty. Thousand Oaks, California: Sage Publications.

Ardichvili, A., Cardozo, R. & Ray, S. 2003. A theory of entrepreneurial opportunity identification and development. Journal of Business Venturing 18, 105-123.

ARENE. 2011. Universities of Applied Sciences in Finland. http://www.arene.fi/data/liitteet/13290=naturallyfinland_pinnet_esite.pdf. Last accessed 17.5.2012.

Argyris, C. 1993. Knowledge for action. A guide to overcoming barriers to organizational change. San Fransico: Jossey Bass.

Argyris, C. 2002. Double-loop learning, teaching, and research. Academy of Management Learning and Education 1 (2), 206-218.

Aronsson, M. 2004. Education matters-but does entrepreneurship education? An interview with David Birch. Academy of Management Learning and Education 3 (3), 289-292.

Atjonen, P. 2007. Hyvä, paha arviointi. Jyväskylä: Tammi.

Atjonen, P. 2011. Kehittävä ja toimivuutta rakentava arviointi. Yrittäjyyskasvatuspäivät 7.10. 2011, Lappeenranta.

Atkinson, P. & Coffey, A. 2011. Analysisng documentary realities. In D. Silverman (Eds) Qualitative Research (3rd ed.) London: Sage Publications.

Auteri, M. 2003. The entrepreneurial establishment of a nonprofit organization. Public Organization Review: A Global Journal 3, 171-189.

Bandura, A. 1997. Self-efficacy in a changing societies. Campridge: University Press.

Baron, R. A. & Ensley, M.D. 2006. Opportunity as a detection of meaningful patterns: evidence from comparisons of novice and expert entrepreneurs. Management Science 52 (9), 1331-1344.

Barron, B. 2003. When smart groups fail. The Journal of the Learning Sciences 12 (3), 307-359.

Barrows, H. 1996. Problem-based learning in medicine and beyond: a brief overview. In L. Wilkerson, W. Gijeselaers (Eds) Bringing problem based learning in higher education: theory and practice. San Fransisco: Jossey Bass Publishing, 3-10.

Baruah, J. & Paulus, P.B. 2008. Effects of training on idea generation in groups. Small group research 39 (5), 523-541.

Beairsto, B. & Ruohotie, P. 2003. Empowering professionals as lifelong learners. In B. Beairsto, M. Klein & P. Ruohotie (Eds) Professional learning and leadership. Hämeenlinna: Research Centre for Vocational Education and Training.

Beaty, L., Gibbs, G. & Morgan, A. 1997. Learning orientations and study contracts. In F. Marton, D. Hounsell and N. Entwistle (Eds) The experience of learning. Implications for teaching and studying in Higher Education (2nd ed.) Edinburgh: Scottish Academic Press, 72-86.

Bechard, J.P. & Tolouse, J-M. 1998. Validation of a didactic model for the analysis of training objectives in entrepreneurship. Journal of Business Venturing 13 (4), 317-332.

Berglund, H. 2007. Opportunities as existing and created: a study of entrepreneurs in the Swedish mobile internet industry. Journal of Enterprise Culture 15 (3), 243-273.

Binks, M., Starkey, K. & Mahon, C. L. 2006. Technology, Analysis & Strategic Management 18 (1), 1-18.

Bjerke, B. 2007. Understanding entrepreneurship. Cheltenham: Edward Elgar Publishing Limited.

Bjerke, B. & Hultman, C. M. 2002. Entrepreneurial marketing: the growth of small firms in the economic era. Cheltenham: Edward Elgar Publishing Limited.

Blenker, P., Dreisler, P., Faergeman, H.M. & Kjeldsen, J. 2006. Learning and teaching entrepreneurship: dilemmas, reflections and strategies. In A. Fayolle & H. Klandt (Eds) International Entrepreneurship Education: Issues and Newness. Cheltenham: Edward Elgar Publishing, 21-34.

Bluemink, J. 2011. Virtually face-to-face: enriching collaborative learning through multiplayer games. The University of Oulu. Dissertation in education.
http://herkules.oulu.fi/isbn9789514294235/isbn9789514294235.pdf. Last accessed 1.10.2012.

Brown, J. S., Collins, A. & Duguid, P. 1989. Situated cognition and the culture of learning. Educational Researcher 18 (1), 32-42.

Bruner, J. 2009. Culture, mind and education. In K. Illeris (Eds) Contemporary theories of learning. London: Routledge.

Boud, D. & Feletti, G. 1999. Ongelmalähtöinen oppiminen. Uusi tapa oppia. Helsinki: Hakapaino Oy.

Cannon-Bowers, J. A., Salas, E. & Converse, S.A.1993. Shared mental models in expert decision making. In N.J. Castellan, Jr. (Eds) Current issues in individual and group decision making. Hillsdale, NJ: Lawrence Erlbaum, 221-246.

Cannon-Bowers, J. A. & Salas, E. 2001. Journal of Organizational Behavior 22 (2), 195-202.

Carrier, C. 2005. Pedagogical challenges in entrepreneurship education. In P. Kyrö & C. Carrier (Eds) The dynamics of learning entrepreneurship in a cross-cultural university context. Entrepreneurship Education Series. Hämeenlinna: University of Tampere, 136-158.

Carrier, C. 2007. Strategies for teaching entrepreneurship: what else beyond lectures, case studies and business plans? In A. Fayolle (Eds) International Handbook of Research in Entrepreneurship Education, Volume 1. Cheltenham: Edward Elgar Publishing Limited, 143-159.

Carwell, M. & Rae, D. 2000. Towards a conceptual understanding of entrepreneurial learning. Journal of Small Business and Enterprise Development 8 (2), 150-158.

Case, R. 1998. Changing views of knowledge and their impact on educational research and practice. In R. D. Olson & N. Torrance (Eds) The Handbook of Education and Human Development: New Models of Learning. Oxford: Blackwell Publishers Ltd.

Cohen, L. & Manion, L. 1994. Research methods in education. London: Routledge.

Cohen, L., Manion, L. & Morrison, K. 2011. Research methods in education (7th ed.) New York: Rutledge.

COMMISSION OF THE EUROPEAN COMMUNITIES. Brussels, 10.11.2005. COM(2005)548 final. 2005/0221(COD). Proposal for a RECOMMENDATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on key competences for lifelong learning.

Companys, Y. & McMullen, J. 2007. Strategic entrepreneurs at work: the nature, discovery, and exploitation of entrepreneurial opportunities. Small Business Economics 28 (4), 301-322.

