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ENTREPRENEURSHIP EDUCATION IN THE LbD ACTION MODEL - REVIEW

Abstract

This article describes the development of entrepreneurship education based on the Learning by Developing (LbD) action model. The LbD action model, which has its roots in a pragmatic learning theory, offers a methodology for the development of practice - oriented entrepreneurial education. The article begins with the concept of entrepreneurship as a mind-set and a process related to active citizenship. It briefly describes the LbD model that integrates competence producing learning and an innovative research and development project. It then proceeds to introduce the didactic triangle of LbD in the entrepreneurial context, and concludes by introducing entrepreneurial learning, and by considering entrepreneurial education from LbD's point of view.

Key words: entrepreneurship education, Learning by Developing, entrepreneurial learning process

Introduction

'Europe faces a number of challenges that can only be met if it has innovative, well-educated, and entrepreneurial citizens' (EACEA 2012). The statement comes from a report, in which the state of entrepreneurship education, in different European countries, is compared. In Finland the objective to promote entrepreneurship at all the school levels as well as to improve the cooperation between education and work life is strengthened in the development plan for education and research for the years 2011 - 2016 following the one for 2007 - 2012 (Ministry of Education and Culture 2012).

Increasing unemployment in European countries, especially among young people, is one of the reasons why the development of entrepreneurship has become a focus in searching new solutions. Entrepreneurship is recognised by the Council as worthy of promotion because it is seen that entrepreneurial competence can provide benefits to society, even beyond their application to business activity (EDUC 27). Based on Audretsch's (2003) literature survey, it seems that

increasingly new and small firms, rather than large ones, are the major providers of new jobs. It furthermore shows that countries exhibiting a greater increase in entrepreneurship rates tended to exhibit greater subsequent decreases in unemployment rates.

The international survey has regarded entrepreneurship as a way of thinking and course of action (cf. the entrepreneurial way of thinking and an entrepreneurial approach) as well as capability as a cognitive concept (cf. entrepreneurial talents), which have clear business objectives in relation to the operating environment and are different from the general methods. (cf. Haynie, Shepherd, Mosakowski & Earley 2010, 217 – 229.) They are identified in different ways of defining the concept. Although entrepreneurship is often linked to creating commercial value, there is also a field which has become known as social entrepreneurship. It focuses on improving conditions or enabling change in the wider social sphere or in the direction of entrepreneurial sustainability (Bessant and Tidd 2011, 10 - 25) that can be taken into account in developing entrepreneurship education.

Enhancing entrepreneurship begins by focusing on the development of entrepreneurship education. We all go to school. It offers an environment where all the potential, future entrepreneurs are achieving new competences for their future lives. The world that is waiting for them is full of unexpected situations and constant changes, where new ways of action are needed as well as self-directedness and taking responsibility for one's own life.

Being aware of the challenges and expectations, mentioned above, the transnational project 'Young Entrepreneurship – Developing in Action (YEDAC)' (2013 – 2015) funded by the EU, aims for the creation of trans-European models for school teachers to support the development of their skills and methods in applying entrepreneurial learning to different teaching subjects and to different contexts. The member states in the project are: Denmark (coordinator), Austria, Finland, the Netherlands, Bulgaria and Spain. The project selected the Learning by Developing action model to be applied in supporting the development of entrepreneurship education, and Laurea as the work package leader in producing the entrepreneurial didactic model (www.yedac.eu/).

The Learning by Developing (LbD) action model has been developed at Laurea University of Applied Sciences (Laurea UAS) since the beginning of 2000. It was developed with respect to the challenges given to higher education institutes in Finland in the university law reforms. Higher education institutes needed to influence society and the surrounding regions. Cooperation with real working life led to change practices at Laurea, and research work (Raij 2007; 2013), focused on the conceptions of teachers concerning project-based learning, introduced the action model that was named as Learning by Developing, referring to future-oriented ways of action in a working life.

Based on successful outcomes LbD was nominated as the basic strategy at Laurea (Laurea Strategy 2007) and it became Laurea's trade mark. Laurea has become the most awarded UAS in Finland with five Centre of Excellence nominations from the Finnish Higher Education Evaluation Council. The LbD action model emphasises acting together in projects, substantial cooperation with working life experts, equality between partners, and curiosity in front of new challenges, risk taking abilities, creativity, and the development of competences that enable meeting an ever-changing world of work (Raij 2013; LbD Guide 2011). The choice to apply the LbD model in the YEDAC project led to consider entrepreneurship education from a pragmatic learning concept's point of view, as it is in the LbD model. The focus in this article is on two research questions:

1. How does entrepreneurship education fit the Learning by Developing action model?
2. How does LbD fit entrepreneurial learning?

These questions will be approached by firstly discussing the concept of entrepreneurship as an entrepreneurial mind-set and a process related to entrepreneurial learning. The discussion will continue by focusing on the LbD action model. The didactic triangle, with the corner elements in the LbD, will then be introduced and compared to an entrepreneurial learning context. The article will close by presenting a didactic model for entrepreneurship education, and with the answers to the research questions.

About entrepreneurship as a concept

The following definitions are aimed to describe the use of the concept of entrepreneurship in different meanings; focusing at first on the characteristics of an operator, and ending by looking at entrepreneurship related to active citizenship. A wide range of meanings, on the other hand, show how entrepreneurship has become important in finding solutions to societal challenges in European countries.

As Gartner (1989) pointed out, entrepreneurship research traditionally focused earlier more on entrepreneurial characteristics or activities carried out by the entrepreneur. The word entrepreneur originates from the French word, 'entreprendre', which means 'to undertake'. In a business context, it refers to starting a business, and at the same time it includes taking initiative and responsibility. On the one extreme, an entrepreneur is a person of very high aptitude who pioneers change, possessing characteristics found in only a very small fraction of the population. On the other extreme of definitions, anyone who wants to work for him or herself is considered to be an entrepreneur. (cf. Reijonen 2007, 37.)

In his own description, Gartner (1989) considers the concept of self-motivated entrepreneurship. According to him, it creates a rich basis for entrepreneurial education, as it is not so much focusing on characteristics of the operator, but on self-directed attitudes and behaviour. Johannisson and Olai-son (2007) continue that this kind of attitude and behaviour are created and used, empowered particularly by accountability and creativity, which, for example, contribute to the challenges of life in every area. Also, Kyrö's (1998) description of self-oriented entrepreneurship refers to an individual's overall entrepreneurial attitude and approach in all areas of life. It emphasises vision, the will and the ability to influence one's own future, as well as taking responsibility for one's own life and activities, such as learning or income.

The Green Paper Entrepreneurship in Europe (2003) widens the concept by highlighting that entrepreneurship is first and foremost a mind-set. 'It covers an individual's motivation and capacity, independently or within an organisation, to identify an opportunity and to pursue it in order to produce new value or economic success. It takes creativity or innovation to enter and compete in an existing market, to change or even to create a new market. To turn a business idea into success requires the ability to blend creativity or innovation with sound management and to adapt a business to optimise its development during all phases of its life cycle' that can be identified as entrepreneurial talents. Hisrich, Peters and Shepherd (2010) sum up the aspects of the entrepreneurial process as identifying and evaluating the opportunity, developing a business plan, resources required and management of the enterprise.

