

Entrepreneurship and Learning

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Abstract

Purpose

Entrepreneurship has become a central part of school curricula in most European countries, not only as a subject matter but also as a mind-set. If entrepreneurship is to be integrated into schools as a mind-set, we need to investigate entrepreneurship as a learning culture and as a learning philosophy. The main questions in this paper are: What can entrepreneurship tell us about learning, and what are the implications for schools?

Design/methodology/approach

This article presents an investigation of the potentials and challenges in regard to entrepreneurship education as a general learning philosophy and methodology. Different conceptions of entrepreneurship education are taken up to establish a distinction between entrepreneurship as a subject and as a general learning methodology.

Findings

The article describes similarities between entrepreneurship and learning. On that background the article suggests a model for entrepreneurship as an enterprising learning philosophy, but also as a methodology, which includes three levels: learning purposes (the formative and political purpose of education); learning design (method); and curriculum (selection of learning content).

Originality/value

The article contributes with a conceptual and theoretical understanding of entrepreneurial learning.

Key words: Entrepreneurship education, Learning philosophy, Learning methodology, Effectuation, Autonomy, Curriculum

Article classification: Conceptual paper

Entrepreneurship and Learning

Introduction

The global financial crisis has generated a heightened emphasis upon entrepreneurship education. Entrepreneurs are seen a key to economic growth and new jobs, wherefore entrepreneurship education is declared to be one of the main instruments for the support of entrepreneurship at all levels of the educational system - from basic school to higher education, (European Commission 2013).

Accordingly, entrepreneurship is affirmed as a central educational competence in the EU context, being included as one of the 8 key competences in the Europeans framework for lifelong learning (Education and Culture DG 2007). In extension entrepreneurship has become a mandatory part of school curricula in many European countries (European Commission 2012).

The question in this article thus becomes: What does this focus on entrepreneurship entail when seen from a general learning perspective, and especially in basic schools?

Entrepreneurship, considered as a specific subject, does not necessarily affect learning as such, but is merely a subject matter learned in parallel with other subject matters. If entrepreneurship, however, is integrated into learning to support the entrepreneurial mind-set of students and to create an entrepreneurial culture as such, the relationship between entrepreneurship and learning needs closer examination.

In the political framework (European Commission 2002, 2012, 2013, Education and Culture DG 2007) but also research (Gibb 1993, 2002, Hannon 2005, Neck and Greene 2011, Blenker et al 2012, Robinson and Blenker 2013) entrepreneurial education is generally understood as both the teaching of entrepreneurship - supporting the creation of businesses - and as a more general learning methodology, which supports general entrepreneurial competences. Hence, a rather specific and narrow understanding of entrepreneurship as business-making and a broader understanding of entrepreneurship as general competences seem to exist alongside each other.¹ It therefore also seems clear that entrepreneurship education is not merely associated with creation of businesses, but equally the creation of a new mind-set and culture.

For that reason it has become crucial to examine what entrepreneurship actually means in relation to the purpose of education, learning as such, and to learning of subject matters.

In the following, the article presents a theoretical and methodological investigation of learning in the light of entrepreneurship, which is lead by the question: what can entrepreneurship tell us about the nature and methodology of learning?² The article presents different conceptions of entrepreneurship education with special reference to Alan Gibb (1993) and Neck and Greene (2011). This is done in order to establish a conceptual ground for further development of entrepreneurship as a learning methodology. This presentation will serve as a point of departure by establishing a conceptual link between entrepreneurship and learning in terms of similarities between ownership of small businesses and learning. A further elaboration will focus on the learning implications of two generic aspects of entrepreneurship, namely 'effectuation' (Sarasvathy 2001) and 'autonomy' (Gelderen 2012). These two concepts are especially interesting from a learning perspective, because they, as will be shown, can be connected to two essential aspects of learning: the way we learn and the motivation to learn.

This approach does not imply a rejection of other concepts and generic aspects of entrepreneurship as relevant in a learning context (as for example self-efficacy (Bandura 1994) and the individual-opportunity nexus (Shane 2003)), which can easily be integrated into the entrepreneurial understanding of learning presented here. The methodological choice of concepts is explained by the potential they contain in a learning context, focusing on learning of subject matters. The hypothesis of this article is therefore that it is possible, based on effectuation and autonomy, to develop an entrepreneurial learning methodology, which can support learning of subject matters as such.

This general learning perspective is essential in a school context, because the purpose of schools is learning and not entrepreneurship exclusively - not even in the broad sense. If entrepreneurship education therefore is to be transformed into a general learning methodology, it must to be converted into a learning philosophy,³ which includes both learning of subject matters and the purposes of education (psychologically, socially, and democratically).

Being closely linked to a political agenda, entrepreneurship education entails several political aspects of education, which can be linked to the educational agenda as such. In the European framework for lifelong learning the main aim is to, "identify and define the key competences necessary for personal fulfilment, active citizenship, social cohesion and employability in a knowledge society" (2006:3). The OECD also emphasizes this socio-economic aspect of learning in the upcoming global knowledge society: "Global drivers are pushing all countries to give priority to generating high levels of knowledge and skills with attention increasingly to more demanding forms of "21st century competences"..."(2010:3). Entrepreneurship education should therefore not only be seen as part of a political crisis-agenda, but reflects positive needs of a global education agenda in relation to formation of future citizens and the development of new competences fit to the knowledge society in the 21st century.