Cooney, T. M. 2005. Editorial: What is an entrepreneurial team? International Small Business Journal 23 (3), 226-235.

Cope, J. 2003. Entrepreneurial learning and critical reflection: discontinuous events as triggers for higher level learning. Management learning 34 (4), 429-450.

Cope, J. 2005. Toward a dynamic learning perspective in entrepreneruhsip. Entrepreneurship Theory and Practice 29 (4), 373-397.

Cope, J. & Watts, G. 2000. Learning by doing. An exploration of experience, critical incidents and reflection in entrepreneurial learning. International Journal of Entrepreneurial Behaviour & Research 6 (3), 104-124.

Corbett, A. C. 2005. Experiential learning within the process of opportunity identification and exploitation. Entrepreneurship Theory & Practice 29 (4), 473-491.

Deakins, D. & Freel, M. 1998. Entrepreneurial learning and and the growth process in SMEs. The Learning Organization 5 (3), 144-155.

Delmar, F. & Shane, S. 2003. Does business planning facilitate the development of new ventures? Strategic Management Journal 24, 1165-1185.

Denzin, N.K. & Lincoln, Y.S. 1998. Introduction: entering the field of qualitative research. In N.K. Denzin and Y.S. Lincoln (Eds) The Landscape of Qualitative Research: Theories and Issues. Thousand Oaks, CA: Sage Publications.

DeTienne, D.R. & Chandler, G.N. 2004. Opportunity identification and its role in the entrepreneurial classroom: a pedagogical approach and empirical test. Academy of Management Learning and Education 3 (3), 242-257.

Dillenbourg, P. 1999. What do you mean by collaborative learning? In P. Dillenbourg (Eds) Collaborative learning: cognitive and computational approaches. Oxford: Elsevier.
http://halshs.archives-ouvertes.fr/docs/00/19/02/40/PDF/Dillenbourg-Pierre-1999.pdf. Last accessed 1.10.2012.

Dillenbourg, P., Järvelä, S. & Fischer, F. 2009. The evolution of research on computer-supported collaborative learning: from design to orchestration. Technology Enhanched Learning 1, 3-19.

Dimov, D. 2007. Beyond the single–person, single-insight attribution in understanding entrepreneurial opportunities. Entrepreneurship Theory and Practice 31 (5), 713-731.

Dixon, N. 1994. The organizational learning cycle: how we can learn collectively. McGraw-Hill Developing Organizations (Series). Berkshire, England: McGRAW-HILL Book Company.

Doolittle, P.E. and Hicks, D. 1999. Constructivism as a theoretical foundation for the use of technology in social sciences.
http://www.itma.vt.edu/modules/spring03/learnth/DoolittleHicks5.pdf. Last accessed 20.7.2012.

Draycott, M. & Rae, D. 2010. Enterprise education in schools and the role of competency frameworks. International Journal of Entrepreneurial Behaviour Research 17 (2), 127-145.

Dreisler, P. 2008. Entrepreneurship from opportunity to action: the entrepreneurial process. In P. van der Sijde, A. Ridder, G. Blaauw and C. Diensberg (Eds) Teaching entrepreneurship. Cases for education and training. Heidelberg: Physica-Verlag.

Drucker, P.F. 1985. Innovation and entrepreneurship: practice and principles. New York: Harper and Row.

Dutta, D.K. & Crossan, M.M. 2005. The nature of entrepreneurial opportunities: understanding the process using 4I organizational learning framework. Entrepreneurship Theory & Practice 29 (4), 425-449.

Eckhard, J. T. & Shane, S.A. 2003. Opportunities and entrepreneurship. Journal of Management 29 (3), 333-349.

Edelman, L. & Yli-Renko, H. 2010. The impact of environment and entrepreneurial perceptions on venture-creation efforts: bridging the discovery and creation viewes of entrepreneurship. Entrepreneurship Theory and Practice 34 (5), 833-856.

Edmondson, A. 1999. Psychological safety and learning behavior in work teams. Administrative Science Quaterly, 44 (2).
http://www.iacmr.org/Conferences/WS2011/Submission_XM/Participant/Readings/Lecture9B_Jing/Edmondson,%20ASQ%201999.pdf.
Accessed 3.10.11.

Edmondson, A. C. 2002. Managing the risk of learning: Psychological safety in work teams.
http://scholar.google.fi/scholar?q=Edmondson,+A.+C.+2002.+Managing+the+risk+of+learning:+Psychological+safety+in+work+teams.&hl=fi&as_sdt=0&as_vis=1&oi=scholart&sa=X&ei=qxIJUJmgG6mm4gSYsaHjCg&ved=0CDsQgQMwAA

Eisenhardt, K.M. 1989. Building theories from case study research. Academy of Management Review 14 (4), 532-550.

Engeström, Y. 1994. Training for change: new approach to instruction and learning in working life. Geneva: International Labour Organization.

Encyclopaedia Britannica Online [referenced 17.3.2011].
http://www.britannica.com/bps/search?query=enterprise

Eriksson, P. & Kovalainen, A. 2008. Qualitative methods in business research. London: Sage Publications.

Eteläpelto, A. & Lahti, J. The resources and obstacles of creative collaboration in a long-term learning community. Thinking Skills and Creativity 3, 226-240.

Etzioni, A. 1990. The moral dimension. Toward a new economics. New York: The Free Press.

European Union. 2006. Communication from the Commission to the Council, the European Parliament and Social Committee and the Committee of the Regions. Implementing the Community Lisbon Programme: Fostering entrepreneurial mindset through education and learning. Brussels, 13.2.2006 COM (2006) 33 final.
http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2006:0033:FIN:EN:PDF. Last accessed 12.10.2012.

European Union. 2008. Entrepreneurship in higher education especially in non business studies. European Commission Enterprise and Industry Doctorate-General, Bryssels.
http://ec.europa.eu/enterprise/policies/sme/files/support_measures/training_education/entr_highed_en.pdf

Fayolle, A. & Gailly, B. 2008. From craft to science. Teaching models and learning processes in entrepreneruship education. Journal of European Industrial Training 32 (7), 569-593.

Fayolle, A. & Klandt, H. 2006. Issues and newness in the field of entrepreneurship education: new lenses for new practical and academic questions. In A. Fayolle & H. Klandt (Eds) International Entrepreneurship Education. Aldershot: Edward Elgar Publishing.

Fiet, J.O. 2000a. The theoretical side of teaching entrepreneurship. Journal of Business Venturing 16, 1-24.

Fiet, J.O. 2000b. The pedagogical side of entrepreneurship theory. Journal of Business Venturing 16, 101-117.