An entrepreneurial mind-set is the ability to rapidly sense, act and mobilize, even under uncertain conditions, as Ireland, Hitt and Sirmon (2003) have posited. The European Reference Framework of Key Competences for Lifelong Learning (2006) associates sense of initiative with entrepreneurship, and Bessant and Tidd (2011, 10 - 25) relate innovation and entrepreneurship by seeing innovation to be driven by entrepreneurship, which enables good ideas to become a reality.

The concept of active citizenship was introduced by the Council of Europe, Education for Democratic Citizenship. It includes participation in the community, including playing a part in the decisions and processes that affect a citizen,

particularly public policy and services. This requires knowledge and understanding of political, social and economic context of citizens' participation so that they can make informed decisions. An active citizen is able to challenge policies or actions and existing structures of the basis of principles such as equality, inclusiveness, diversity and social justice. It also requires acquiring knowledge, skills and attitudes, being able and willing to use them in decision making, and taking action individually and collectively. (Council of Europe 2004.) Active citizenship emphasises the role and competence of an actor, as well as activities and responsibilities. The key characteristics of active citizenship can be seen to guide the development of entrepreneurship education with its objectives and contents aiming to produce an entrepreneurial mind-set that is seen in citizens' innovative ways of action.

In conclusion, the concept of entrepreneurship has different meanings depending on the selected 'what and how' perspectives. (Figure 1.) This article considers entrepreneurship with respect to entrepreneurial education. The educational purpose is not to push every learner to become an entrepreneur but rather to support the development of an entrepreneurial mind-set, and offer resources for taking responsibility for building one's own future. Entrepreneurship is seen as a mind-set and as a process leading to identifying an opportunity and pursuing it in order to produce new value or economic success based on the principles such as equality, inclusiveness, diversity and social justice. An individual's ability to turn ideas into action demands not only creativity and innovativeness, but also competences as new ways of action.

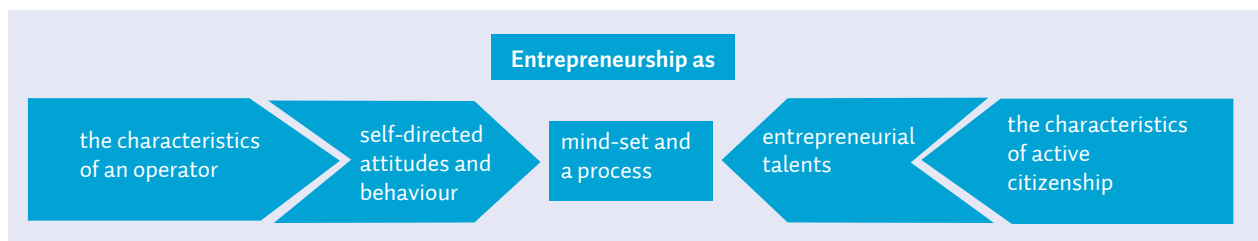


Figure 1. Entrepreneurship as a widening concept based on given meanings.

The entrepreneurial view in a learning process

In an entrepreneurial literature, a learning process is described based on the skills of an entrepreneur or looking at different phases in a development process. Applying Tötterman (2008) knowledge and skills in an entrepreneurial learning process are knowledge related to business skills, networking skills, marketing skills, administration skills and commercialising skills, as well as skills related to creativity, flexibility

and design. They enable the management of a process from identification or creation of venture ideas, decisions and actions related to development and execution of these ideas towards the realisations of a new business venture.

According to Hisrich et al (2010), there is an agreement that behind being an entrepreneur there is a kind of behaviour that includes; initiative taking, the organising and reorganising of social and economic mechanisms to bundle resources

in innovative ways, and the acceptance of risk, uncertainty, and/ or the potential for failure.

Bessant and Tidd (2011, 10 – 25) have described the phases of setting the entrepreneurial goals in the entrepreneurial context. The phases are; recognising an opportunity, finding

resources, developing a venture, and creating value. (Figure 2). Entrepreneurial goals and context through the availability or scarcity of resources, talent, opportunities, infrastructure and support are additionally profoundly affected by the education, training experience and aptitude of individuals as Bessant and Tidd (2011) have clarified.

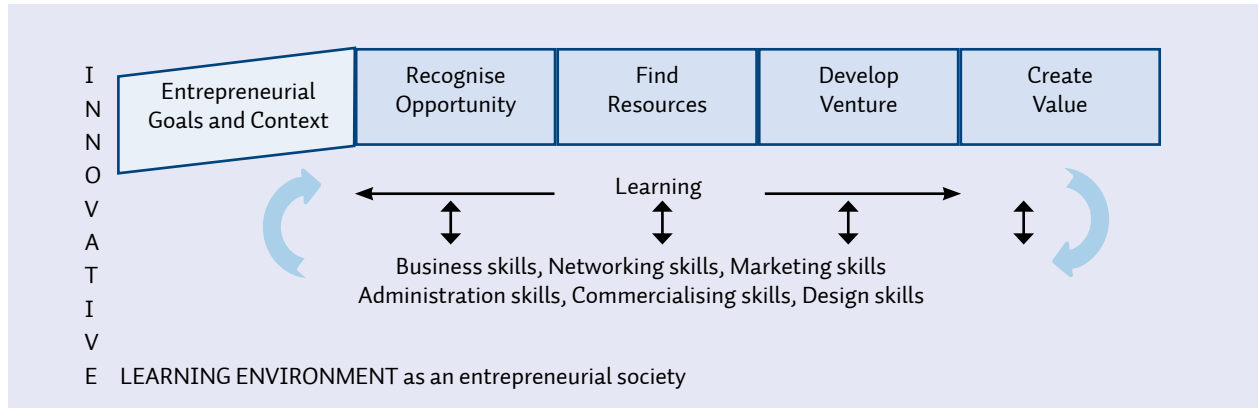


Figure 2. Aspects of the entrepreneurial process with entrepreneurial skills in an innovative learning environment (appl. Tötterman 2008 and Bessant & Tidd 2011)

The descriptions of entrepreneurial talents, as well as behaviours, can be used as basis in identifying entrepreneurial learning objectives that enable, the management of a process from identification or creation of venture ideas, and decisions and actions related to the development and execution of these ideas towards the realisations of new business venture. The identified talent – based competences aim to enhance influencing on one’s own future, and taking responsibility for one’s own life and activities.

A future entrepreneur is able;

- to recognize opportunities and take initiatives,
- to find and bundle resources,
- to build and maintain networks, to develop and market business ideas,
- to respond to challenges and find new solutions, to design,
- to manage activities and processes,
- to commercialise new innovations, and
- to make decisions and realise new business ventures.

The identified phases describe the main processes leading to value creation as entrepreneurial goals in the entrepreneurial context. They will be utilised in planning entrepreneurship education and creating an entrepreneurship education context that enables change and good ideas to become a reality.