In the following a learning philosophy based on entrepreneurship, which accounts for the socio-economical needs for education in the 21st century and for a learning methodology aiming at the learning of subject matters, will be presented.

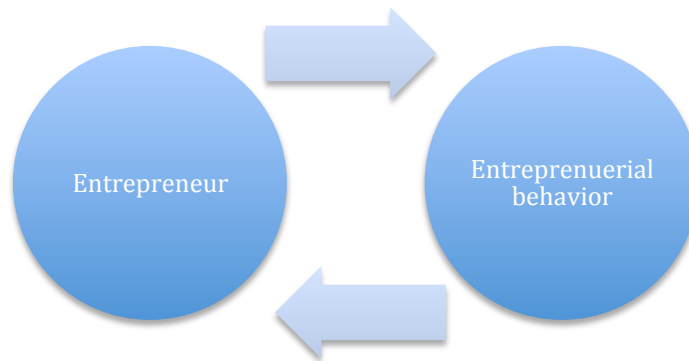
In order to define entrepreneurship education as a genuine learning methodology I will begin by examining entrepreneurship education in its narrow and in its broad sense hereby providing a more stable conceptual ground for clarification.

What is entrepreneurship education?

As mentioned above the general assumption of entrepreneurship education includes both learning entrepreneurship as a subject matter (knowledge of career opportunities and world of work, economic and financial literacy, knowledge of business organization and processes) and the development of more general competences related to skills (communication, presentation, and planning skills and teamwork) and attitudes (self-awareness, self-confidence, taking initiative, risk-taking, critical thinking, creativity and problem-solving), which lead to a general entrepreneurial behaviour.⁴

The relationship between entrepreneurship as a subject matter and entrepreneurship as general competences is based on the assumption that entrepreneurs have a special behaviour and character, which in itself will lead to becoming an entrepreneur:

Figure 1

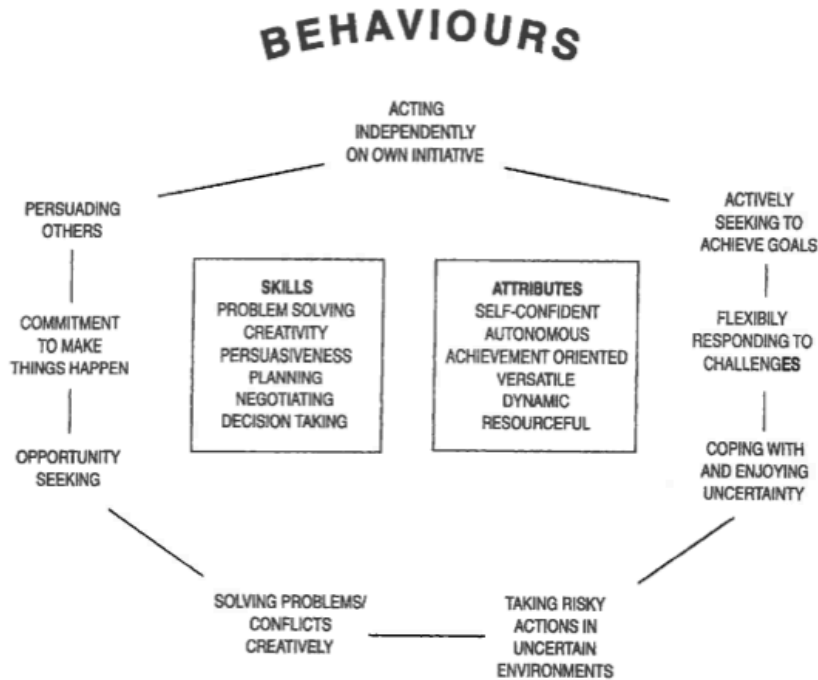


Due to this correlation, the duality of objectives for entrepreneurship education seem simple, coherent, and perhaps even straight forward, but the relation is however not that obvious, as Gibb (1993) points out. In the article: *The Enterprise Culture and Education: understating enterprise education and its links with small business, entrepreneurship and wider educational goals*, Gibb stresses that the relationship between entrepreneurship (small businesses⁵) and entrepreneurship education is confused by several factors.

One of the main factors according to Gibb, with reference to entrepreneurship education in UK, is that general entrepreneurship education is not introduced to stimulate business formation or development, but, “to help develop enterprising people and, in particular, to inculcate an attitude of self-reliance” (1993:13). The main goal and the basic nature of entrepreneurship education are therefore - following Gibb - to create ‘enterprising young people’. They are characterized by a number of indicators, which Gibb categorizes as behavioural elements and associated skills and attributes, summed up in his figure for ‘Enterprising Behaviour’, skills, and attributes:

Figure 2

**EXHIBIT 1
ENTERPRISING BEHAVIOURS, SKILLS AND ATTRIBUTES**



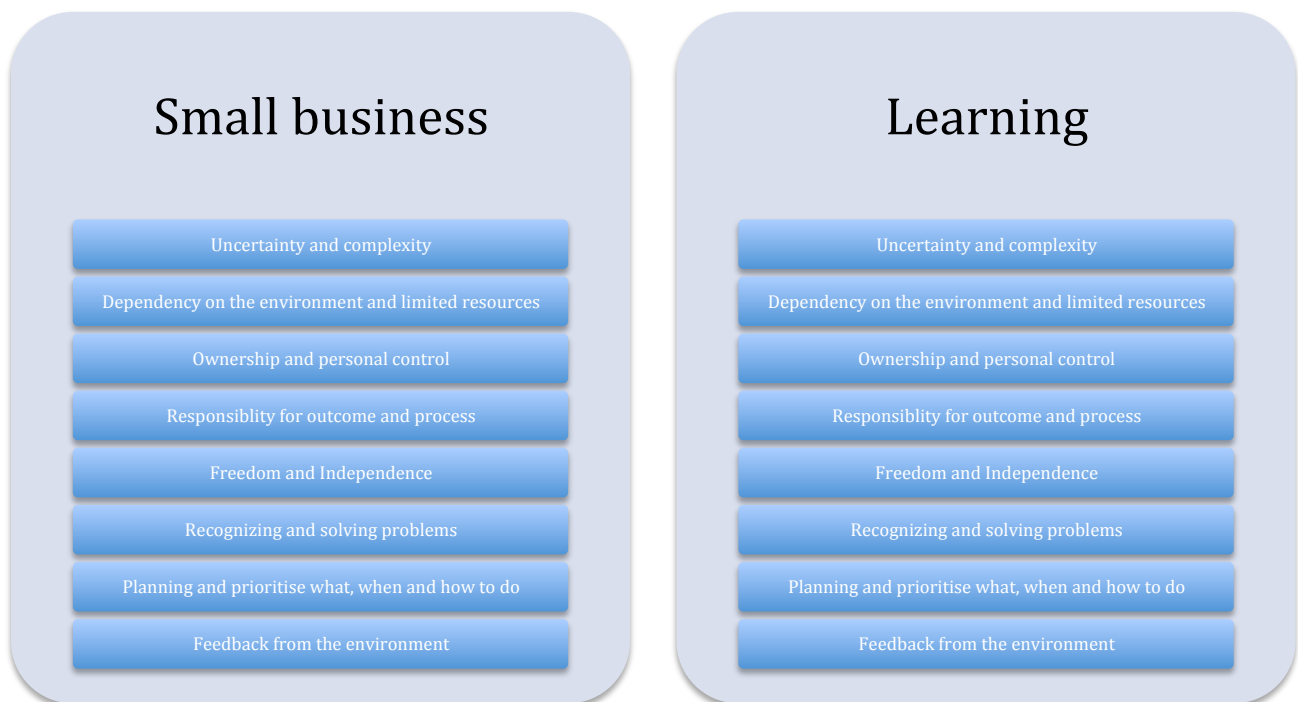
Although business making is not the main objective of entrepreneurship education it often includes ‘simulating making businesses’ (profit or non-profit) (Gibb 1993). This obviously confuses the picture of the aims for entrepreneurial education: business making is the frame, but not the aim.

The reason, business creation is used as a learning method in entrepreneurship education, is that small businesses contain organisational and personal elements, which correspond conceptually to learning environments and ‘learning behaviour’ (Gibb 1993: 16ff). Starting up a small business implies in brief uncertainty, complexity (in opposition to being employed), dependency on the environment, and limited resources, but also ownership and personal control. The combination of ownership and personal control leads to personal responsibility for the outcome and a commitment to see things work and to see things through. Furthermore, uncertainty forces a holistic task structure, where the owner of the business is obliged to recognize and solve problems, to decide for him- or herself how, and when to do things, but also to prioritize resources. Small businesses incorporate freedom and independency to take these decisions - though within the constraints and responses from the environment (customers, partners, affiliations etc.). Response or feedback from others – towards mistakes or as rewards – is furthermore a basic source of learning. Finally there is a close relation between private and professional life and a need to rely on personal networks for owners of small businesses.

All the characteristics for small business-ownership are relevant in a learning context. Learning new is a field of uncertainty and complexity. When a learner is confronted with a new area or subject, the field is unknown and therefore experienced as difficult and complicated. The learner is also dependent upon the resources and facilities he or she are offered (these are normally limited and restricted in different ways), but if the learner is allowed ownership and control over the learning process, he or she is able to take responsibility for the process and its outcome. This requires freedom to act (within limits) and an amount of independence in the management of the learning process, including recognizing and solving problems, decisions of how and when to do things, and to prioritize resources. Still the learner relies on feedback from the environment and is able to learn from mistakes. In the learning process the learner can furthermore use his or her personal resources and network.

The conceptual link between small business and learning is summed up in the following figure⁶:

Figure 3



Several implications can be drawn from the model above. Later I will return to the methodological potential in the similarities with regard to a specific learning design. For now the main conclusion to be made from Gibb's analyses of the conceptual similarity between entrepreneurship (as ownership of small businesses) and learning is that the correlation between the two is established, not by the subject, but by the method. Entrepreneurship education therefore is not simply similar to learning about small businesses; it is not a subject, but a general way of learning, which can be used in teaching all subjects'. Gibb therefore concludes that: "A clear distinction can be made between programmes aimed at developing enterprising behaviour, skills and attributes from those focused upon small business and entrepreneurship" (Gibb 1993:30).