Fiet, J.O. 2007. A perspective analysis of search and discovery. Journal of Management Studies 44 (4), 592-611.

Fletcher, D. 2007. Social constructionist thinking: some implications for entrepreneruship research and education. In A. Fayolle (Eds) Handbook of Research in Entrepreneurship Education, Volume 1. Cheltenham, UK: Edward Elgar Publishing Limited, 160-246.

Fletcher, J.K. & Käufer,K. 2003. Shared leadership. Paradox and possibility. In C.L. Pearce & J.A. Conger (Eds) Shared leadershp. Reframing the hows and whys of leadership. Thousands Oaks, CA: Sage Publications.

Frese, M. & Fay, D. 2001. Personal initiative: an active performance concept for work in the 21st century. Research in Organizational Behavior 23, 133-187.

Gaglio, C.M. 2004. The role of mental simulations and counterfactual thinking in the opportunity identification process. Entrepreneurship Theory and Practice 28 (6), 533-552.

Garavan, T. & O'Cinneide, B. 1994. Entrepreneuship education and training programmes: A review and evaluation Part 1. Journal of European Training 18 (8), 3-12.

Gartner, W.B. 1989. "Who is an entrepreneur?" Entrepreneurship Theory & Practice, 47-68.

Gartner, W.B., Bird, B.J. Starr, J.A. 1992. Acting as if: differentiating entrepreneurial from organizational behavior. ENTREPRENEURSHIP THEORY & PRACTICE 16 (3), 13-31.

Gibb, A.A. 1987. Enterprise culture-its meaning and implications for education and training. Journal of European Industrial Training 11 (2), 2-38.

Gibb, A. A. 1993. The enterprise culture and education. Understanding enterprise education and its links with small business, entrepreneruship and wider educational goals. International Small Business Journal 11 (3), 11-24.

Gibb, A.A. 1997. Small firms training and competitiveness. Building upon the small business as learning organization. International Small Business Journal 14 (3), 13-29.

Gibb, A.A. 2000. SME policy, academic research and the growth of ignorance, mythical concepts, myths, assumptions, rituals and confusions. International Small Business Journal 18 (13), 13-35.

Gibb, A.A. 2002. Conducive environment for learning and entrepreneurship. Industry and Higher Education. June 2 2002, 135-147.

Gibb, A.A. 2005. The future of entrepreneurship education-determining the basis for coherent policy and practice? In P. Kyrö & C. Carrier (Eds) The dynamics of learning entrepreneurship in a cross-cultural university context. Hämeenlinna: University of Tampere.

Gorman, G., Hanlon, D. & King, W. 1997. Some research perspectives on entrepreneurship education, enterprise education and education for small business management: a ten- year literature review. International Small Business Journal 15 (3).

Gupta, V. K., Huang, R. & Niranjan, S. A. 2010. Longitudinal examination of the relationship between team leadership and performance. Journal of Leadership and Organizational Studies 17 (4), 335- 350.

Gustafsson-Pesonen, A. & Kiuru, P. 2012. Ideoita ja oivalluksia yrittäjyyskasvatukseen YKOONTI. Aalto-yliopisto. Aalto-yliopiston julkaisusarja KAUPPA+TALOUS 4/2012.

HAAGA-HELIA University of Applied Sciences. 2012a. HAAGA-HELIA in a nutshell. http://www.haaga-helia.fi/en/about-haaga-helia/haaga-helia-in-a-nutshell. Last accessed 18.2.2012.

HAAGA-HELIA University of Applied Sciences. 2012b. Mission and Vision. http://www.haaga-helia.fi/en/about-haaga-helia/mission-and-vision/index.html/ Last accessed 17.5.2012.

HAAGA-HELIA University of Applied Sciences. 2012c. Pedagogical strategy. http://www.haaga-helia.fi/en/students-guide/welcome-to-haaga-helia/pedagogical-strategy/?searchterm=pedagogical%20strategy. Last accessed 18.2.2012.

Hannula, H., Ruskovaara, E., Seikkula-Leino, J. & Tiikkala, A. 2012. Evaluating Finnish teacher educators as entrepreneurship educators. Improvement by Evaluation. 8th International Conference on Evaluation for Practice, 101-109. A conference for Experts of Education, Human Services and Policy 18-20 June 2012, Pori, Finland.

Hansen, D.J., Shrader, R. and Monllor, J. 2011. Defragmenting definitions of entrepreneurial opportunity. Journal of Small Business Management 49 (2), 283-304.

Harper, D.A. 2008. Towards a theory of entrepreneurial teams. Journal of Business Venturing 23, 613-626.

Hartshorn, C. & Hannon, P. D. 2005. Paradoxes in entrepreneurship education: chalk and talk or chalk and cheese? A case approach. Education + Training 47 (8/9), 616-627.

Hayek, F.A. 1945. The use of knowledge in society. The American Economic Review 35 (4).

Helakorpi, S. & Olkinuora, A. 1997. Asiantuntijuutta oppimassa. Ammattikorkeakoulupedagogiikka. Juva: WSOY.

Henry, C., Hill, F. & Leitch, C. 2005. Entrepreneurship education and training: can entrepreneurship be taught? Part 1. Education + Training 47 (2) 98-111.

Hisrich, R.D. & Peters, M.P. 1998. Entrepreneurship: starting, developing, and managing a new enterprise (4th ed.) Burr Ridge, IL: Irwin/McGraw-Hill.

Hodder, I. 2000. The interpretation of documents and material culture. In N. K. Denzin & Y. S. Lincoln (Eds) Handbook of Qualitative Research (2nd ed.) London: Sage Publications, 703-715.

Holcomb, T. R., Ireland, R. D., Holmes jr., R. M. & Hitt, M.A. 2009. Architecture of entrepreneurial learning: exploring the link among heuristics, knowledge, and action. Entrepreneurship Theory and Practice 22 (1), 167-192.

Holmer, L.L. 2001. Will we teach leadership or skilled incompetence? The challenge of student project teams. Journal of Management Education 25, 590-605.

Honig, B. 2004. Entrepreneurship education: towards a model of contingency based business planning. Academy of Management Learning and Education 3 (3), 258-273.
http://www.unc.edu/~jfstewar/Oct%2020%20papers/Honig%20paper%20AMLE%202004.pdf. Last accessed 14.10.2012.

Honig, B. & Karlsson, T. 2004. Institutional forces and written business plan. Journal of Management 30 (1), 29-48.