In order to succeed in enhancing entrepreneurship, the participation of the whole society is involved. In the Council’s paper, it is clearly expressed as a recommendation. ‘Building

an entrepreneurial society involves everyone. Attitudes towards entrepreneurial initiative, and failure, must be made more positive. Crucial to achieving this are those on whom today’s and future entrepreneurs depend’. (COM 2003)

LbD action model in entrepreneurship education

The Learning by Developing (LbD) action model is based on a pragmatic learning concept as Taatila & Raij (2011) have shown. Referring to Ardalan (2008), in pragmatism, the world of work is seen as ever-changing and today’s truth might be different tomorrow. Learners need new ways of action to be able to meet future challenges, and find new solutions. The LbD action model, with its phases and characteristics, was identified by studying the changing practices at Laurea USA, since the three tasks (pedagogy, regional development, research and development), given in the USA law, were seen as an integrated whole. The integration led to develop networking and cooperation with a region resulting in many successful project works. It, in turn, led to see an authentic working life - related project as a learning environment (Raij 2013).

The LbD actions can also be seen as an integration of different types of knowledge: knowledge in theories and models, embedded in skills and abilities, moral knowledge, and experiential knowledge, as well as an integration of different learning components; knowing, understanding, acting and managing situations. This leads to describe learning

objectives as competences that include a knowledge base, skills, abilities to act, and abilities to manage situations, as well as to build a learning environment around projects, as different workshops, in which learners have the possibility to achieve tools in the forms of different types of knowledge. (Raij 2000; 2013.)

In entrepreneurship education, a connection with a real-life context is seen as meaningful, as it is also emphasised in guidelines for entrepreneurship education given by the Ministry of Education and Culture (2009). Learning competences include an integration of different types of knowledge connecting theory and practice, and the purpose is that a learner will be able to do something for his or her own future. Learning is seen as a tool for producing new habits of action that makes it possible to create a new business - like idea, to test it and discover the ways of implementing it in the future. This can be seen to facilitate the development of an entrepreneurial mind-set that supports the development of new ways of action as an active citizen. It happens through the interactions between learners, their teachers, and entrepreneurs as well as other stakeholders.

In LbD, acting together is emphasised. It means co-creation, co-operation, and co-design as equal partners, a process in which all the partners have different roles related to their expertise and own objectives. The various activities are supposed to change individuals and the environment. The following example is introduced to make it more concrete. The development of a marketing plan for Laurea's partner company was carried out in co-operation between business people, and Laurea's staff and students (P2P project 2014). In the project, based on careful competitor analyses, and home-page analyses, students produced the 'digi-marketing' plan by utilising social media and other internet possibilities, and managed to change marketing behaviour in the company by offering new approaches and ideas, as well as their own actions.

By applying LbD, the development of an entrepreneurial mind-set proceeds from experiences of how 'a business idea' is created, developed further, and tested with entrepreneurs. Entrepreneurial learning takes place by acting together in an entrepreneurial context. A starting point is a discovered idea for an inquiry. New, entrepreneurial words and concepts are used as means of interaction, communication and coordination. Learning proceeds based on experienced actions and their consequences. In entrepreneurial education, applying the LbD action model means that learning is seen as a tool, facilitating the achievement of new ways of action that are described as entrepreneurial learning competences. Subject matters are seen as different possibilities for establishing workshops, in which new tools can be achieved. The

following description is introduced as an example. A health care student had an idea of developing remote interpretation services for non-native health care clients by utilising either internet or mobile applications. She acquired the needed subject-specific knowledge and skills, and additionally business skills including financial management skills needed in the establishment of an enterprise. This project became her learning environment. Additionally, she participated in the Cambridge Venture Camp in the UK (established in 2007 between Laurea UAS and Cambridge University) with her business idea plan. In Cambridge, the student contacted many business experts as well as other business-oriented students and ended up finding a partner for her future enterprise. Her learning path led to the establishment of an enterprise where remote interpretation services can be bought today.

The LbD action model integrates competence-producing learning and an innovative R&D project. In entrepreneurship education, an innovative project, based on learners' own ideas, and derived from a real-life context, offers a possibility to achieve entrepreneurial competences and at the same time to produce something new.

The characteristics of the LbD are authenticity, partnership, trust, creativity and an investigative approach (Raij 2007). If we look at entrepreneurship education, we see that authenticity arises from real-life connected entrepreneurial projects that form the learning environment. Partnerships between learners, their teachers, entrepreneurs and other stakeholders are built on trust and on a commitment-inspiring agreement. Different subject matters add value to the development process of a project. The role of a teacher involves management and organisation carried out with different participants, project planning, and participation in different project stages. All this requires the learning culture, in which leadership supports and gives spaces for equal participation in the development of entrepreneurship education, as well as invites the involvement of the surrounding society.

Laurea offers bachelor level educational programmes in two different campuses that are introduced as examples of how to enhance learning entrepreneurship and business development, as well as creating new businesses through LbD: Peer - to - Peer (P2P), and Laurea Business Ventures (LBV). Learning objectives are described as action-related competences in entrepreneurship related subject areas. Learning always takes place in authentic development projects. The differences can be found in the focus areas. The P2P programme aims more to enhance entrepreneurship by getting students involved with business people and carrying out different developmental projects in and for companies.

The P2P students are supposed to find their own projects by selecting interesting project ideas offered by companies or Laurea staff. In LBV, which was established to emphasise the development of one's own business, business-development-related subject areas are highlighted. The LBV students are also supposed to find their own projects either, by creating their own business ideas or businesses, or by selling their competence to existing organisations. In the both programmes students define the project related learning objectives in cooperation with their teachers, and carry out their projects in different workshops, in which the idea is to facilitate their competence construction processes in relation to practical experiments and give to them tools for their project work. (Laurea 2014.)

Entrepreneurship education in LbD – oriented didactic triangle

This part is an attempt to draw the LbD oriented didactic triangle in the context of entrepreneurship education for enabling the discussion of the different roles a teacher, learner, and content have. Referring to Kansanen (1999, 2012), learners, teachers and content are the three entities that form the corners of the didactic triangle. As Kansanen points out, didactics are always connected with some context in the society. He emphasises, however, the relation between a teacher and a learner, and a learners' relation to the content is seen as the key to didactic understanding. (Figure 3.)

