

# Theoretical background

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## Introduction

The project Young Entrepreneurship – Developing in Action (YEDAC) aims to the creation of trans-European models for primary and secondary school teachers to support the development of their skills and methods in applying entrepreneurial learning to different teaching subjects and to different contexts. The project aims to find solutions for the challenge of increasing unemployment in European countries, especially among young people. Entrepreneurship is recognized 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). Entrepreneurial competences are, in this project, linked to the development of entrepreneurial education that is the main purpose of this project. The topic has been approached in different ways. In the first phase the development of a didactic entrepreneurial model is seen as one of the main targets that enables the achievement of the objectives in the project. It includes the shared perception of the topic of entrepreneurial education. The questions that have been set for clarifying the phenomenon are;

- What are the key concepts in entrepreneurial education ?
- How are the concepts related to each other?
- What are the key activities in planning and implementing entrepreneurial education?

This is an attempt to answer to the questions by looking at entrepreneurial education as a phenomenon from very different perspectives. The decision was made to approach the topic by deepening the selected themes related to the development of a didactic model by different YEDAC partners. The themes were: 'Acquiring the key competence of a sense of initiative and entrepreneurship' (Jaap van Lakerveld), 'Entrepreneurial education based on a pragmatic learning theory' (Katariina Raji), 'The entrepreneurial context driven from Klafki's didactic triangle' (Keld Skovmand), 'Didactic understanding of entrepreneurship education' (Helle Munkholm Davidsen), and 'Can Theories on Promoting Giftedness and Talent Support Promoting Entrepreneurship Education' (Christa Bauer). They all address to widening different perspectives in order to enable the finding of mutual understanding as well as the shared perception of the principles of a future model. Themes related discussions seen as focus group discussions (n= 26) as well as getting acquainted with the research literature were used in identifying the key concepts. The research questions will be approached by identifying the key concepts and their relationships derived from focus group discussions, and by ending up to the presentation of a process model for organizing and implementing entrepreneurial education, and a didactic model for developing entrepreneurial education.

## Entrepreneurial mind-set

In the Green Paper Entrepreneurship in Europe (2003) it is highlighted 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. In a nutshell 'entrepreneurship is the mind-set and process for creating and developing economic activity by blending risk-taking, creativity and/or innovation with sound management, within a new or an existing organisation.'

The European Reference Framework of Key Competences for Lifelong Learning associates sense of initiative with entrepreneurship. They both refer to an individual's ability to turn ideas into action. It means that creativity, innovation and risk-taking as well as the ability to plan and manage projects in order to achieve objectives are emphasized. The goal is to support individuals in their everyday lives at home, in a society and in a workplace in being aware of the context of their work and being able to seize opportunities, as it has been highlighted in the definition of sense of initiative and entrepreneurship key competence (European Parliament and Council 2006.)

What does entrepreneurial mindset mean? We can recognize it in the description of self-oriented entrepreneurship (e.g. Kyrö 1998), as well by referring to the key characteristics of active citizenship described by the European Council (2004). According to Kyrö self-oriented entrepreneurship refers to an individual's overall entrepreneurial attitude and approach in all areas of life. It emphasizes vision, the will and the ability to influence on one's own future, as well as taking responsibility for one's own life and activities, such as learning or income.

According to the Council's paper active citizenship includes participation in the community including playing 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.(cf. Council of Europe, Education for Democratic Citizenship 2004.)

Entrepreneurial as a mind-set and a process is considered with respect to active citizenship. As a learning objective in entrepreneurial education it requires giving space for individual learners to become creative, innovative, and empowered decision makers, who are able to direct their own lives, and identify new opportunities for going forward. It can be enabled by offering them a space to gather experiences, and give them meanings by doing and developing.

In entrepreneurial the development of education entrepreneurial mind-set can be seen to be related to teaching different subject matters, and in this way linked to the European Union's understanding of Lifelong Learning (European Commission 2007).