Hytti, U. & O'Gorman, C. 2004. What is "enterprise education?" An analysis of the objectives and methods of enterprise education programmes in four European countries. Education + Training 46 (1), 11-23.

Hämäläinen, R., Manninen, T., Järvelä, S. & Häkkinen, P. 2006. Learning to collaborate: designing collaboration in a 3-D game environment. Internet and Higher Education 9, 47-61.
http://edglo-technology.wikispaces.com/file/view/Learning_to_collaborate_pdf.pdf. Last accessed 17.10.2012.

Ikonen, R. 2006. Yrittäjyyskasvatus. Kansalaisen taloudellista autonomiaa etsimässä. Helsinki/Jyväskylä: Minerva kustannus Oy.

Illeries, K. 2009. A comprehensive understanding of human learning. In K. Illeries (Eds) Contemporary theories of learning. Learning theorists in their own words. New York, NY: Routledge.

Jack, S. L. & Anderson, A. R. 1999. Entrepreneurship education within the enterprise culture. Producing reflective practitioners. International Journal of Entrepreneurial Behaviour & Research 5 (3), 110-125.

Jarvis, P. 2009. Learning to be a person in society: learning to be me. In K. Illeries (Eds) Contemporary theories of learning. Learning theorists in their own words.New York, NY: Routledge.

Johnson, D. W. & Johnson, R. T. 2005. New developments in social interdependence theory. Genetic, Social, and General Psychology Monographs 131 (4), 285-358.
http://www.co-operation.org/wp-content/uploads/2011/01/Social-Interdependence-Theory-Monograph-copy.pdf. Accessed 3.10.11.

Johnson, D.W. & Johnson, R.T. 2009. An educational psychology success story: social interdependence theory and cooperative learning. Educational Researcher 38 (5),365-379.

John–Steiner, V. 2000. Creative collaboration. Oxford: Oxford University Press.

Jones, B. & Iredale, N. 2010. Enterprise as pedagogy. Education + Training 52 (1), 7-19.

Järvelä, S., Näykki, P., Laru, J. & Luokkanen, T. 2007. Structuring and regulating collaborative learning in higher education with wireless networks and mobile tools. Educational Technology & Society, 10 (4), 71-79.

Kamm, J.B. & Nurick, A.J. 1993. The stages of team venture formation: a decision- making model. Entrepreneurship Theory and Practice 17, 17-28.

Kasanen, E., Lukka K. & Siitonen, A. 1991. Konstruktiivinen tutkimusote liiketaloustieteissä. Liiketaloudellinen aikakauskirja 40 (3), 301-327.

Kasanen, E., Lukka, K. & Siitonen, A. 1993. The constructive approach in management accounting research. Journal of Management Accounting Research Fall 1993.

Katz-Navon, T.Y. & Erez, M. 2005. When collective and self-efficacy affect team performance. The role of task interdependence. Small Group Research 36 (4), 437-465.

Kayes, A.B., Kayes, D.C. & Kolb, D.A. 2005. Experiential learning in teams. Simulation & Gaming 36 (3), 330-354.

Kember,D. 1997. A reconceptualization of the research into university academics' conceptions of teaching. Learning and instruction 7 (3), 255-275.

Kickul, J. & Fayolle, A. 2007. Cornerstones of change: revisiting and challenging new perspectives on research in entrepreneurship education. In A. Fayolle (Eds) Handbook of Research in Entrepreneurship Education, Volume 1. UK: Edward Elgar Publishing Limited, 1-19.

Kirby, D. 2007. Changing the entrepreneurship education paradigm. In A. Fayolle (Eds) Handbook of Research in Entrepreneurship Education, Volume 1. Cheltenham, UK: Edward Elgar Publishing Limited, 21-45.

Kirkman, B.L. & Rosen, B. 1999. Beyond self-management: antecedents and consequences of team empowerment. Academy of Management Journal 42, 58-74.

Kirkman, B.L., Rosen, B., Tesluk, P.E. & Gibson, C.B. 2004. The impact of team empowerment on virtual team performance: the moderating role of face-to-face interaction. Academy of Management Journal 47 (2), 175-192.

Kirzner, I.M. 1979. Perception, opportunity, and profit: studies in the theory of entrepreneurship. Chicago: University of Chicago Press.

Klassen, R. M. & Krawchuk, L. L. 2009. Collective motivation beliefs of early adolescents working in small groups. Journal of School Psychology 47, 101-120.

Klimoski, R. & Mohammed, S. 1994. Team mental model: construct or metaphor? Journal of Management 20 (2), 403-437.

Koiranen, M. & Peltonen, M. 1995. Yrittäjyyskasvatus. Ajatuksia yrittäjyyteen oppimisesta. Valkeakoski: Konetuumat Oy.

Koiranen, M. & Ruohotie, P. 2001. Yrittäjyyskasvatus: analyysejä, synteesejä ja sovelluksia. Aikuiskasvatus 2/01.

Kolb, D.A. 1984. Experiential learning. Experience as the source of learning and development. New Jersey: Prentice Hall.

Kozlowski, S. W. J. & Ilgen, D. R. 2006. Enhancing the effectiveness of work groups and teams. Psychological Science in the Public Interest 7 (3), 77-124.

Kuratko, D.F. 2005. The emergence of entrepreneurship education: development, trends, and challenges. Entrepreneurship Theory and Practice 29 (5), 577-598.
https://entrepreneurship.okstate.edu/files/The_Emergence_of_Entrepreneurship_Education_Development_Trends_and_Challenges.pdf. Last accessed 14.10.2012.

Kyrö, P. 2004. Tutkimusprosessi valintojen polkuna. Hämeenlinna: Tampereen yliopisto.

Kyrö, P. 2005a. Entrepreneurial learning in a cross-cultural context challenges previous learning paradigms? In P. Kyrö & C. Carrier (Eds) The dynamics of learning entrepreneurship in a cross-cultural university context. Entrepreneurship Education Series. Hämeenlinna: University of Tampere, 25-30.

Kyrö, P. 2005b. Yrittäjyyskasvatusta käsitteellistämässä. In A. Heikkinen (Eds) Aikuiskasvatuksen tutkimuspolut. Vantaa: Kansanvalistusseura, 181-206.

Kyrö, P. 2008. A theoretical framework for teaching and learning entrepreneurship. International Journal of Business and Globalization 2 (1), 39-55.

Kyrö. P. & Carrier, C. 2005. Entrepreneurial learning in universities: bridges across borders. In P. Kyrö & C. Carrier (Eds) The dynamics of learning entrepreneurship in a cross-cultural university context. Hämeenlinna: University of Tampere, 14-43.