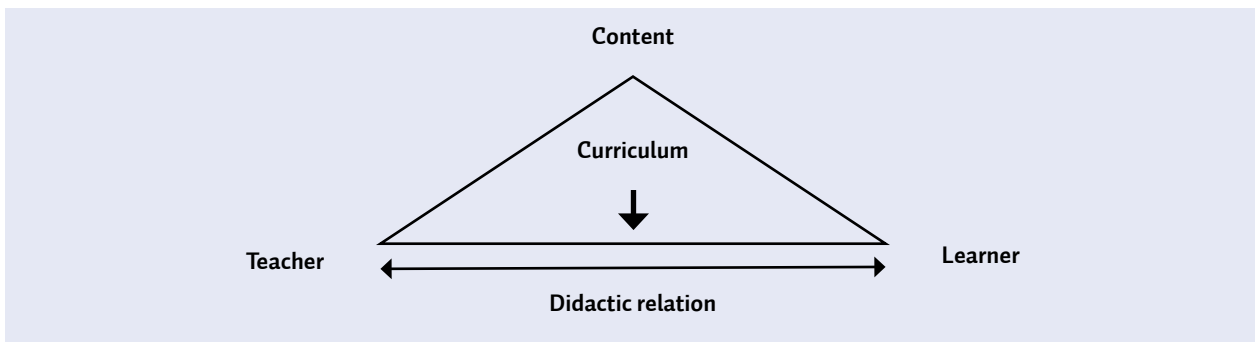


Figure 3. The didactic relation in the didactic triangle applying Kansanen (1999)

In a traditional learning situation, a teacher teaches with respect to the content (subject) and a learner learns by studying. The aims and learning objectives are described in a curriculum. The objective is achieved when a learner displays the gained knowledge often by giving right answers in an exam.

In LbD, in which a research and development project forms a learning environment, and new competences as new ways of action, as well as new innovations are the desired outcomes, the entities in the didactic model have different meanings. The partners in entrepreneurship education are students, teachers, entrepreneurs as working life representatives, and other stakeholders depending on the nature of a project.

Kallioinen (2011) writes about transformative teaching connected to the development of the LbD model. The traditional classroom teacher has no role in LbD (LbD Guide 2011). A transformative teacher is seen as a facilitator, co-actor, and a coach, representing his or her own expertise. Additionally, working life representatives, who share their experiences and utilise them in a project, are seen as co-actors, facilitators and coaches. The new roles of a transformative teacher are identified based on the vast practical experiences at Laurea since 2005: 1) as preparers and organisers of the LbD implementation process; 2) as implementers, and 3) as evaluators (LbD Guide 2011). Referring to the expectations

concerning active citizenship, teachers are responsible for giving space and offering opportunities to learners to become active citizens, who are able to make decisions and take actions individually and collectively by following principles such as equality, inclusiveness, diversity and social justice (c.f. Council of Europe 2004) these also are in line with Laurea's own values: sense of community, social responsibility and creativity.

Entrepreneurial projects differ from each other, and contents are derived from various subject matters. Thus, at the beginning of an LbD project, it is difficult to know what kind of learning will take place. We can say that LbD means team teaching, but the team consists of different co-actors and different experts. Since the entrepreneurial project has connections with authentic real - life situations, the learning outcomes are in line with the entrepreneurial goals, but the objectives can be achieved in many different ways as well as in many different contexts. This kind of project enables the integration of different competences. Transformative teaching offers possibilities to develop new ways of action as a teacher. As a preparer, a teacher builds networks and contacts entrepreneurs and other stakeholders in a region and develops cooperation. As an implementer, a teacher can act in a project as a developer or a researcher or facilitate students in different workshops to achieve new tools needed

in project work. As an evaluator, a teacher is responsible for the holistic assessment. It is seen as challenging, because students do not act and learn in the same contexts. Evaluation takes place in many different ways, and it can be seen as teamwork. In Laurea's LBV programme (p.9), evaluation is described as a reflective, development-oriented co-operational process between the students, staff mentors and working-life representatives (Laurea, 2010). The entrepreneur's feedback, peer feedback, the students' own self-evaluation as well as teachers' quantitative and qualitative assessments are all important elements in holistic evaluation. Two aims can be separated. First, the evaluation is focused on a business-like project as a process. Secondly, students' entrepreneurial competences are identified and credited by comparing them to the learning objectives described in curricula. (c.f. LbD Guide 2011.) Therefore, it is considered important that learning outcomes are described as concrete entrepreneurial competences addressing the development of an entrepreneurial mind-set, and learning objectives direct the planning of personal curricula, not single study units. Competence-oriented assessment includes students' knowledge base, skills, and abilities to act and manage situations set in learning objectives. By acting together in projects, students can show what they have really learned, and describe it, for example, in portfolios or learning diaries that are used at Laurea (c.f. LbD Guide 2011).

In LbD-based entrepreneurship education a student is in the central role. Giving space for individual creativeness and facilitating the integration of different talents can be seen to promote every learner's growth to find his or her own strengths and possibilities for a future life. In traditional classroom teaching, where there are tens of students with one teacher, the challenge might be too high. In LbD-based education, a student is seen as a partner, who develops his or her own idea in a project, achieves entrepreneurial competences at the same time, and produces new entrepreneurial innovations. Acting together in a real entrepreneurial project is seen as an enabler. Giving space for students does not mean leaving them alone, although some of the students once complained that 'they were thrown into the water without being asked if they can swim'. Based on systematically collected student feedback, it was concluded that the LbD model can significantly advance the general working-life readiness of the students, as well as their high-quality learning possibilities. It was enabled by cooperation and the development of partnerships, as well as students acting as partners. Additionally, LbD was seen to enhance the growth

in self-directed learning. (Kallioinen 2008.) In the second international LbD evaluation in 2009, the authors identified the following as the strengths of LbD: 'the growth of independent thought, self-confidence, a highly experiential atmosphere, a high degree of responsibility, early experiences of personal responsibility for results and duty to colleagues, early experiences of having people relying on you and experiences with equality.' LbD is also focused on ensuring that students can 'do things' rather than just be able to repeat answers in exams. (Vyakarnam, S. and Illes, K. (2009.) All these strengths can be seen in line with the objectives of active citizens (c.f. Council of Europe 2004) and as evidences of how the principles; equality, inclusiveness, diversity and social justice could be adopted through LbD. Furthermore, the annual number of start-ups (around 20) funded by Laurea students can be seen as evidences of the impacts of the LbD model.

A curriculum has an essential role in directing school work. The curriculum reform related to the development of LbD (Laurea 2007) was based on the identification of the holistic model of competence (Raij 2000) that has been used as a frame in Laurea's pedagogical strategy since 2002. In describing learning objectives subject-specific knowledge, as well as the experiences of different project participants, were taken into account. The outcomes describe what kind of competences a student has achieved and how they correspond to the expected requirements. Competences in curricula are related to different subject matters. In real-life-oriented R&D projects, different subject matters are needed as enablers to successfully carry out a project. In the latest report, in which entrepreneurship education at European schools was compared, it was noticed that entrepreneurial content was applied in very different subject matters (European Commission 2012). In the LbD projects, subject matters can vary depending on the nature of a project and the development process of a project. In an entrepreneurial curriculum, learning objectives are described as competences that are needed in enhancing entrepreneurship in a society, 'to change or even to create a new market' as it was highlighted in the Green Paper (2003).

In conclusion, the didactic triangle that is assumed to fit entrepreneurship education will be introduced by taking into account the pragmatic nature of the LbD action model, the application of the model and the different meanings of the corner entities described above (Figure 4).

