Entrepreneurship Education for a Sustainable Future

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Abstract

Entrepreneurs keep our economy and society vibrant by implementing new ideas, which is why our society needs people with entrepreneurship competences. The development of our entrepreneurship competences does not begin with the start of our professional lives, but is initiated in earlier phases of our socialisation. Entrepreneurship education can trigger and support this process. A common goal of entrepreneurship education is to strengthen entrepreneurs with value orientation for a sustainable society. All entrepreneurs of the future are in school today, the nature of their value-oriented education and their willingness to participate is shaped by today's learning. This article provides information about entrepreneurship education, with a focus on Entrepreneurial Challenge-Based Learning for a sustainable future. Entrepreneurial Challenge-Based Learning touches on the basic personal and social issues of responsibility and autonomy and is intended to foster a culture of solidarity in our society.

Keywords: entrepreneur, entrepreneurship education, entrepreneurial challenge-based learning, social entrepreneurship, TRIO Model for Entrepreneurship Education, Youth Start Entrepreneurial Challenges, Sustainable Entrepreneurial Design, www.youthstart.eu.

Introduction

A socially responsible market economy needs confident and responsible citizens, who take an active role in shaping their own future and that of the society they live in through entrepreneurial and social initiatives. Without people who are willing to become active and implement their ideas, we would now be living in a very different reality. We owe innovations such as the arts, schools, cars, medication, the rule of law and democracy to people who were ready to make continual efforts to implement new ideas and change the rules of society.

Entrepreneurial initiatives are crucial for the development of regions and entire countries. Entrepreneurial thinking and acting can contribute to social cohesion in poorly developed regions and can help improve the situation of unemployed or underprivileged people. This is why the European Union is targeting a renaissance of entrepreneurship (cf. European Council, 2014; European Commission, 2013). In official appeals, economic policymakers and stakeholders are calling for new entrepreneurs, invoking a new phase

of economic upswing resembling the "Gründerzeit" – "years of rapid industrial expansion" of the 1800s or the "Wirtschaftswunder" – "economic miracle" of the 1950s.

To be able to launch initiatives and to conceive and implement their ideas, citizens need a solid basis for developing competences and creating an environment that supports unimpeded personal development. This article aims at emphasising how important it is to strengthen the role of entrepreneurship education as a model of life-long learning from an early age on. Shaping a sustainable future for society in mind the following questions will be discussed:

1. What do the terms *entrepreneur*, *entrepreneurship* and *entrepreneurship education* mean? – Definition.
2. Which competences does promoting entrepreneurship convey? – Strengthening entrepreneurship competences.
3. What are key activities of an entrepreneurial challenge-based learning for a sustainable future?

Definitions

Even though the terms "entrepreneur" and "entrepreneurship" are not yet commonly used in German-speaking countries – unlike other English business terms, such as "management" or "marketing" – they have become more widely known in recent years. The terms are derived from the French word "entreprendre" ("to undertake" / "to launch"). In their current meaning, they were introduced by Joseph Schumpeter (1911) and are now frequently used in English-speaking countries (Drucker, 1986).

Entrepreneur. Entrepreneurs are independent business protagonists. According to Schumpeter (1911) they are the key drivers of economic and social dynamics. Schumpeter emphasised their skills and abilities in the independent development and implementation of ideas and pointed out their innovative power, which encompasses the creation of new products, production processes, organisational structures or alternative distribution channels. Drucker (1986), Shane and Venkataraman (2000) and Spinelli and Timmons (2008) regard the competence to spot and make use of a business opportunity as a central entrepreneurial task.

Entrepreneurs play a relevant role in all subsystems of our society: from business, religion, sciences and politics to education and sports. Generally speaking, anybody can become active as an entrepreneur (Faltin, 2015). The terms *intrapreneurs*and *co-entrepreneurs* (Wunderer, 1999) describe entrepreneurs who are not self-employed, but decide to become active within a company. *Social entrepreneurs* or *change-makers* (Drayton, 2003) are individuals who combine entrepreneurial and social initiatives to bring about a positive change in society. They implement ideas in areas such as education, environmental protection or the creation of jobs for persons with disabilities.

Entrepreneurship. While the term "entrepreneur" refers to a person, "entrepreneurship" describes the process of developing an idea, identifying a business opportunity and implementing the idea as a team (Fueglistaller, 2004). The term *social entrepreneurship* is used for initiatives that focus on solving certain problems of society; it partly overlaps with the term *social business*.

Entrepreneurship education. The term *entrepreneurship education* refers to the development of independent ideas and the acquisition of the respective skills and abilities

that are necessary to implement these ideas. Emancipatory approaches to entrepreneurship education emphasise its social and pedagogical relevance for society. Braukmann (2011) considers entrepreneurship education a continuation of the cultural tradition of the Age of Enlightenment (p. 368).