## About learning theories

When we look at the history of learning theories, the focus is on theories such as behaviourism, cognitivism, humanism, constructivism and social constructivism, and connectivism (similar to Vygotsky's 'zone of proximal development', an idea later transposed in to Engeström's [Activity theory](#)), and nowadays eclecticism (e.g. applying different theories in particular cases) as well as pragmatism that has been found again. The development chains in the eighties and the nineties open multiple environments and compare learning the ways how it was to nowadays learning, and how we learned to how we do it today. As an example learning in behaviourism was perceived as a synonym of being trained, in which rewards and reinforcements had an important role. In cognitivism learning was assumed to be basically an information processing process. Humanism emphasizes self-directed learning that is seen as needs motivated, adaptive learning, in which a learning goal is to become self-actualized with intrinsic motivation towards accomplishment. We can additionally recognize the direction named as critical pedagogy that is represented by Klafki's categorical theory of education. In this theory the building of categories are seen as enablers to understand both the physical and cultural world and life as such, and learning itself is considered as an experience. In constructionism the emphasis is on a learner's own knowledge construction as well as on an active role of a learner whereas in pragmatism acting together leading to the development of new ways of action is emphasized.

In entrepreneurial education a connection with a real life context is seen meaningful, 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. That is why in the YEDAC project we have selected the Learning by Developing action model (Raij 2007; 2013) to be applied that is based on a pragmatic learning theory (Tautila & Raij 2012). It also emphasizes the meaning of experience. Action-oriented pragmatism studies the link between action and truth, practice and theory. Based on Dewey's (1931, 31) definition pragmatism is 'the doctrine that reality possesses practical character'. An action oriented approach that strongly emphasizes having the ability to do something, of being prepared to engage with an ever changing world. Action requires thinking, and 'thinking is a mental activity: it is a doing' (Peters 2007, 356).

According to Dewey (see Learning by Doing) school is of life, not for life, and learning is seen as a tool for producing new habits of action through the continuous interactions between people and their environment. In entrepreneurial education learning is seen as a tool for producing new habits of action that makes it possible to create a new business idea, to test it and discover the ways of implementing it in the future. All this leads to the development of entrepreneurial mind-set that supports the development of new ways of

action as an active citizen. This all happens through the interactions between learners, their teachers, and entrepreneurs as well as other stakeholders.

A pragmatic learning concept emphasizes collaboration, the activities that change individuals and the environment, and the role of experiences and interaction. Learning is active and consists of restructuring and building experiences, of handling new situations and of acting in a purposeful way. The development of entrepreneurial mind-set proceeds from experiences of how 'a business idea' is created, developed further, and tested with entrepreneurs. Learning takes place by acting together. A starting point is a discovered idea for an inquiry. New words and concepts are used as means of interaction, communication and coordination. Learning proceeds based on experienced actions and their consequences. Experiencing and reflecting on consequences lead to form new beliefs and new habits of action, and to handling new situations and of acting in a purposeful way. 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 learning competences. Subject matters are seen as different possibilities for establishing workshops, in which new tools can be achieved.

The LbD action model integrates competence-producing learning and an innovative R&D project. In entrepreneurial education it means that establishing a project based on learners' own ideas derived from a real life context is seen as a learning environment. Learners, their teachers, entrepreneurs, and other stakeholders act together in different roles. Learners form new ways of action by working in projects that are in line with entrepreneurial learning competences. The characteristics of the LbD are authenticity, partnership, trust, creativity and an investigative approach (Raij 2007). Authenticity arises from the genuine working life projects that form the learning environment. Partnerships are built on trust and on a commitment-inspiring agreement. In entrepreneurial education it means that establishing a project based on learners' own ideas derived from a real life context is seen as a learning environment, in which a learner is allowed to create something new by using an investigative approach.

## Competence in the centre

The concept of competence was originally used in a business context as parallel to the concept of knowledge, which embraces factual knowledge, skill, experience, value judgements and social networks. It refers to a capacity to act in a situation. (Sveiby 1997). According to Rychen & Salganik (2000) we can identify cognitive, ethical, motivational, societal and functional competencies. A competence is defined as the holistic integration of different components as it is seen in Hodkinson's and Issitt's (1995) description of a competence as an integration of knowledge, understanding, values and skills. In line with them Cheetham and Chivers (1996) present a holistic model of competence as a

framework that comprises five dimensions that are cognitive competence, functional competence, personal competence, ethical competences and meta-competences. Additionally a holistic model of professional competence is identified as an integration of knowing, understanding, and acting and situation management. In terms of the various types of knowledge, the model is seen as an integrated whole that combines 1) knowledge written in theories and models, 2) knowledge embedded in skills and abilities, 3) moral knowledge and 4) experiential knowledge (gathered by acting and experiencing) (Raij 2000.)