Kyrö, P., Kauppi, T. & Nurminen, M. 2008. Entrepreneurial learning and virtual learning. In P. van der Sijde, A. Ridder, G. Blaauw & C. Diensberg (Eds) Teaching entrepreneurship. Cases for education and training. Heidelberg: Physica-Verlag, 117-133

Kyrö, Kurczewska and Osei-Bonsu. 2011. Different approaches to opportunity process and their consequences for teaching practice. Yrittäjyyskasvatuspäivät. Konferenssijulkaisu. 6.-7.10. 2011, Lappeenranta, Finland.

Kyrö, P., Lehtonen, H & Ristimäki, K. Yrittäjyyskasvatuksen uusia suuntia etsimässä. In P. Kyrö, H. Lehtonen & K. Ristimäki. (Eds) Yrittäjyyskasvatuksen monia suuntia. Yrittäjyyskasvatuksen julkaisusarja 5/2007. Tampere: Tampereen yliopistopainos Oy-Juvenes Print, 12-30.

Kyrö, P. & Niemi, M. 2008. Advancing business planning: from planning to entrepreneurial learning. In P. van der Sijde, A. Ridder, G. Blaauw & C. Diensberg (Eds) Teaching entrepreneurship. Cases for education and training. Heidelberg: Physica- Verlag, 35-52.

Labro, E. & Tuomela, T-S. 2003. On bringing more action into management accounting research: process considerations based on two constructive case studies. European Accounting Review 12 (2), 409-442.

Laitinen, M. & Nurmi, K.E. 2007. Aktiivinen kansalainen yrittäjänä. In P. Kyrö, H. Lehtonen & K. Ristimäki (Eds) Yrittäjyyskasvatuksen monia suuntia. Yrittäjyyskasvatuksen julkaisusarja 5/2007. Tampere: Tampereen yliopistopainos Oy-Juvenes Print, 78-100.

Lange, J.E., Mollov, A., Pearlmutter, M., Singh, S.& Bygrave, W.D. 2007. Pre-start up formal business plans and post-start-up performance: a study of 116 new ventures. Venture Capital 9 (4), 237-256.

Lindblom-Ylänne, S. & Nevgi, A. 2003. Yliopisto- ja korkeakouluopettajan käsikirja. Werner Söderström Osakeyhtiö: Helsinki.

Lukka, K. 2000. The key issues of applying the constructive approach to field research. In T. Reponen (Eds) Management expertise for the new millennium. In commemoration of the 50th anniversary of the Turku School of Economics and Business Administration Series A 1:2000. Turku: Publications of the Turku School of Economics and Business Administration.

Lukka, K. 2006. Konstruktiivinen tutkimusote: luonne, prosessi ja arviointi. In K. Rolin, M-L Kaakkuri-Knuuttila & E. Henttonen. Soveltava yhteiskuntatiede ja filosofia. Helsinki: Gaudeamus.

Lumpkin, G.T. & Lichtenstein, B.B. 2005. The role of organizational learning in the opportunity-recognition process. Entrepreneurship Theory & Practice 29 (4), 451-472.

Mair, J. 2002. Entrepreneurial behaviour in a large traditional firm: exploring key drivers. Research paper No 466, IESE, University of Navarra, Barcelona.

Marsick,V.J. 1990. Action learning and reflection in the workplace. In J. Mezirow and associates. Fostering critical reflection in adulthood. A guide to transformative and emancipatory learning. San Fransisco: Jossey-Bass Publishers, 23-46.

Martin, J. and Sugarman, J. 1999. The psychology of human possibility and constraint. Albany, NY: State University of New York Press.

McCarthyGallagher, J. & Reid, D.K. 2002. The learning theory of Piaget & Inhelder. Lincoln, NE: iUniverse.

Menzies, T.V. 2005. Entrepreneurship Education at Universities across Canada. In P. Kyrö & C. Carrier (Eds) The dynamics of learning entrepreneurship in a cross-cultural university context. Entrepreneurship Education Series. Hämeenlinna: University of Tampere, 286-308.

Merriam, S.B. 1988. Qualitative Research and Case Sudy Applications in Education (2nd ed.) San Fransisco: Jossey-Bass Inc.

Mezirow, J. and associates. 1990. Fostering critical reflection in adulthood. A guide to transformative and emancipatory learning. San Fransisco: Jossey-Bass Publishers.

Miettinen, R. 2000. The concept of experiental learning and John Dewey's theory of reflective thought and action. International Journal of Lifelong Education 19 (1), 54-72.

Ministry of Education and Culture (MINEDU). 2009. Guidelines for entrepreneurship education. Publications of Ministry of Education 2009: 9. http://www.minedu.fi/export/sites/default/OPM/Julkaisut/2009/liitteet/opm09.pdf. Last accessed 18.7.2012.

Mitchell, J.R. & Shepherd, D.A. 2010. To thine own self be true: images of self, images of opportunity, and entrepreneurial action. Journal of Business Venturing 25, 138-154.

Morris, M.H., Schindehutte, M. & LaForge, R.W. 2002. Entrepreneurial marketing: a construct for integrating emerging entrepreneurship and marketing perspectives. Journal of Marketing Theory and Practice 10 (4).

Mowrer, R.R. & Klein, S.B. 2001. Handbook of contemporary learning theories. Mahwah NJ: Lawrence Erlbaum Associates.

NIRAS Consultants, FORA & ECON Pöyry. 2008. Survey of Entrepreneurship Education in Higher Education in Europe. Study requested by European Commission.

Niiniluoto, I. 1997. Johdatus tieteenfilosofiaan. Käsitteen- ja teorianmuodostus. Helsinki: Otava.

Nummenmaa, A.R. & Lautamatti, L. 2005. Ryhmässä ja yhdessä-opiskelun työprosessin ohjaus. In A R. Nummenmaa, M. Lairio, V. Korhonen and S. Eerola (Eds) Ohjaus yliopiston oppimisympäristöissä. Tampere: Tampere University Press.

Ojanen, S. 2001. Ohjauksesta oivallukseen. Ohjausteorian kehittelyä (2nd ed.) Saarijärvi: Palmenia-kustannus.

Opetushallitus (OPM). 2012. Overview of the education system. http://oph.fi/english/education/overview_of_the_education_system. Last accessed 6.5.2012.

Paasio, K. & Nurmi, P. 2006. Yliopistolliset yrittäjyysopinnot Suomessa. In P. Kyrö & A. Ripatti (Eds) Yrittäjyyskasvatuksen uusia tuulia. Tampere: Tampereen yliopistopaino-Juvenes.