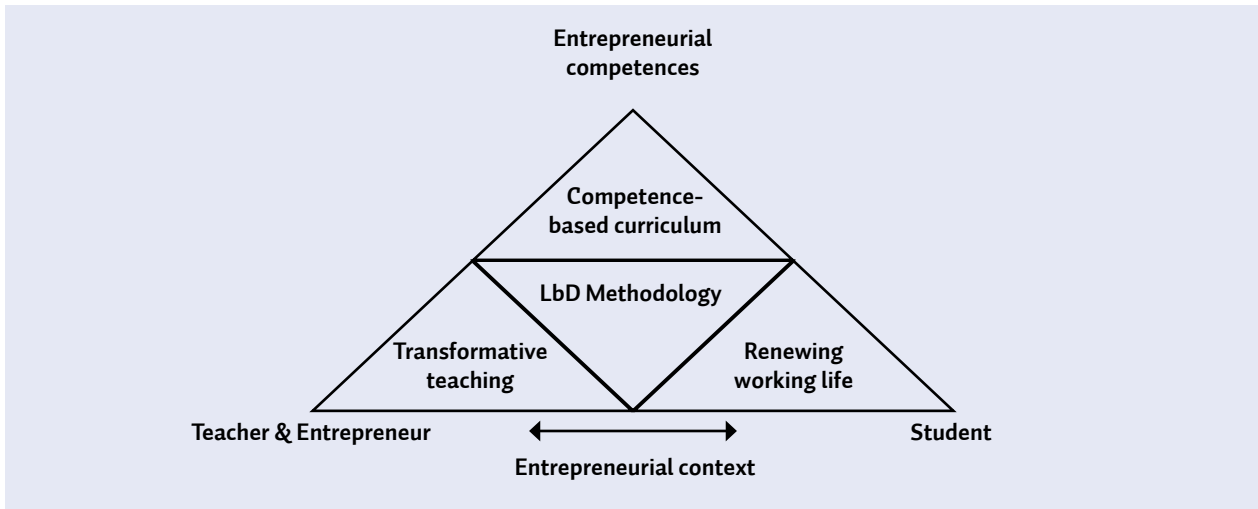


Figure 4. The entrepreneurial didactic triangle in the LbD action model.

The didactic triangle in LbD, in the entrepreneurship education, is located to the context where a region, with all the different enterprises and entrepreneurs as well as teachers, has an important role. School is of life, not for life, and learning takes place most favourably through models and applications that have genuine foundations in life as Dewey (1929, 39–40; 1934, 35–59) pointed out in his time. Considering the relations between the core entities, it can be summarised that a teacher has many different roles through transformative teaching for supporting and facilitating students in achieving entrepreneurial competences, while a student should achieve entrepreneurial competences for being able to renew working life as a developer.

Entrepreneurial learning activities in LbD

Referring to Bessant’s and Tidd’s (2011) description (p. 6), the phases of setting the entrepreneurial goals in the entrepreneurial context are; recognizing an opportunity and finding resources related to planning; developing a venture related to acting and creating value related to evaluating and developing. The stages of the LbD action model that were identified in the study (Raij 2007; 2013) follow each other in different orders depending on the needs of learners and the development processes of a project (Table 1).

Table 1. The stages of the LbD model

planning	identifying the phenomenon of the R&D project with its concepts and relationships between concepts, and defining a project with its activities
	reflecting on the meanings of previous research findings and solutions
	predictive recognition and description of processes related to the project, which makes possible both an abductive hypothesis (an initial presumption (based on prior clarifications, facts and discoveries) and a personal curriculum
acting	acquiring tools that are existing theories and models, subject – related concepts, and instruments for acting
	acting together, which encompasses the creation of problem-solving skills, leading to new habits of action;
evaluating	continuous evaluation of the project and personal learning process (the consequences of activities)
	reflecting on shared experiences and creating new meanings
	recognising and evaluating achieved competence
	assessing the impact of the project
developing	sharing, disseminating and productising the outcomes developing

The stages can be identified also as learning activities. Thus, in the entrepreneurial learning context, learning activities could be summarized in a following way (Table 2):

Table 2. Learning activities in entrepreneurship education

planning	identifying regional challenges
	creating new business-like ideas
	defining and developing a project
acting	reflecting on both earlier and new experiences
	acquiring entrepreneurial tools (theory knowledge, skills, values)
	acting together by co-creating and solving problems
evaluating	assessing learning and a project
developing	developing new ways of action by utilising the outcomes

In the above mentioned YEDAC project (p. 2) (www.yedac.eu), it was concluded, based on literature review and focus group discussions that are formed by experts from different partner countries, to describe entrepreneurial learning activities as in the following way: discovering new ideas (under the selected theme); defining a project; networking; acquiring entrepreneurial tools; co-creating and solving problems; experiencing, reflecting on consequences; and developing new ways of action that are in line with the LbD learning activities.

The activities described are suggested to be used as a guide for developing a process model for entrepreneurial learning. We can now utilise them as a basis for establishing entrepreneurial workshops to enable the achievements of learning objectives. The workshops are meant to facilitate learning and all the partners' work by structuring different phases in a project work in the following way:

Thematic workshops: Teachers, students, entrepreneurs and other stakeholders select firstly a theme that is connected to a region by taking into account regional challenges, and secondly plan different approaches based on subject matters that will be integrated.

Idea workshops: Constructed thematically. Students create and sell new ideas to be further developed in teams that

are formed around the most potential ideas. New ideas are tested, and the potential ones will be approved based on shared feedback and encouragement. Partners in idea workshops are mainly students, teachers and entrepreneurs.

Entrepreneurial tool workshops: Provide students with different tools (knowledge and skills, and values) needed in the development of selected business-like ideas as projects.

Project workshops: A project is defined and developed. They offer facilities, guidance, coaching, co-creation and acting together. Partners in project workshops are students, teachers, entrepreneurs, and other stakeholders. The project workshops additionally facilitate dissemination of outcomes as new ways of action, and new products.

Reflecting workshops: Enable reflection on the meanings of consequences in the development of projects. Consequences can be positive or negative but they all are valuable in offering learning experiences that lead to new ways of action.

Evaluation workshops: Enable the continuing evaluation of the projects developed around the ideas, learning processes, learning outcomes and products or services produced in the projects. Evaluation as a team includes self-evaluation, peer evaluation, and teachers' as well as entrepreneurs' evaluation. (Figure 5.)