In 2005 Delamare Le Deist and Winterton compared the approaches used in five different countries when defining competence. Based on their findings, they argue that a holistic typology is useful in understanding the combination of knowledge, skills and social competences that are required in particular occupations. They present a typology of competence, in which knowledge and understanding are captured by cognitive competence, skills are captured by functional competence and behavioural and attitudinal competences are captured by social competence. Additionally they describe meta-competence as being concerned with facilitating the acquisition of the other substantive competences.

In the YEDAC project the concept of competence has been highlighted as the combination of knowledge, skills, behaviours and attitudes that can also be found in the holistic models of competence mentioned above. In entrepreneurial education the competences have been identified as being able to take initiatives, communicate in different contexts, search and take opportunities, sell ideas, take risks and responsibility, turn ideas into action, and create value added products or services.

The above introduced LbD action model is identified as a competence oriented model that integrates competence-producing learning and an innovative R&D project. It means that the learning objectives are described as competences that refers to a competence based curriculum. The competences achieved in project works are compared to the leaning objectives described in a competence based curriculum in an evaluation process. Evaluation, in turn, demands more than only a given grade as a number or points, it includes the description of how well the competences have been achieved. Learners form new ways of action by working in projects that are in line with entrepreneurial learning competences. (e.g. Raij 2013).

## New roles in entrepreneurial education

In the LbD action model the role of a teacher is multi-faceted. A pragmatic learning concept does not have a place in traditional classroom teaching. A teacher has many roles depending on his or her own responsibilities within the LbD project. In a workshop where learners are seeking new tools, a teacher is responsible for transmitting the needed actions relevant to selected subject matters and the latest substance-specific knowledge in the forms of concepts, models and theories. In the projects work, a teacher acts as a facilitator and partner for learners and the developer and researcher central to the project's objective. The idea is to give space to learners and to facilitate their competence construction

processes in relation to practical experiments. The teacher develops tools together with the learners. Through all of the interactive processes, she is involved in assessing the achievements of learners' learning outcomes. Assessment is challenging because it has been understood and accepted that learners can learn and will do so in different ways with different contents. A teacher's role can be identified as follows: as preparer and organiser of the LbD implementation process; as an implementer; and as an evaluator. At the beginning of a new LbD project, one does not really know what kind of learning will take place 'wrong' as such, but they can be something unexpected. Therefore, it is important that learning outcomes are described as competences needed in a complex and ever-changing working life. (c. f. Taatila & Raij 2011; Raij 2013.)

The biggest change occurs with respect to a teacher's role. In the LbD, a learner is an equal partner, and building a partnership between learners at different levels of study, and entrepreneurs (in entrepreneurial education) as well as other stakeholders introduces new challenges for a teacher. Teachers encounter a number of development challenges in the LbD model. The traditional teaching role of distributing or processing information is inadequate within the context of a pragmatically-oriented school education. The key words are networking, co-developing, and co-producing creative innovations that are seen as learners' products. All in all teachers function as tutors, and partners as well as recognizers and acknowledgers of competence, developers and researchers in R&D projects, and supporters and mentors in workshops. (c. f. Taatila & Raij 2011; Raij 2013.)

We can additionally look at entrepreneurial education from a teacher's point of view by comparing two different entrepreneurial approaches; a narrow one and the broad one. The important elements are an independent acting subject, making your own business, and an autonomous and authentic way of being. In a teachers work entrepreneurial didactic takes into account an independent, acting subject, subject matters as potentiality, autonomous and authentic way of being and making your own business. This is in line with the basic assumptions of the LbD model, in which a learner is seen as an equal partner who is independent acting subject, subject matters as potentiality that have an important role in establishing workshops for the achievement of needed tools, and in which giving space for learners to develop their own competences in cooperation with the surrounding world are emphasized.