Patton, M.Q. 2002. Qualitative research & evaluation methods (3rd ed.) Thousand Oaks, CA: Sage Publications.

Pearce, C.L. & Conger, J.A. 2003. All those years ago: the historical underpinnings of shared leadership. In C.L. Pearce & J.A. Conger (Eds) Shared leadershp. Reframing the hows and whys of leadership. Thousands Oaks, CA: Sage Publications.

Pittaway, L. & Cope, J. 2007. Simulating entrepreneurial learning. Integrating experiential and collaborative approaches to learning. Management Learning 38 (2), 211-233.

Politis, D. 2005. The process of entrepreneurial learning: a conceptual framework. Entrepreneurship Theory &Practice 29 (4), 399-424.

Rae, D. 2003. Opportunity centred learning: an innovation in enterprise education. Education + Training 45 (8), 542-549.

Rae, D. 2005. Entrepreneurial learning: a narrative-based conceptual model. Journal of Small Business and Enterprise Development 12 (3), 323-335.

Rae, D. 2006. Entrepreneurial learning: a conceptual model framework for technology-based enterprise. Technology Analysis & Strategic Management 18 (1), 39-56.

Rae, D. 2007. Entrepreneurship-from opportunity to action. New York: Palgrave McMillan

Rae, D. 2010. Entrepreneurial learning: the challenge of the new era. Presentation. Valtakunnalliset yrittäjyyskasvatuspäivät. 30.9-1.10.2010. Turku, Finland.

Ramdsen, P. 2003. Learning to teach in higher education (2nd ed.) London: RoudledgeFalmer.

Rauste-von Wright, M., von Wright, J. & Soini,T. 2003. Oppiminen ja koulutus. Helsinki: WSOY.

Read, S., Dew, N., Sarasvathy, S.D., Song, M. & Wiltbank, R. 2009. Marketing under uncertainty: the logic of an effectual approach. Journal of Marketing 73, 1-18.

Remes, L. 2003. Yrittäjyyskasvatuksen kolme diskurssia. Jyväskylä studies in education, psychology, and social research. Dissertation. https://jyx.jyu.fi/dspace/bitstream/handle/123456789/13332/9513914267.pdf

Remes, L. & Hietanen, L. 2011. Yrittäjyyskasvatuksen käsitteen määrittelyä ja käytäntöjä yleissivistävän opettajakoulutuksen näkökulmasta. Konferenssijulkaisu. 6.-7.10. 2011, Lappeenranta.

Ristimäki, K. 2007. Yrittäjyyskasvatuksen osalliset. In P. Kyrö, H. Lehtonen & K. Ristimäki. Yrittäjyyskasvatuksen monia suuntia. Hämeenlinna: Tampereen yliopiston kauppakorkeakoulu.

Robson, C. 2002. Real world research (2nd ed.) Oxford: Blackwell Publishing.

Rojas-Drummond, S.M., Albarran, C.D. & Littleton, K.S. 2008. Collaboration, creativity, and co-construction of oral and written texts. Thinking Skills and Creativity 3, 177-191.

Sarasvathy, S. D. 2001. Causation and effectuation: toward a theoretical shift from economic inevitability to entrepreneurial contingency. Academy of Management Review 26 (2), 243-263.

Sarasvathy, S. D. & Dew, N. 2005. New market creation as transformation. Journal of Evolutionary Economics 15 (5), 533-565.

Sarasvathy, S.D., Venkataraman, S., Dew, N. & Velamuri, R. 2010. Three views of entrepreneurial opportunity. In Z. Acs (Eds) Hanbook of Entrepreneurship (2nd ed.) Boston: Kluver Academic Press, 77-93.

Schwenk, C.R. & Shrader, C.B. 1993. Effects of formal strategic planning on financial performance in small firms: a meta-analysis. Entrepreneurship Theory and Practice 17 (3),53-64.

Schön, D.A. 1987. Educating the reflective practitioner. San Fransisco: Jossey-Bass.

Scott, M.G., Rosa, P. & Klandt, H. 1998. Educating entrepreneurs for wealth creation. Aldershot, England: Ashgate Publishing Ltd, 1-14.

Scott-Young, C. & Samson, D. 2009. How team efficacy beliefs impact project performance: an empirical investigation of team potency in capital project in the process industries. World Academy of Science, Engineering and Technology 54, 955-960.

Seikkula-Leino, J., Ruskovaara, E., Ikavalko, M., Mattila, J. & Rytkölä, T. 2010. Promoting entrepreneurship education: the role of a teacher? Education + Training 52 (2), 117-127.

Shane, S. 2000. Prior knowledge and the discovery of entrepreneurial opportunities. Organization Science 11 (4), 448-469.

Shane, S. 2003. A general theory of entrepreneurship: the individual-opportunity nexus. Cheltenham, UK: Edvard Elgar Publishing.

Shane, S. & Venkataraman, S. 2000. The promise of entrepreneurship as a field of research. The Academy of Management Research 25 (1), 217-226.

Shulman, L.S. & Shulman, J.H. 2004. How and what teachers learn: a shifting perspective. Journal of Curriculum Studies 36 (2), 257-271.

Smith, B.R., Matthews, C.H. & Schenkel, M.T. 2009. Differences in entrepreneurial opportunities: the role of tacitness and codification in opportunity identification. Journal of Small Business Management 47 (1), 38-57.

Snow, R.E., Corno, L. & Jackson, D. 1996. Individual differences in affective and conative functions. In D.C. Berliner & R.C. Calfee (Eds) Handbook of Educational Psychology. New York: Simon & Schuster Macmillan, 243-310.

Stajkovic, A. D., Lee, D. & Nyberg, A. J. 2009. Collective efficacy, group potency, and group performance: meta-analyses of their relationships, and test of a mediation model. American Psychological Association 94 (3), 814-828. http://web.mac.com/astajkovic/Alex_Stajkovic/Publications_files/Stajkovic,%20Lee,%20%26%20Nyberg%20(2009).pdf Accessed 31.8.2011.

Stahl, G. 2003. Meaning and interpretation in collaboration. http://www.gerrystahl.net/cscl/papers/ch20.pdf. Last accessed 17.10.2012.

Stake, R. E. 1994. Case studies. In N.V. Gubta & Y.S. Lincoln (Eds) Handbook of Qualitative Research. Thousand Oaks, CA: Sage Publications.

Stake, R.E. 1995. The art of case study research. London: Sage Publications.