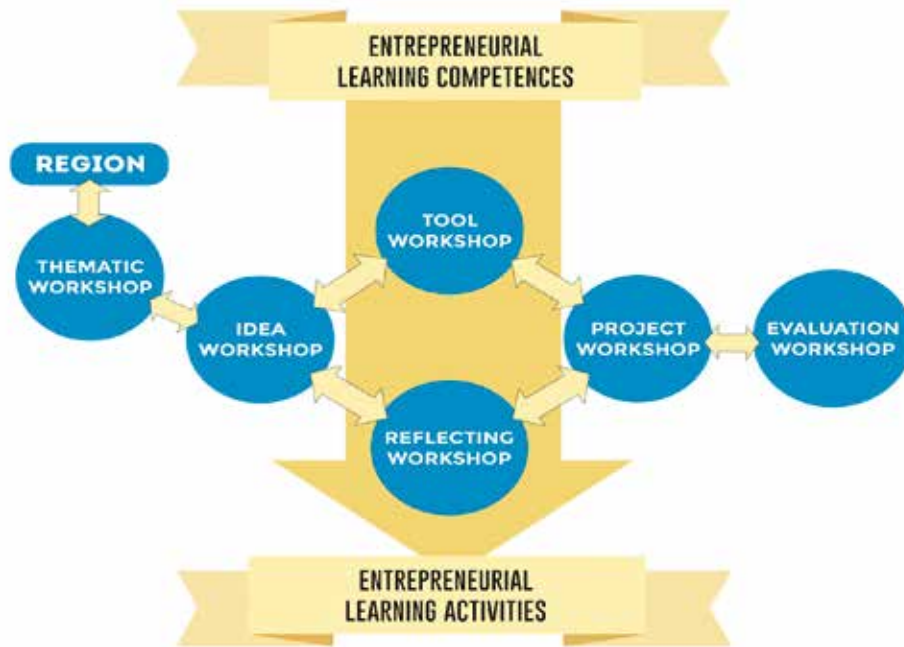


Figure 5. Entrepreneurial learning context.

Learning activities give their own meanings to workshops that provide students with knowledge, skills and values, and actions needed in working life. New entrepreneurial ways of action can be identified as learning competences.

The entrepreneurial way of learning in the LbD action model

If we accept that the educational goal is to have an effect on social practices, we should pay attention to the learning practices that are most effective in creating a social and personal acceptance of the subjects in a curriculum and the competence to use this information in practice (Fugate & Jefferson, 2001). We can now consider an entrepreneurial learning process from the perspective of the LbD way of learning. The starting point is creating an entrepreneurial idea, something new that learners are willing to develop further. Around good ideas, project teams are established, where teachers and entrepreneurs also have a role. Responsibilities

are divided and roles are named. Working plans are made together. Needed tools can be achieved in workshops that have been built around ideas. A workshop can be a lesson where new concepts and knowledge embedded in skills and abilities are dealt with, as well as language skills as part of networking skills or computer skills as part of administration skills, or it can be an enterprise where experiential knowledge is shared. Creativeness is asked from teachers when they plan how to facilitate and guide learners in presenting their ways of action in projects and achieved outcomes. Consequences as experiences are constantly reflected on and they are given meanings. Based on this, new ways of action are developed. Success is rewarded. Failure is seen as a valuable learning experience that leads to the development of new habits of action in front of new challenges. They are always competences as new ways of action that are assessed. The aforementioned entrepreneurial process with entrepreneurial skills (p. 5) can be introduced as the LbD way of learning in entrepreneurship education (Figure 6).

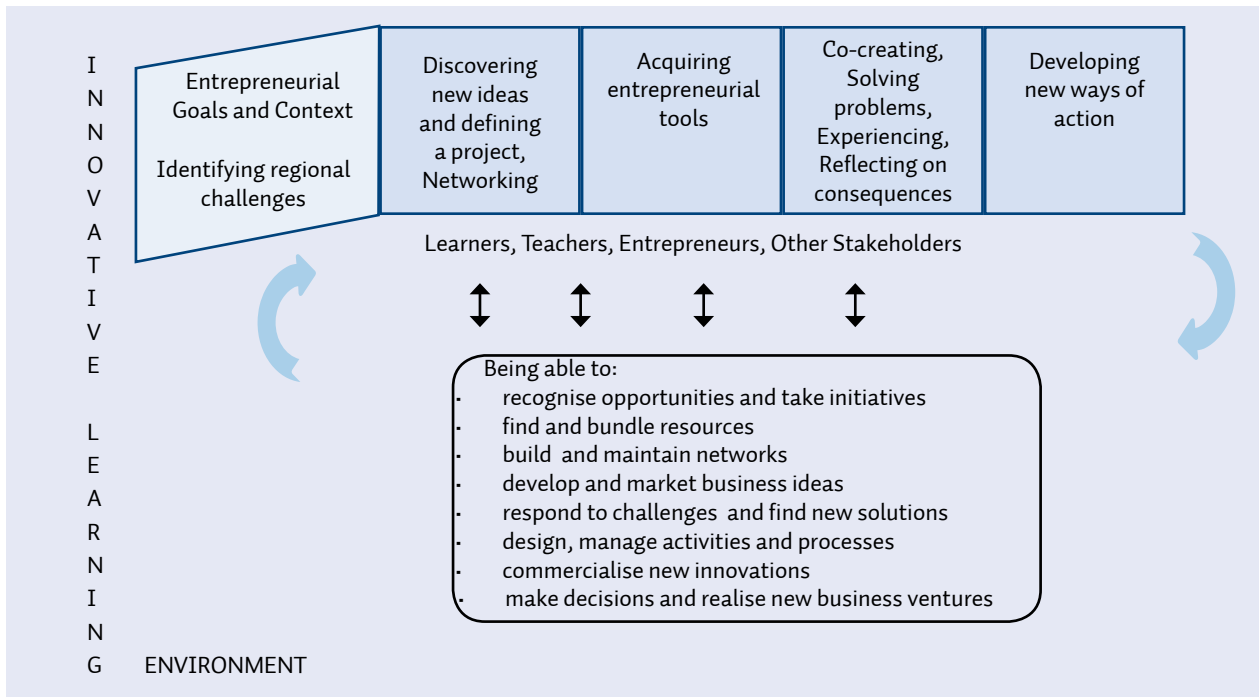


Figure 6. The LbD way of learning in an entrepreneurial context.

Setting entrepreneurial goals as learning objectives requires identifying the objectives as entrepreneurial competences that enable the development of active citizenship (p. 4). Creating an entrepreneurial learning context requires cooperation with enterprises and entrepreneurs as well as teachers with different subject-specific competences. School has to enter the real life context; designing, developing marketing plans as well as commercialising plans leading to value creation are the concrete phases in an entrepreneurial learning process.

A teacher's role as a facilitator is multi-faceted. It is not enough to be an expert in one's own subject, but teachers have new roles as preparers and organisers of the LbD implementation process, as implementers; and as evaluators. They are supposed to network, co-create, participate in project activities as facilitators and coaches, develop and investigate. Entrepreneurs can be seen as partners who share their experiential knowledge and competences and support learners in the development of project ideas. Enterprises are seen as workshops in an entrepreneurial learning environment. Based on Laurea's experiences, cooperation with enterprises has added value for all of the participants. Enterprises receive a constant stream of new ideas and innovations and future workforce. Cooperation between the public (school) and private organisations give space to the integration of different competences and make it possible to go forward. Similarly, enterprises offer a constant stream of interesting project ideas and subjects and share competences based on

their own experiences and the requirements of a job. (c.f. Taatila & Rajj, 2012.)