Following Gibb and his analyses it is possible to identify entrepreneurship education as an enterprising way of learning. To make the distinction even more clear, it would be suitable to use the term 'enterprising' instead of entrepreneurial as Gibb does in his article, but also name the learning method 'enterprising education or learning' and the programs about entrepreneurship, 'entrepreneurship education or training':

- Entrepreneurship education as learning method: enterprising learning
- Entrepreneurship education as a subject: entrepreneurship training

For the moment mixing the two creates confusion, not least in regard to the further development of entrepreneurship education as a general learning method.

There are other interesting implications of the intervening conceptual relation of entrepreneurship education, which I will return to. However, when seen from a learning perspective, it is the enterprising aspects of entrepreneurship education and its didactic implications, which are relevant. They – and not learning about business planning, budgets etc. - contain the innovative potentiality for fostering new learning methods.

I will return to these aspects later. For now, however, it is possible to sum up the different understandings of entrepreneurship education with a typology made by Neck and Greene (2011), which clarifies the different conceptions of entrepreneurship education.

This typology points out 4 different phases in the development of entrepreneurship education, which also represent 4 understandings of entrepreneurship education. Entrepreneurship is either introduced in teaching as: a role model, a process, a mind-set, or a method⁷:

- Role model: here, the focus in the entrepreneurship education is on the entrepreneur and his or her personal traits. It seems based on the assumption that identification with the entrepreneur is stimulating that more students want to become entrepreneurs. It represents an evolutionary apprehension of entrepreneurship and focuses on description and identification.
- Process: this represents a need for a more systematic and analytical approach to the organisational level, which prevents the skills and knowledge that make venture creation possible, like business planning and financial forecasting. It represents a linear apprehension of entrepreneurship and focuses on prediction.
- Mind-set or the cognitive approach: focus here is also on the entrepreneur, but not so much on the behaviour or inherent traits, as on the acquired thinking: what is entrepreneurial thinking or cognition? Focus is on decision-making and the mental models characterising entrepreneurial thinking.
- Method: Focus here is on training techniques, which in practice and develop the skills and understanding of productive entrepreneurship. It stresses, "using, applying and acting", (Neck and Greene 2011:61), on doing and practicing. It uses real world venture creation, serious games, design-based learning, and reflective practice as some of the cornerstones in an experimental 'pedagogical portfolio'.

These different elements are to various extents parts of the type of entrepreneurship education that has entrepreneurship as a subject, and they make the diversity of the subject-oriented entrepreneurship education clear. This variety is not to be confused with the distinction above, between entrepreneurship education as a subject and as a learning method. In the article, Neck and Greene argue for teaching entrepreneurship as a method, which simulates the way entrepreneurs behave. By doing so they approach entrepreneurship education as enterprising learning, while still having entrepreneurship as venture creation as the main learning objective. Therefore, their definition of entrepreneurship education as a method does not represent 'enterprising learning' as a general learning methodology, which could be used in any subject matter.

The difference between entrepreneurship education as a method and as a learning methodology is that the first aims at creation ventures, while the latter aims at learning subject matters. Entrepreneurship education in Gibb's optic as 'enterprising learning' is thus defined here as a fifth way of understanding entrepreneurship education, which represents the most generalised apprehension covering learning as such - especially in basic schools, but also in higher education:

- Methodology: Focus here is on learning any subject in an entrepreneurial way. It is a general learning methodology that borrows its pedagogical goals, organisation, and processes from entrepreneurship theory, but also from entrepreneurship practice. .

In this learning perspective, entrepreneurship is not the subject, but a conceptual and theoretical frame. In the following this frame will be explored in regard to three levels of a general learning philosophy and methodology: the purpose of education, learning design, and curriculum (selection of content).

Educational purposes: Entrepreneurship, ontology and learning

In the definition of enterprising learning purposes we need to find an understanding of entrepreneurship that is sufficiently broad to cover a rather diverse cultural understanding of educational purposes. Basic school education has two purposes:

- An instrumental aim to acquire the basic knowledge (or literacies) of a culture. This basic knowledge is defined in the EU frameworks for lifelong learning (Education and Culture DG 2007) as competences within 3 subjects areas: mother tongue, foreign languages, mathematics, science and technology (mathematics, science and technology are grouped as one key competence)
- A cultural politically determined aim to fulfil social, economic, and cultural goals, varies from country to country. This function is related to the development of the future labour force, democratic citizenship, and social and cultural cohesion. In the EU frameworks for lifelong learning (Education and Culture DG 2007), these aspects are defined as 5 trans-disciplinary competences: digital competence, learning to learn, social and civic competences, sense of initiative and entrepreneurship, cultural awareness, and expression.

In addition to this, school education should support the personal and individual psychological development of children and young people.⁸ The latter has been vital in the North European countries and is incorporated in the German word 'Bildung', which in some aspects, but not all, can be translated to the English word 'general character formation'. To sum up, the educational purpose can therefore be seen as three folded: instrumental, cultural, and personal.