Stenholm, P., Heinonen, J. Kovalainen, A. & Pukkinen, T. Global Entrepreneurship Monitor. Finnish 2010 Report. Univeristy of Turku. Series A Research Reports A1/2011. http://www.tem.fi/files/27192/Turun_Kauppakorkeakoulun_Global_Entrepreneurship_Monitor_Finnish_2009_Report.pdf

Tang, J., Kacmar, K.M. & Busenitz, L. 2010. Entrepreneurial alertness in the pursuit of new opportunities. Journal of Business Venturing (article in press).

Taylor, D. W. & Thorpe, R. 2004. Entrepreneurial learning: a process of co-participation. Journal of Small Business and Enterprise Development 11(2), 203-211.

van der Sijde, P., Ridder, A., Blaauw, G. & Diensberg, C. 2008. Teaching entrepreneurship. Cases for education and training. Heidelberg: Physica-Verlag.

Vaso, J. 1998. Ammatillisen aikuiskoulutuksen laatu-konstruktiivinen tutkimus laadun arviointivälineen kehittämiseksi. Dissertation. Vammala: Vammalan kirjapaino oy.

Wilson, K. & Twaalfhoven, B. 2005. Breeding more gazelles: the role of European Universities. In P. Kyrö & C. Carrier (Eds) The dynamics of learning entrepreneurship in a cross-cultural university context. Entrepreneurship Education Series. Hämeenlinna: University of Tampere, 312-321.

Yin, R.K. 2011. Qualitative research from start to finish. London: The Guilford Press.

Young, J. E. & Sexton, D. L. 2003. What makes entrepreneurs learn and how do they do it? The Journal of Entrepreneruhsip 12 (2), 155-182.

Young, R. A. & Collin, A. 2004. Introduction: constructivism and social constructionism in the career field. Journal of Vocational Behavior 64, 373-388.

Yukl, G. 1998. How leaders influence organizational effectiveness. The Leadership Quaterly 19, 708-722.

Zaccaro, S.J. & Klimoski, R. 2002. The interface of leadership and team processes. Group & Organization Management 27 (1), 4-13.

Zaccaro, S. J., Rittman, A. L. & Marks, M. A. 2001. Team leadership. The Leadership Quaterly 12 (4), 451-483.

APPENDIX 1 Course outline

HAAGA-HELIA University of Applied Science/ Malmi Campus

27 August 2009

Course code: MAR2 LD002-6

Course title: International Marketing Strategy Planning and Implementation

Scope in credit points: 6 ECTS

Name of the teacher:: Maija Suonpää

Tel. 0404887149

Learning outcomes/Objectives:

When we talk about learning Mumford (1995) proposes that "learning has happened when people can demonstrate that they know something that they did not know before (insights, realizations as well as facts) and/or when they can do something they could not do before (skills)."

- We learn to be innovative (to seek novel and creative solutions to customer problems and needs)
- We learn to scan the environment for identifying trends and developments to find marketing opportunities
- We learn to plan customer solutions and experiences to create customer value
- We learn to prepare a marketing plan considering global context (goal setting, marketing mix decisions, profitability calculations etc.)
- We learn to implement the marketing plan in an authentic business situation (selling, negotiating, establishing relationships with customer and stakeholders)

Marketing themes

- generating creative service ideas for unmet customer needs
- customer intimacy, value co-creation
- design service concept- service offering, process, delivery and pricing
- design customer experience
- impact of service innovation to business profitability and business model
- selling, negotiating and persuading customers and stakeholders
- establishing and developing relationships and networks in marketing
- managing risks and resources in marketing networks

Study methods

- Project work in collaborative teams
- Individual learning diaries
- Individual and team learning contracts
- Class assignments
- Mini lectures
- Guest speaker
- Other methods generated in class (e.g. role plays)

Assessment

1. Project report in teams (feedback from a company, students and a teacher), 50% of final grade
2. Individual learning diary 50% of final grade
3. Individual and team learning contracts (pass/fail)
4. All class assignments and discussion sessions are obligatory and to be passed with satisfactory performance

Work load calculations

Total 6 x 27 hrs = 162 hrs per student

- Class participation including assignments – approximately 60 hrs
- Project work-80 hrs
- Individual learning diary- 20 hrs

Literature:

Schindehutte, M. Morris, M.H.and Pitt, L.F. 2008.Rethinking marketing. The entrepreneurial Imperative. London: Pearson Prentice Hall.

Grönroos, C. 2007. Service Management and Marketing. Customer Management in Service Competition. 3rd Ed.England: John Wiley &Sons Ltd.

Levinson, J.C. 1998. Guerilla Marketing: secrets for making big profits from your small business. New York: Houghton Mifflin Company. Library has other Guerilla Marketing books by Levinson which can be useful.

APPENDIX 2 Individual learning contract

Name:

I will improve my learning in the following marketing competence areas:

1.

2.

3.

4.

5.

What can I do to reach my learning goals?

What others can do to help me to reach my goal?

What can I do to others to help them reach their learning goals?

How can I prevent myself to reach my learning goals?

Upload this to Moodle by Monday 31.8.09

APPENDIX 3 Team learning contract

Names:

Date:

Discuss first each other's learning contracts and then set learning goals for the teamwork

Upload the learning contract to Moodle by the due date

Learning contract:

I. We will improve our learning in the following five most important areas:

1.

2.

3.

4.

5.

II. What can we do to reach our learning goals?

III. How can we prevent ourselves from reaching our learning goals?

IV. We agree that the following rules are followed by everyone in the team

1.

2.

3.

4. etc

V. Make decisions on team roles. What roles are needed and what are the tasks of each role? How to rotate the team roles if you decide to assign roles?

APPENDIX 4 Individual learning diary

According to Professor Ulla Suojanen (1992), "Reflective praxis is a way of action, where the actor, after having adopted the habit, consciously examines the bases, the quality and the result of her/his working process in order to continuously develop her/himself, her/his work and working environment."

Write your learning diary every week in a quiet place where you can fully reflect on your own *knowledge, skills and attitude* developments in the core marketing competence areas (Table 1).

When you start reflecting, collect your thoughts, opinions and judgements on the theories, activities, experiences and situations that contribute to your learning of core marketing competence. You can answer questions such as: What have you learnt in marketing? What do these marketing learning experiences mean to you? How did you contribute to these marketing learning experiences? How can you do things differently to improve yours and others' learning in marketing? Be *critical* toward learning practices, but provide *reasons* for your criticism. You can also illustrate your ideas and learning for example by including news items, comic strips, pictures, poems etc.