An entrepreneurial learning environment can be described first as different types of knowledge (knowledge written in theories and models, knowledge embedded in skills and abilities, moral knowledge and experiential knowledge), which demand the close cooperation of teachers, entrepreneur and other stakeholders. Secondly, a project around a discovered idea forms a learning environment. Furthermore a learning environment is seen as a physical and psychological space. Established workshops provide students with tools to accomplish different tasks in the development of entrepreneurial projects. As a psychological space, it requires a warm, respectful and open atmosphere, where everyone is seen as an individual and equal partner and where differences are seen as possibilities to find new innovative ideas. The concept of a learning environment in an entrepreneurial context does not work in a traditional classroom.

LbD became the main strategy at Laurea (Laurea strategy 2007). The decision presented the challenge to focus on the development of learning culture in such a way that it supports transformative teaching, participation, equality and constant interaction with a region. Participative leadership is emphasised, which includes 'the bottom up' way of developing work, and the integration of different competences. (c.f. Laurea strategy 2007).

Didactic model in entrepreneurship education

Considering entrepreneurship education as fitting in the LbD model, an attempt to introduce an entrepreneurial didactic model for learning entrepreneurship will be made. The model is built by utilising the YEDAC project work (www.yedac.eu/), in which literature review and focus group discussions (p.2) led to identify the central concepts of

entrepreneurship education as a learning culture, learning environment, learning activities and learning outcomes, with their properties that are in line with the characteristics of the LbD and the entrepreneurial talents described above. They are seen as a part of a whole that, together, describe the key entities of the didactic model. The actors in entrepreneurship education are; a teacher, a student, an entrepreneur, and other stakeholders. (Figure 7.)

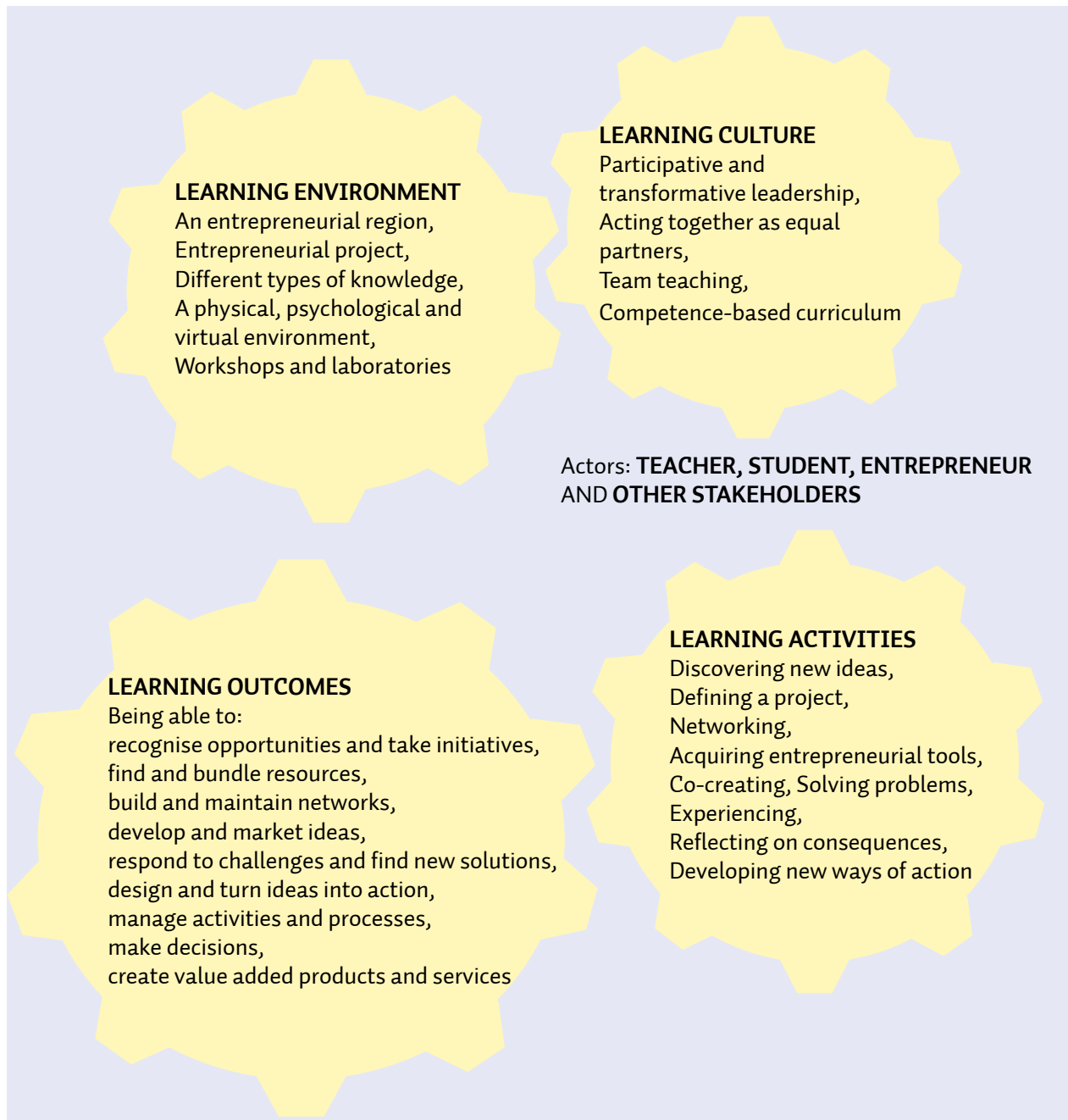


Figure 6. The LbD way of learning in an entrepreneurial context.

Conclusions

The choice, made in the transnational YEDAC - project, of applying the LbD action model in the development of entrepreneurship education led to the consideration of how LbD fits entrepreneurship education, and how entrepreneurial learning fits LbD.

In LbD, the connection with real working life is essential, and a real-life-oriented project forms a learning environment. In this respect, it seems to correspond with the objective 'to improve the cooperation between education and work life' (Ministry of Education and Culture 2012).

Entrepreneurship education is considered related to an entrepreneurial mind-set, which leads to the development of entrepreneurial competence (knowledge, skills, values, as well as new ways of action) or, in some cases, to the development of one's own business. The development of an entrepreneurial mind-set is seen as an enabler for acting as an active citizen, who takes part in decision making in a society, as well as takes responsibility for one's own life and activities. The LbD action model is introduced related to entrepreneurship education, and the LbD phases are followed in the identification of the process model for guiding the development of an entrepreneurial learning context, as well as for structuring participants' different learning paths. The present didactic triangle of the entrepreneurial LbD model is used as a frame for introducing the key actors and elements in entrepreneurship education. Finally, the identification of the central concepts of entrepreneurship education and their relationships led to the construction of the didactic model of entrepreneurship education in the LbD action model.