Entrepreneurship has always been linked to a political agenda in an educational context. Before the financial crises entrepreneurship was linked to the globalization discourse (Gibb 2002) and now 'the goodness of entrepreneurship' (Gibb 1993) is mainly dominated by an economic growth discourse. In both cases it has been associated with capitalism and commercialization, but also the danger of causing ideological conflict among teachers and perhaps even hostility (Gibb 1993, 2011). This attitude toward entrepreneurship is perhaps, needless to say, absent when entrepreneurship is labelled enterprising and aims at the personal development of the enterprising person (Gibb 1993). In any case, we need a concept that is not too ideologically biased and can cover the diversity and the basic purposes of education.⁹

There is an attempt to see entrepreneurship as a more general cultural phenomenon in Spinosa et al.'s: *Disclosing new worlds* (1997). Here entrepreneurship is viewed as a basic driver of cultural innovation, cultural changes, and even history, in the sense that the world or the understanding of the world is changed. In this perspective the authors make entrepreneurship the vehicle for a radical openness towards the discovery of new worlds. Their conception includes a potential generality, but it also seems to bow towards revolutionary developments stressing major historical changes, which also seems ideologically biased in a school context¹⁰. Blenker et al. (2012) have presented a more pragmatic interpretation of this radical paradigm though, which also represents a relevant and interesting effort to define entrepreneurship more broadly in a school context. With reference to Spinosa et al. and to Shane and Venkataraman's understanding of entrepreneurship as individual-opportunity nexus, Blenker et al. define entrepreneurship as an everyday practice where individual disclose disharmonies and turn them into opportunities.¹¹ As a consequence Blenker et al. mean that entrepreneurship education should be personalized in a way, which makes it possible for the learners to act on the disharmonies and opportunities in their particular contexts and environments (Blenker et al 2012: 418, 421).

Although this pragmatic and constructivist conception of entrepreneurship contains a broad understating, which point at entrepreneurship as an everyday activity, it still aims at exploiting specific opportunities with the purpose of creating businesses. This does not alter the fact that they, together with Spinosa et al., open an ontological ground for entrepreneurship.

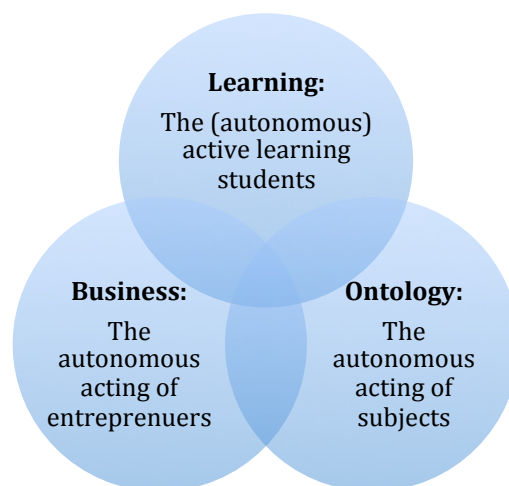
Inspired by the innovative ambition in the political conception (reaching out for innovation and new solutions in both business and in the social and cultural life), we here focus on the broadest and most basic conception of entrepreneurship, as the basic impulse to act, to take initiative, and to see opportunities. In this ontological perspective entrepreneurship is defined as a way of being and acting as such without any other purposes than to explore the world¹².

At a first glance it seems like a large step to go from entrepreneurship-as-business-making to a general way of being and acting. We are moving from a rather specific understanding to a very broad psychological, existential, and ontological understanding. At a second glance though the two ways of perceiving entrepreneurship reveals a common core, which can furthermore be used as a foundation for understanding entrepreneurship as learning

The specific understanding of entrepreneurship-as-business-making embeds an acting subject, the entrepreneur, and in the centre of the general ontological understanding of entrepreneurship, there is also an acting subject. Both ways of acting are characterised by autonomy and self-government. The subject is self-moving and follows its own ideas. So, essential for the two different understandings of entrepreneurship is an autonomously acting subject.¹³ This acting subject can both be the junction of the different understandings of entrepreneurship and serve as a ground for entrepreneurship as learning, since the acting subject is at the very centre of the learning process.

In constructivist (Vygotsky 1978) and pragmatic learning theories (Dewey 1938/1963) the learner must be actively involved in learning to construct his or her own understanding. Because the entrepreneurial perspective implies independence and autonomy this basic constructivist assumption will, in the entrepreneurial perspective, be developed into an even more active, self-governed, and autonomous subject. So the active autonomous subject can unify business, ontology, and learning:

Figure 4



The active subject does not only cover all three areas, it also brings a new understanding to them. Entrepreneurship as ontology includes therefore here a particular ontological view of the human being as independently acting, self-governed, and autonomous. This interpretation has political consequences, as mentioned above, but it also affects the learning subject, both in regard to educational purposes, methodology, and curriculum - especially because autonomy has become central.

The 'entrepreneurial subject' - understood as a self-governed and autonomous subject - provides a new way of thinking. It radicalises the cultural and personal purpose of education focusing on the development of entrepreneurial citizens or more generally enterprising citizens. In this way of thinking learning aims at the development of autonomy and the self-governed acting of independent students, both in a psychological, existential, economical, and democratic sense.