Strengthening Entrepreneurship Competences

The debate about the basic competences that an entrepreneur should have has been linked to the "key qualifications debate". The term "key qualifications" (Mertens, 1974) describes a flexible and universally applicable type of knowledge that remains valid over a long time, rather than overly specialised and narrowly scoped knowledge. The term is thus ideally suited for a multi-dimensional examination of entrepreneurship competences. Mertens differentiates between **"basic qualifications"** and **"horizontal qualifications"**. Basic qualifications comprise a critical, structural and determined mindset, cooperative behavior, conceptional thinking, creative action and contextual thinking. Mertens defines horizontal qualifications as competences that deal with the processing of information, which also includes knowledge about the nature of information and about how information is acquired, understood and processed.

The European Commission (2005) defines entrepreneurship competences (Key competence 7): Sense of initiative and entrepreneurship) as one set of eight key competences for life-long learning that every EU citizen should acquire. According to the Commission, entrepreneurship competence is the individual's ability to implement ideas. It requires creativity, innovation andthe willingness to take risks as well as the capacity to plan and implement projects in order to reach certain objectives. It enhances the individual's everyday personal and social life and enables employees to consciously perceive their working environment and grasp opportunities. It is the basis on which entrepreneurs build their initiatives in a social or business context.

Table 1
Basic Structure of the Framework of Reference for Entrepreneurship Competences (cf. Lindner, 2014)

Competence areas	Competence level					
	A1	A2	B1	B2	C1	C2
Developing Ideas						
• Attitude						
• Identifying Opportunities						
Implementing Ideas						
• Working Together						
• Organising						
Sustainable Thinking						
• Acting as a Visionary						
• Financial Literacy						

The **Framework of Reference for Entrepreneurship Competences** was elaborated on the basis of the *Common European Framework of Reference for Languages*, CEFR. Entrepreneurship competences develop over time, in a process that starts long before

individuals embark on their professional careers, which is why the framework of reference for entrepreneurship competences includes several competence levels. These levels (Table 1) correspond to the conventional division into primary, secondary and tertiary levels:

- competence level A (primary level, beginners) refers to elementary entrepreneurship applications,
- competence level B (secondary level) to independent, and
- competence level C (tertiary level) to fully competent entrepreneurship applications.

The individual competence levels are subdivided into a higher and lower level each, creating a total of six competence levels.

The framework of reference provides orientation for the learning process in the following competence areas: "developing ideas", "implementing ideas" and "sustainable thinking" (intended to inspire value-oriented thinking). The competences of learners are expressed in *'Can Do' statements*, describing the specific attitudes, abilities and skills that learners are supposed to develop. The Framework of Reference for Entrepreneurship Competences is meant to serve as an aid for curriculum development teams (Bacigalupo, 2016) and an inspiration for the development of teaching-learning arrangements (see chapter 4: *Entrepreneurial challenge-based learning*).

Overview of Entrepreneurship Education Principles

Gibb Nelson (1996) defines three intentions of entrepreneurship education: *education for, through and about entrepreneurship* (Suonpää, 2013). These intentions are described as follows:

- *for = learning to become an entrepreneur*: here, the emphasis is on the abilities and skills required to implement an idea and launch a business;
- *through = learning to become entrepreneurial*: the main objective is to strengthen the "entrepreneurial mindset" (capacities), i.e. the general disposition that enables someone to "launch an enterprise";
- *about = learning to understand entrepreneurship*: these learning activities are intended to help students develop an understanding for companies, with a focus on establishing correlations (relevant knowledge).

These fundamental intentions make an important contribution to the debate about entrepreneurship competences and the development of methodical teaching-learning arrangements. They are also reflected in the target groups of entrepreneurship programmes. Target groups can be categorised according to the four criteria: idea, intention/motivation, competences and resources (Table 2). Each of these categories comprisesa variety of personalities with diverse private and professional lives.

This categorisation of target groups reveals the differing requirements that account for the variety of entrepreneurship programmes. Programmes can target the following phases: awareness and development (target group 1), specification (target groups 2 to 5) and implementation (target groups 6 and 7).