TABLE 4 Marketing competence areas

Competence areas	Knowledge Scale 1-5	Skills Scale 1-5	Attitude Scale 1-5
I can be innovative (to seek novel and creative solutions to customer problems and needs)			
I can scan the environment to identify trends and developments to find marketing opportunities			
I can plan customer solutions and experiences to create customer value			
I can make a marketing plan (marketing mix decisions, profitability calculations etc.)			
I can implement the marketing plan in an authentic business situation (selling, negotiating, establishing relationships with customers and stakeholders)			
I can take calculated risks (I can take risks that I can afford to loose, and I can use my network to leverage and share risks)			

Write at least one page in your learning diary every week. Indicate the week that you refer to when writing your diary. Write it in a Word document, 1,5 spacing, 1,5 margins, font size 12. Return it to Moodle.

APPENDIX 5 Project work reporting instructions

Instructions- You can find the project reporting guidelines below. The guidelines are modified from HH thesis guidelines. At the end of the project report, you can find a short description of the project presentation.

1. The cover (see thesis guide)

2. Abstract (see thesis guide)

The abstract provides a clear overview of your project, and as such describes the key contents of your project. The abstract must not contain source references. Never use the first person singular.

The abstract ends with a list of key words, usually 3–6 words that best describe the project topic and contents. Use commonly used reference or search terms as your key words.

3. Table of contents (see thesis guide)

4. Introduction
   The introduction has two primary tasks: to raise the reader's interest and to provide the reader with background information about your topic. Make your introduction interesting and concise. Your introduction has been successful if it provides a good understanding of what your project is about.

   The introduction explains the main objectives and secondary objectives of the project. It presents the key stakeholders involved in the project. It provides a description of key factors affecting the work's structure.

5. Description of the Project Idea
   The role of this part it to present the project idea in a sellable form. This part is your marketing material which is used in "selling" your idea to potential customers, partners and/other stakeholders. Make sure the concept meets the general requirements of an opportunity.

   In this part you can use pictures, flow charts etc. to describe the project idea. Write with good English. You do need to use an academic writing style in this part of the report.

6. Project Implementation
   In the project you have followed the opportunity centred learning

process introduced by Rae (2003;2007). As an attachment you can find the process description.

Each part of the process should be described with the level of detail required, i.e. that the reader understands what you did, how you did it, and what the result were.´

7. Assessment of the project
   The readers of your project, especially when there are organisations involved, are interested in your summary and conclusion. This section reviews the key results, and the conclusions that can be made from them. It also discusses the significance and reliability of the results, and their value with regard to both theory and practice.

   In addition, you will assess the overall project planning and implementation processes and think of how these processes could have been done differently and better if the same project were to be repeated.

8. Bibliography
   The project is based on your references. These include research studies, books, articles, interviews, the Internet, professional seminars, lectures, as well as reports produced by companies, associations or the public sector. You are to indicate all your sources both in the text proper and in the bibliography, which is to be placed at the end of your project. This allows the reader to check from where you have obtained the information you present. In addition, your sources allow the reader to determine the quality and reliability of your work.

9. Appendices (see thesis guide)

10. Writing references (see the thesis guide)

11. Layout (see thesis guide)

APPENDIX 6 A weak market testing with the experts in entrepreneurship education.

The first draft of a learning model was tested with nine experts in entrepreneurship education in April 2012. They were given a table of contents and the first draft of the constructed learning model (Figure 27) The purpose was to provide opportunity for these experts to comment on the construction itself and its functionality for team based entrepreneurship education.

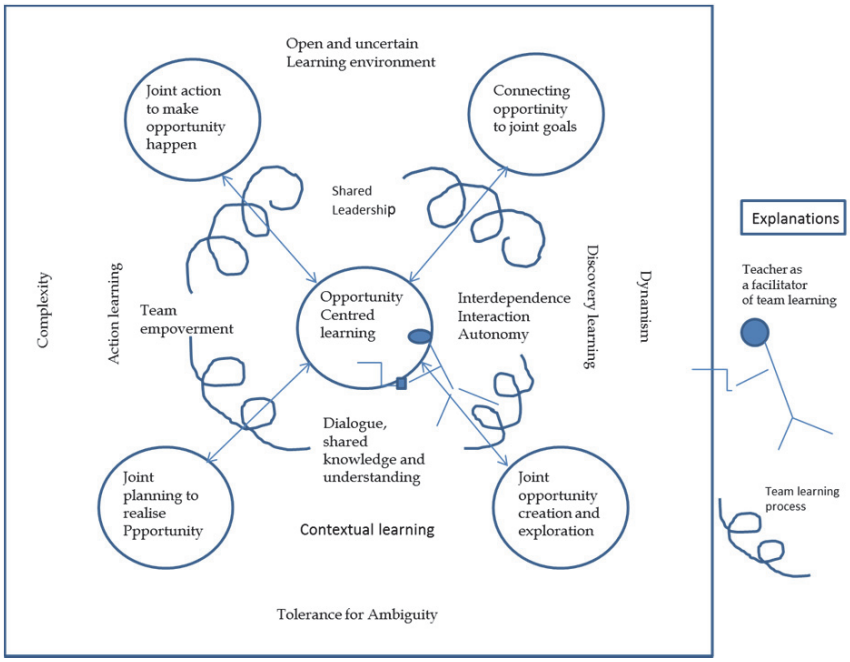

FIGURE 27 The first draft of an Opportunity Centred Collaborative Learning Model

In the testing phase, six experts provided written comments, whereas three experts provided verbal comments on the constructed learning model. As a general comment, many of the experts were interested in the contents and the usefulness of the model. Also some experts were unable to make detailed comments due to limited amount of information available. However, several comments focused on the following issues:

1. Comments on the structure of the learning model:
- the model appears logical
- theoretical and empirical research depends on the goal and tasks
- which comes first circle or activity in the model
- what are the meanings of loops in the model
- which comes first the goals or opportunity

- relationships between team oriented concepts (team empowerment and team leadership) vs. concepts of like interdependence, interaction vs. autonomy
- there are links between different learning environments associated with different types of learning which need to be defined
- how to differentiate different levels/forms of learning
- reflection on learning is important and could be shown in the model

2. Team work challenges and contents of the phases
- teams are not always capable of ' negotiated enterprise' and joint goals
- explicate creative thinking, working and innovation to an opportunity creation and exploration
- planning requires envisioning and anticipating future trends and scenarios
- joint action include 'reality testing' plans and innovation against actual customers, markets and scenarios

3. The importance of explicating research contributions in the report