Based on the present discussion, it can be said that the LbD action model, with its properties seems to fit the development of entrepreneurship education. According to the experiences of LbD, co-operative authentic actions between learners, working life experts and sometimes users, who can be invited to participate, makes it possible to achieve new competences as new ways of action. Based on our experiences at Laurea, applying LbD in business education has led both to

the development of start-ups (student enterprises (n=18) and invention reports (n=8) in 2012), and to find a job in a company after graduation (Laurea statistics 2012).

Learning the process of discovery and self-sufficiency (Ardalan 2008) is evident in the LbD action model, which is in line with the goals of active citizenship. Based on them, LbD, which is built on partnership in entrepreneurship education, offers the possibility of playing a part in the decisions and processes that affect an individual and a community. Sharing experiences and conceptions with other students and teachers, entrepreneurs and other stakeholders are meant to facilitate making a positive difference. In this way, real dialectics with different opinions, conceptions, as well as activities are tested and the situational truths are discovered. Students seem to be able to take action individually and collectively as the students' strengths, identified 'as early experiences of personal responsibility for results and duty to colleagues and early experiences of having people relying on you and experiences with equality' (Vyakarnam & al 2009) show. The LbD way of learning has a real-life connection that opens school doors and invites everyone 'to be involved in building an entrepreneurial society'.

The key questions are directed to teacher education. How can teachers become more entrepreneurial even though they are used to seeing entrepreneurship education as a topic that concerns only business-related subject matters? To be successful, entrepreneurship should be seen as a mind-set and a process in all the studies and subject matters. Creating 'an entrepreneurial school' is a challenge, but it could respond to the argument that entrepreneurial competence can provide benefits to society, even beyond their application to business activity (EDUC 27). It should be taken into careful consideration when developing entrepreneurship education on all the school levels as the Finnish development plan also emphasises (Ministry of Education and Culture 2012). The graduates should be able 'to think in new ways, and have the courage to meet and adapt to the challenges facing them' (EURACE 2012) as it is in the LbD-based entrepreneurship education. ■

References

- Ardalan, K. (2008). The Philosophical Foundation of the Lecture-Versus-Case Controversy. Its Implications for course goals, objectives and contents, *International Journal of Social Economics*, 35:1/2, 15–34.
- Audretsch, D. B. (2002). Entrepreneurship: A survey of the literature
- Bessant, J. & Tidd, J. (2011). *Innovation and entrepreneurship*. John Wiley & Sons, Ltd, United Kingdom.
- Council of Europe (2001). *The concrete future objectives of education and training systems*.
- Council of the European Union, 5980/01 EDUC 23
- Council of Europe, Education for Democratic Citizenship 2004.
- Council of Europe. (2003). Green Paper Entrepreneurship in Europe.
- Dewey, J. (1929). *The Quest for Certainty: A study of the relation of knowledge in action*. New York, Minton, Balch, and Company.
- Dewey, J. (1934). *Art as Experience*. New York, Minton, Balch & Co.
- Dewey, J. (1963). *Experience and Education*. New York, Collier Books.
- EACEA. (2012). *Entrepreneurship Education at School in Europe*. National Strategies, Curricula and Learning Outcomes. EACEA P9 Eurydice and Policy Support.
- European Parliament and Council. (2006). The European Reference Framework of Key Competences for Lifelong Learning
- Finnish Law, Act 351/ 2003
- Fugate, D. L. & Jefferson, R.W. (2001). Preparing for Globalization: Do we need structural change for our academic programs? *Journal of Education for Business*, 76:3, pp. 160–166.
- Gartner, W. B. (1989). “Who is an entrepreneur?” is the wrong question. *Entrepreneurship Theory and Practice*, 13 (4), 47–68.
- Haynie, J.M., Shepherd, D., Mosakowski, E. & Earley, P.C. (2010). A situated metacognitive model of the entrepreneurial mind-set. *Journal of Business Venturing*, (25), 217–229.
- Hisrich, R., Peters, M. & Shepherd, A. (2010). *Entrepreneurship*. McGraw-Hill, New York.
- Ireland, R.D., Hitt, M.A. & Sirmon, D.G. (2003). A model of strategic entrepreneurship: the construct and its dimensions. *Journal of Management* (29), 963 – 990.
- Johannisson, B., & Olaison, L. (2007). The moment of truth: Reconstructing entrepreneurship and social capital in the eye of the storm. *Review of Social Economy*, 65 (1), 55 – 78.
- Kallioinen, O. (2011). Transformative Teaching and Learning by Developing. *Journal of Career and Technical Education JCTE*. Vol 26, Nr 2, Winter 2011. pp. 8-27.
- Kansanen, P. (1999). Teaching as Teaching-Studying-Learning Interaction. *Scandinavian Journal of Educational Research*, 43(1), 81-89.
- Kansanen, P., & Meri, M. (1999). *The Didactic relation in the teaching-studying-learning process*. In TNTEE Publications (Vol. 2, pp. 107 - 116).
- Kansanen, P. (2003). Studying – the realistic bridge between instruction and learning. An attempt to a conceptual whole of the teaching-studying-learning process. *Educational Studies*, 29, 221-232.
- Kyrö, P. (1998). *Yrittäjyyden tarinaa kertomassa*. Helsinki: WSOY.
- Laurea (2007). *Pedagogical Strategy*. Laurea University of Applied Sciences.
- Laurea (2008). Laurea statistics 2008.
- Laurea (2010) *Curriculum: Laurea Business Ventures*, PDF-document. Available at: <https://soleops.laurea.fi/opsnet/disp/en/welcome/nop?kieli=1&menuid=0>
- Laurea (2011). Laurea statistics.
- Laurea (2014). *Over viewing the P2P project*. <http://www.laurea.fi/fi/tikkurila/tiedotteet-ja-tapahtumat/Sivut/Asiakas-l%C3%A4ht%C3%B6isesti-internettiin---Kurkistus-P2P-projektiin.aspx>
- Ministry of Education and Culture . (2009). *Guidelines for entrepreneurship education, 2009*.
- Ministry of Education and Culture. (2012) *Education and Research 2011–2016, A development plan*. Reports of the Ministry of Education and Culture, Finland 2012:3.

Raij, K. (2000). *Toward A Profession. Clinical learning in a hospital environment as described by student nurses*. Research Report 166. Helsinki University: Department of Education.

Raij, K. (2007). *Learning by Developing*. Laurea Publications A58. Laurea University of Applied Sciences).

Raij, K. (2013). Learning by Developing in Higher Education. *Journal of Education Sciences*. Issue II, 6–21.

Reijonen, Helen. (2007). In a book R. Ikonen and E. Karttunen (eds.) *Kytkentöjä yrittäjyyskasvatukseen*. Pohjois-Karjalan ammattikorkeakoulun julkaisuja A: Tutkimuksia, 18.

Taatala, V. & Raij, K. (2012). Philosophical review of Pragmatism as a Basis for Learning by Developing Pedagogy. *Educational Philosophy and Theory*, Volume 44 (8), 831–844.

Vyakarnam, S. and Illes, K. (2009): *Second International Review of LbD-IfLbD is the Answer, what is the question?* Laurea University of Applied Sciences.

YEDAC project (2013 – 2015). www.yedac.eu/