Taking Gibb's description of the conceptual similarities between ownership of small business and learning into account, the next step in the investigation of this enterprising learning philosophy is to explore by what means and to which extent the generic aspects of being an entrepreneur - effectuation and autonomy – can contribute to the understanding of the actively learning subject.

Seeing opportunities, autonomy and self-determination theory

Sarasvathy (2001) has examined the characteristics of entrepreneurs, the specificity of their actions and behaviours in creation of businesses, and suggests the ability to see opportunities as a central feature. Entrepreneurs are characterized by the ability to act upon the opportunities that are provided here and now. She calls this ability 'effectuation'. Effectuation is furthermore characterised as being 'means-driven' and opposed to being 'goal-oriented'. In real life entrepreneurs do not make business plans, strategies, or market analyses to guide their actions and choices. They do not perform rational and systematic planning. Instead they act spontaneously from the opportunities they see here and now and adapt their actions to the immediate responses they get - not to a business plan or strategy. They experiment and learn through a trial- and-error logic. They do not get involved in wild or blind transactions, but evaluate opportunities from an economic perspective, thus minimizing potential loss. They operate with acceptable losses. The entrepreneurial action can be described as a pragmatic rationality that focuses on what can be done, but it is also characterised by an innovative and creative approach to the opportunities that are given. Consequently, entrepreneurs operate from a potentiality of choices and actions. This is often neglected in a rational goal-oriented business understanding. The contrast between the two logics is interesting in a business perspective and in an economic and political perspective and even in an existential perspective, but it is particularly interesting from a learning perspective.

The difference between means-oriented and goal-oriented reveals two different conceptions of learning. If learning is considered a means, then subject matters are seen as a potentiality, as various possibilities for learning. Perceived as a goal, subject matters are seen as predefined learning outcomes, realisable in only one specific way. In the first case the students can find their own innovative ways of learning through the subject matter, being a field of possibilities realised in different ways. In the second case the students need to follow the teacher's instructions. They will be asked to reproduce a goal and will be unable to follow their own ideas thus profit from the learning potentiality in the individual meeting with the subject matter.

An entrepreneurial approach to learning will focus on the potentiality of the subject matter offered to the students and lets them follow their own learning paths and interests, thus supporting their active learning as well as their entrepreneurial behaviour. Focus upon the potentiality of subject matters will furthermore encourage another generic element in entrepreneurial behaviour: autonomy.

Entrepreneurs are not only characterised by being able to see opportunities, they are also characterised by valuing their autonomous being in the world. Marco van Gelderen (Gelderen 2012) points out that autonomy is a recurrent value in the investigation of entrepreneurs' motivations to make their own businesses. It is not primarily the prospect of economic profit that motivates them, but the ability to be able to make their own decisions and choices.

Gelderen connects this trait of entrepreneurship to a specific learning method, which directly supports autonomy, namely self-directed learning. Self-directed learning means that students set up their own learning goals. This, however, does not imply 'teacher-free' learning. Teachers are very important in self-directed learning, but they have a different task than in traditional teaching. Instead of teaching, they facilitate learning processes among students through a variety of means (Gelderen 2012, Reeve 2006):

- Building upon the student's goals, abilities, and preferences;
- Clarification of the relevance of learning activities;
- Openness to student feedback and criticism in regard to the relevance of the activity;
- Offering different opportunities;
- Encourage independent thinking;
- Allow students to find their own solutions;

Self-directed learning is not only characterized by what the teacher does, but also by what the teacher does not do (Reeve 2006). In self-directed learning the teacher reduces the use of control, monitoring, and interventions in student work through external motivation in the form of reward and punishment and internal motivation by imposing guilt and shame. Instead, the teacher tries to create a safe learning environment with room for error.

Self-directed learning is, as mentioned, not without direction or instruction from the teacher. Studies show that the students need the teacher's guidance even more, to find their own goals and potential, but also to create qualitatively good learning environments (Gelderen 2012).

The central element in the support of autonomy is not free choice, but relevance (Gelderen 2012, Assor et al 2002). It is therefore not essential that self-directed learning is self-governed in all respects. What matters is that it is relevant to the student and the quality of their learning.

Based on effectuation and autonomy an enterprising learning should therefore conform to the following constitutive elements:

- Subject matters as a field of possibilities (affects curriculum)
- Autonomy and self-directed learning (effects learning methodology)

Gelderen refers to a research area in educational psychology, which focuses on self-directed learning on the basis of *self-determination theory* (SDT). SDT is grounded in the assumption that people are "innately motivated to learn and develop, as long as the social environment provides for the person's basic psychological needs" (Gelderen 2012:713). In relation to students, this means that they are driven by internal needs and potentials for development, which the learning environment should interact with and support (Reeve 2006:226).

SDT assumes that inner needs are authentic in the sense that they come from the student's inherent potentials for development and from their personal needs for development, including their need to be related to others and to build up competences (Assor et al. 2002).

Research in SDT and self-directed learning is not as such related to entrepreneurship education, but it seems to be a particularly suitable theoretical foundation for anchoring entrepreneurship

education as Gelderen points out. This is because SDT and self-directed learning can be connected to both generic characteristics of entrepreneurship and to learning.

Linking entrepreneurship to the ability to realize one's own potential, SDT furthermore builds a coherent and consistent bridge between entrepreneurship in the economic sense (business making) and entrepreneurship in the ontological sense (autonomy).