The most important in entrepreneurial education is a learner as it is in the LbD model. If we accept that every learner is gifted in his or her own way it is most important to be able to identify different kinds of giftedness. Modern theories on promoting giftedness and potential development start from some major assumptions. Giftedness is dynamic and it can be discovered and developed at any time in one's life. Both giftedness and potential are developed in interaction with relevant people around you, which means it is systemic. Environmental factors have an important influence including family and friends but schools still have an impact around. To develop your potential into performance non-cognitive personality factors like motivation, self-confidence, work discipline and deliberate practice

are necessary (Weilguny & Weissbuch 2011). We can agree that children (and adults alike) want to be seen in their talents and interests. Children could be helped to find out who they are and what they like doing by allowing them to choose learning matter according to their interests. Entrepreneurial education can be seen promoting every learner's giftedness by giving space for individual creativeness, and facilitating the integration of different talents.

Partnership in the LbD action model refers to cooperation among learners, teachers, entrepreneurs and other stakeholders, and it features mutual commitment. It is built on trust and is characterized by equality, and enables continuous interaction with the learning environment. Learners, their teachers, entrepreneurs, and other stakeholders act together in different roles. 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 transformative leadership supports and gives spaces for equal participation in the development of entrepreneurial education, as well as invites a surrounding society to join.

## The process model in entrepreneurial education

Bessant's and Tidd (2011) describe the phases of setting the entrepreneurial goals in the entrepreneurial context. They are; recognizing an opportunity, finding resources, developing a venture, and creating value. 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 have clarified.

The learning outcomes that have been identified in the YEDAC project, are firstly based on literature, and secondly on the conclusions driven from focus group discussions. As the following table (table 1) shows the comparisons between the learning outcomes of the YEDAC project and the phases described by Bessant & Tidd are to be found.

| The learning outcomes of the YEDAC project  | The phases of setting the entrepreneurial goals (Bessant et. al. 2011) |
|---|--|
| To take initiatives<br>To communicate in different contexts<br>To search and take opportunities | Recognizing an opportunity   |
| To sell ideas<br>To take risks and responsibility   | Finding resources  |
| To turn ideas into action   | Developing a venture   |
| To create value added products or services  | Creating value   |

Table 1. The comparison between the learning outcomes identified in the YEDAC project and the phases of setting the goals described by Bessant & al.

The development of a process model for entrepreneurial education is based on the study (Raij 2007; 2013) that describes all the phases leading to achieve new competences as new ways of action. in the LbD model.

The process includes;

- identifying the phenomenon of the R&D project with its concepts and relationships between concepts, 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;
- acquiring tools that are existing theories and models, subject related concepts, and instruments for acting;
- acting together, which encompasses the creation of new habits of action and problem-solving skills;
- continuous evaluation of the project and personal learning process (the consequences of activities);
- reflecting on shared experiences and creating new meanings,
- recognizing and evaluating achieved competence;
- assessing the impact of the project; and
- sharing, disseminating and productizing the outcomes

The activities leading to the achievement of the learning objectives in the LbD are in line with the learning activities identified in the YEDAC project. Applying the activities described above they can be categorized in entrepreneurial education as; the creation of new ideas leading to the development of a project, reflecting on earlier and new experiences, acquiring tools, acting together by co-operating and solving problems, assessing learning and a project, and developing new ways of action. The learning activities in the YEDAC project are identified as; discovering new ideas, defining a project, networking, acquiring entrepreneurial tools, co-creating and solving problems, experiencing, reflecting on consequences, and developing new ways of action. Assessment can be seen to be included in reflecting on experiences that lead to the development of new ways of action.

The process model that is ment to function as a tool in planing and implementing a project based learning in entrepreneurial education aims to clarify the activities that are needed for enabling the achievement of entrepreneurial competences. It has been built by identifying different workshops that are essential in an entrepreneurial learning process. The workshops have their bases on the identification of participants' activities that enable the achievement of entrepreneurial learning outcomes. (Figure 1.)

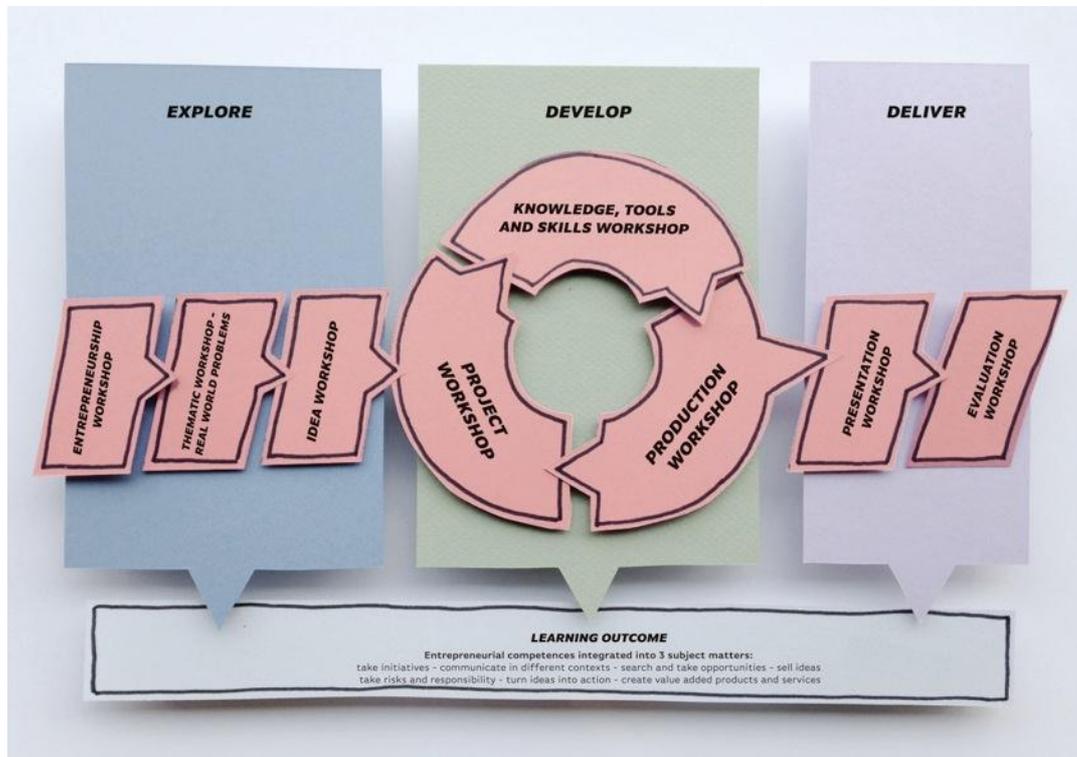


Figure 1. The process model in entrepreneurial education

The process model forms of different workshops that are identified based on learning activities

- Thematic workshops formed by teachers select a theme that is connected to the region and select different points of view based on subject matters.
- Idea workshops are constructed thematically. Partners are students, teachers and entrepreneurs. Students create and sell new ideas to be further developed in teams that are formed around the most potential ideas.
- Tool workshops are established for offering knowledge and skills needed in the development of selected ideas as projects.
- Project workshops enable the development of projects in teams by offering facilitates, guidance, coaching, co-creating and acting together. Partners are students, teachers and entrepreneurs.
- Reflecting workshops are established for reflecting on the meanings of consequences in the development of projects 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 includes self-evaluation, peer evaluation, and teachers' as well as entrepreneurs' evaluation