Motivation and self-directed learning

Self-directed learning is not a simple concept. It confines itself to a nuanced understanding of the inner motivation for learning, which includes both the need for autonomy, for social relatedness and for competences. Gelderen defines the various inner motivations as follows (Gelderen 2012:713):

- Autonomy: "the need to feel a sense of full volition and "choicefulnesschoice fullness" regarding one's activities and goals, a feeling that emerges when action and goals are experienced as emanating from one's authentic self";
- Relatedness: "the need to feel closely related to other people";
- Competences: "the need to be effective in one's interactions with the environments and to feel that one is capable of mastering challenges";

Furthermore SDT operates with four types of extrinsic motivation that either promote or hinder the inner motivation going from external reward to personal identification with external demands (demands (Gelderen 2012:713). There are degrees of internalisation of the extrinsic motivation in form of self-regulatory behaviour, however, or in the form of integration between the internal motivation and external demands. However, studies show that learning quality is directly proportional to the degree of autonomy (Gelderen 2012:217).

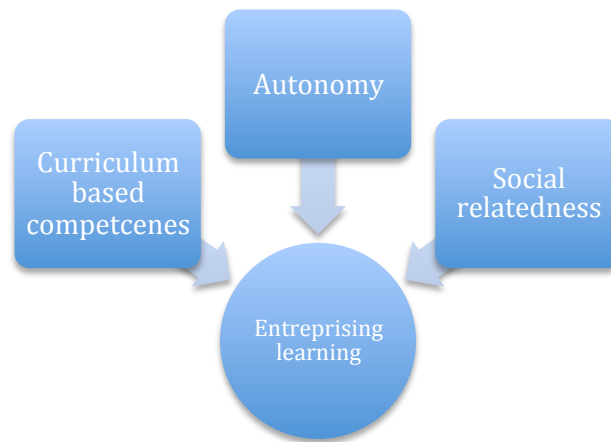
Nevertheless, it might be difficult for students to base their learning purely on autonomy (Gelderen 2012:713). This means that there is a need for both an external frame for the learning process that represents the extrinsic motivation in the form of curriculum and for teacher's guidance and instruction of the student. Furthermore the organisation of learning should support the social relatedness to others.

Methodologically the development of autonomy therefore requires a balance between

- Self-directed learning that is based on the students' autonomy;
- External curriculum, instruction and guidance;
- Organisational forms, which support cooperation, network, and feedback.

The purposes of enterprising learning implied in Gelderen's reference to SDT can be summed up by the following figure based on the three types of inner motivation described in the self-determination theory:

Figure 5



Outline of an enterprising learning philosophy and methodology

To sum up, the previous the constitutive components in an enterprising learning philosophy and methodology are: ontological understanding of entrepreneurship, effectuation, autonomy, and the conceptual similarity between ownership of small business and learning. These constitutive elements entail different educational consequences, where the ontological understanding of entrepreneurship as autonomous and independently acting lead to the educational purpose of developing enterprising citizens (vs. employees).

In return, the generic understanding of entrepreneurship as seeing opportunities in the given (effectuation) leads students to see subject matters (curriculum) as means and opportunities that can be realized in different ways (vs. reproduction of predefined curriculum set goals); the generic understanding of entrepreneurship as seeking autonomy this leads to self-directed learning and individual realization of curriculum through differentiated learning goals (vs. unified and standardized learning goals). The focus on autonomy as the primarily motivating factor in learning is furthermore linked (through SDT) to the understanding of autonomy as realized in a frame of externalized competence goals (curriculum) and social relatedness to others.

The conceptual similarity between ownership of small businesses and learning supports the relation between entrepreneurship, effectuation, autonomy, and self-directed learning through shared concepts as 'ownership and personal control', 'responsibility for outcome and process', 'freedom and independency' etc. The conceptual similarity between ownership of small business and learning furthermore explains the methodological relationship between project based learning and enterprising behaviour, because project based learning exactly allows 'ownership and personal control', 'responsibility for outcome and process', 'freedom and independency' etc. 'ownership etc.'

Finally, we can sum up these basic elements in an enterprising learning philosophy and methodology as including

- A learning philosophy describing the purposes of education:
 - The development of enterprising and autonomous citizens
- A learning methodology describing
 - Principles for curriculum (selecting subject content)
 - Differentiated learning goals
 - Learning design
 - Self-directed learning and project based methodology

The enterprising learning philosophy and methodology is consequently based on the development of enterprising and autonomous citizens through differentiated learning goals, self-directed learning and project based methodology. It can be realized in different ways but in the following I will argue how it can be operationalized in a traditional school system.

The enterprising learning philosophy and methodology however not only aims at developing an enterprising behaviour. It is first and foremost a learning methodology, meaning a way to learn subject matters and to learn them better. Measuring the effects of autonomy supported by self-directed learning show that it increases commitment, work effort, perseverance, self-control, flexibility, creativity, concentration, and achievement of personal goals and well-being (Gelderen 2012). The hypothesis here is furthermore that, if we allow children to select individual learning goals that support their autonomy, they will learn more and on a qualitatively deeper level, because they taking ownership and responsibility for their own learning, and because they are allowed to follow the learning opportunities they see in the subject matters. This of course needs to be tested, but it seems to be a hypothesis worth testing.