## Towards the didactic model in entrepreneurial education

In the development process leading to the description of the key concepts and their relationships all the essential elements that are needed in the entrepreneurial education were identified based firstly on theory knowledge, and secondly on focus group discussions. Theory knowledge described above was used as a basis in focus groups discussions. The collected knowledge related to understanding the concept of entrepreneurial as a mind-set and a process, the overview of learning theories, the concept of competence as an objective, and the new roles in entrepreneurial education led to identify the key concepts and their relationships in entrepreneurial education. In the first phase analysing and categorizing the material related to entrepreneurial mind-set as well as the concept of competence led to identify the learning competences in entrepreneurial education as being able to; take initiatives, communicate in different contexts, search and take opportunities, sell ideas, take risks and responsibility, turn ideas into action, and create value added products and services. Secondly discussion material followed by considering learning theories in the context of entrepreneurial education enabled to recognize learning activities that lead to the development of entrepreneurial competences as; discovering new ideas, defining a project, networking, acquiring entrepreneurial tools, co-creating, solving problems, experiencing, reflecting on consequences, and developing new ways of action. Thirdly it was possible to identify a learning environment from very different perspectives just as; an entrepreneurial region, different types of knowledge, entrepreneurial projects, a physical, psychological and virtual environment, workshops and laboratories, and enterprises. Furthermore it could be seen that the development of entrepreneurial education demands the development of an entrepreneurial culture with the characteristics of participative and transformative leadership, acting together that includes teachers as teams, entrepreneurs, and other stakeholders, as well as learners as equal partners. The key concepts introduce the needed elements that together enable the development of entrepreneurial education.

In the development of the didactic model of entrepreneurial education two phases can be identified. In the first phase the key concepts described above were identified. Secondly two different theoretical approaches were selected to be used in constructing the didactic model.

Balanced Scorecard was presented by Kaplan & Norton (1996; 2001) aiming to be applied in the development of a company's management system. Even the purpose in the development of the didactic model of entrepreneurial education differs from the original one, the idea of the Balanced Scorecard can be renewed in a new context. It addresses to perceiving the whole system as parts that together form a balanced model. The identified parts complete each other and fitting together enable the successful movement. The parts were named as a learning culture, learning activities, a learning environment as well as learning outcomes.

Another approach that was applied refers to the realistic evaluation (Pawson & Tilley 1997) that is used in the evaluation research suitable for the projects with clear objectives. In the realistic evaluation the creation of a programme theory is an essential starting point. It includes the basis and background for project activities as well as the core ideas of how to achieve the objectives of a project. A programme theory can be developed by applying different theories, working hypothesis as well as expert knowledge that will be clarified by empirical observations. In the development of the didactic model of entrepreneurial education, the draft of the didactic model constructed by applying theories, working hypothesis and expert knowledge is seen as a programme theory that will be clarified and further developed based on future national pilot experiences. The presented didactic model as a programme theory aims to describe what is needed, for whom and under what kind of circumstances. Figure 2.



Figure 2. The key concepts and their relationships in entrepreneurial education

The didactic model introduces the needed key concepts and their relationships that together enable the development of entrepreneurial education. The form of gears as a metaphor is meant to address to action that is only possible if all the gears move together.

## Conclusions

In discovering the key concepts and their relationships in entrepreneurial education, it was seen to be of importance to look at entrepreneurial education from several, science oriented, points of view by sharing the YEDAC partners' expertise and own interests. The selection of producing material for the basis of discussions was guided by the partners' own special interests that explain the different approaches. The most important were the focus group discussions based on the presented themes that enabled the further development of the project by producing material to be analysed and categorized. The conclusions made led to identify the concepts of learning culture, learning environment, learning activities and learning outcomes as the key concepts that are in interaction with each other in a constant development process. They should be taken into account when entrepreneurial education is developed and implemented. They additionally offer a platform for evaluation an entrepreneurial education as a whole. The challenge is the development of measurement tools that show the needed quality level in entrepreneurial education.

Entrepreneurial education as it is understood in the YEDAC project includes a new kind of learning culture, where a school is seen as a part of society, an where different experts as well as learners are seen to co-create and co-design as equal partners. The atmosphere is respectful, participative and encouraging allowing side paths as successful learning experiences. We call leadership transformative and participative as an opposite to the top bottom hierarchical leadership model. The concept of learning environment is many sided. It has to enable the achievement of different kind of tools for the development of new ways of action as competences described in a competence based curriculum, and the development of new innovations as the goals of a project. Entrepreneurial learning is not closed to a physical environment it can take place in a virtual environment as well. Methods are creative, however, guided by subject matters that open different kind of contents to look at a project and its development. Learning activities are supposed to lead to the achievement of learning outcomes described that are in line with the characteristics of active citizenship.

Identifying the key activities in planning and implementing entrepreneurial education led to the development of a process model whereas a didactic model roots from the identification of the key concepts and their relationships. The both models will be tested and validated in the forthcoming pilots that form a part of the YEDAC project.

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