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¹This duality is very clearly stated in an early report about entrepreneurship education from the European Commission (European Commission 2002:15): “There was in the Working Group a general recognition of the importance of including two different elements or concepts within the definition of entrepreneurship teaching:

- A broader concept of education for entrepreneurial attitudes and skills, which involves developing certain personal qualities and is not directly focused on the creation of new businesses; and,
- A more specific concept of training in how to create a business.”

² Acknowledgement taken out due to review process.

³ In a North-European context the terms ‘didactic’ and ‘pedagogic’ denote questions about the purpose, goal and content of education. These terms are not well-known in an English-speaking context. Therefore learning philosophy is used here instead of ‘didactic’ and ‘pedagogic’. This means that the term ‘learning philosophy’ refer to basic questions about the reasons and purposes of education.

⁴ The elements listed here are borrowed from the report *Entrepreneurship education in schools in Europe* (European Commission 2012:21). They include most of what is mentioned as knowledge, skills, and attitudes in the description of the key competence ‘Sense of initiative and entrepreneurship’ in the framework for Lifelong Learning (Education and Culture DG 2007). The elements mentioned are furthermore the elements that the report documents (European Commission 2012) are part of the entrepreneurship education in primary and secondary schools in the European countries. For a complete list it would though be relevant to include innovative, proactive, turning ideas into action (which are part of the description of the key competence) and seeking opportunities as entrepreneurial competences.

⁵ Gibb identifies entrepreneurship in this article with “independent small business ownership” and “opportunity-seeking leaders of high profile companies” (1993:13). There are others and broader ways of defining entrepreneurship. Gibb also comments on the ambiguity in the concepts, and especially on the confusion between ‘entrepreneurship’ and ‘enterprise’. We will not go into that discussion, just make the interpretation here explicit.

⁶ Gibb is making several very relevant and interesting models to illustrate both the components of small business and enterprise education in his article, and this model do not represent an attempt to summarise or replace his model, but an attempt to stress the conceptual link.

⁷ See Hannon (2005:108f) for a range of other definitions and categorisations of entrepreneurship education. Hannon (2005) is in particular also offering an interesting categorisation of entrepreneurship education in relation to different philosophically conceptions of what he calls adult education. They can also be seen as general learning philosophies (liberalist, progressive, behaviourist, humanistic, radical). We are not including his contribution here because it does not aim at a generic understanding of entrepreneurship in a learning perspective. It has a descriptive purpose to provide a framework for clarifying and evaluating the different practices of entrepreneurship education in UK.

⁸ In the EU framework (Education and Culture DG 2007) it is part of the overall purpose: “Key competences are

those which all individuals need for personal fulfillment and development, active citizenship, social inclusion and employment (2007: 3)".

⁹ See Gibb 2010 for the same view in relation to universities.

¹⁰ Robinson and Blenker (2013) also point to this liberatory aspect in their investigation of practices of entrepreneurship education at universities, which emphasises the emancipatory aspect of entrepreneurial behaviour. Gibb (1993) also touches this question by raising the question: is the labour market prepared to receive an enterprising work force? There is, as Robinson and Blenker stress, an ideological tension in entrepreneurship education. This tension is between disciplined commercialisation and critical emancipation, which we will leave open here.

¹¹ In opposition to Shane and Venkataraman, Blenker et al. (2012:420) define opportunities as something that emerge by the specific individual in a specific context, whereas Shane and Venkataraman define opportunities as something that are objectively given and discovered by an entrepreneurial individual.

¹² We use the word ontological as a philosophical term, and this means that it denotes how we define 'being' or 'existing'. We do not refer to any particular philosophical understanding, although we are aware that the ontological interpretation of entrepreneurship calls for further philosophical clarification and references to philosophical positions within ontology, especially phenomenology (Heidegger) and existentialism (Sartre). These philosophical positions are, though, generally orientated towards an abstract understanding of 'being' that is not immediately convertible to the active and pragmatic aspects that is entailed in entrepreneurship. We find that a pragmatic and semiotic position defining the ontological ground as a field of possibilities open for interpretation (Peirce) would establish a more consistent frame for a further philosophical clarification. We will leave this detailed philosophical exploration out since our focus is on education, and our point is simply that entrepreneurship has an ontological level, that it can be defined in a general way of being.

¹³ We define autonomy in line with Kant (Kant 1785/2011) as the ability human beings have to act freely given they are rational beings that can take ethical decisions (the categorical imperative: "act only according to that maxim by which you can at the same time will that it become a universal law" (Kant 2011: 421/71)). So by 'autonomously acting' we mean, that the subject can decide to act freely with reference to itself (and not with reference to somebody else) given the capability to think rational and ethical. We are by that reference not implying a 'pure' rational subject that is not influenced 'irrationally' or unconsciously by personal dispositions or by cultural or social constraints, but we are though linking the possibility of action autonomous to the freedom of acting and to the apprehension of human being as capable of rational and ethical acting. There is of course a lot more to be discussed philosophically and political in relation to the concept of autonomy, but this is not the issue here. Our point is that entrepreneurship defined by autonomous acting.