Table 2

Target Groups for Entrepreneurship Education Programs Categorized by Criteria

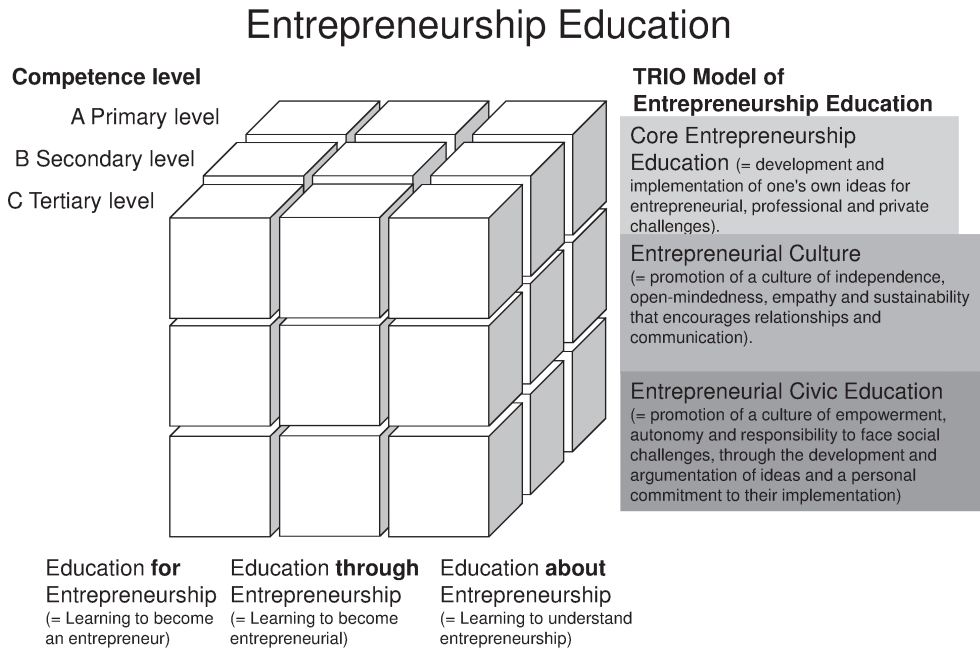| Target groups	Idea	Intention	Competences	Resources
1. No idea, no implementation intentions, no or only limited competences	Idea has yet to be conceived	No plans for implementation	Competences need to be developed	No or little capital available
2. Implementation intention and idea need further development	Idea has been conceived, product has yet to be developed	Implementation is planned	Skills need to be improved	If possible, an entrepreneurial design should be developed
3. Implementation intention, but no idea	Idea has yet to be conceived	Implementation is planned	Skills have been acquired	
4. Implementation intention and idea have been developed	Idea has been developed or start-up has been launched	Implementation is planned	Skills need to be improved drastically	
5. Idea and competences, but no implementation intentions	Idea has been developed	This group does not (yet) intend to implement their idea	Skills have been developed	
6. Investors	Idea has yet to be conceived	This group intends to support the implementation of someone else's idea	Skills (may) have been developed	Capital is available
7. Entrepreneurship educators and consultants	Ideas of their own (may) have been developed	This group intends to support the implementation of someone else's idea	Skills need to be further developed	No capital investment

This article primarily discusses the awareness and development phase with its potential teaching-learning arrangements and adopts a transdisciplinary interpretation. Working with the target group in question, the aim is to foster their disposition to show entrepreneurial initiative and strengthen their entrepreneurial orientation. Only for a small segment of the target group the actual intention to launch a business will be a realistic immediate goal. The promotion of an entrepreneurial mindset in this target group comprises three components:

- **entrepreneurial initiative:** professional and entrepreneurial independence;
- **personal initiative**: implementing plans and ideas for one's own life;
- **social initiative:** acting independently as empowered and responsible citizens.

Entrepreneurship education thus pervades all areas from the entrepreneurial sphere itself to the personal qualities required for socially proactive citizenship. The TRIO Model for Entrepreneurship Education[1] encompasses three segments.

Segment I teaches core competences that foster entrepreneurial and professional independence and support independent decisions for one's private life. For this purpose, business models (*entrepreneurial designs*) for ideas to meet entrepreneurial, professional and private challenges are developed and implemented (Faltin & Ripsas, 2011; Lindner, 2014).

Table 3
Possible Combinations in Entrepreneurship Education

Entrepreneurship Education

Competence level

A Primary level

B Secondary level

C Tertiary level

TRIO Model of Entrepreneurship Education

Core Entrepreneurship Education (= development and implementation of one's own ideas for entrepreneurial, professional and private challenges).

Entrepreneurial Culture (= promotion of a culture of independence, open-mindedness, empathy and sustainability that encourages relationships and communication).

Entrepreneurial Civic Education (= promotion of a culture of empowerment, autonomy and responsibility to face social challenges, through the development and argumentation of ideas and a personal commitment to their implementation)

Education **for** Entrepreneurship (= Learning to become an entrepreneur)

Education **through** Entrepreneurship (= Learning to become entrepreneurial)

Education **about** Entrepreneurship (= Learning to understand entrepreneurship)

Intention

Segment II, *Entrepreneurial Culture,* focuses on the promotion of a culture of independence, open-mindedness, empathy and sustainability that encourages relationships and communication. Segment III, *Entrepreneurial Civic Education*, aims at promoting a culture of empowerment, autonomy and responsibility to face social challenges. This is achieved through the development and argumentation of ideas for social initiatives and a personal commitment to their implementation.

The TRIO Model for Entrepreneurship Education perfectly combines the above-mentioned intentions and competence levels. The various possible combinations mean that entrepreneurship education can and should have different curricular dimensions.

Entrepreneurial Challenge-Based Learning

Challenge-based learning is a practically oriented approach to entrepreneurship education (Neck, Greene, & Brush, 2014) and is based on the learning cycle "challenge – feedback – reflection" (Kolb, 1984; Sternad & Buchner, 2016). This learning method combines an action-oriented (especially project-oriented) pedagogical approach with a reflection-oriented pedagogical approach:

- A challenge is defined as a demanding and complex task that is tailored to the target group and reflects their daily reality. Learners are challenged to develop and implement ideas (often in collaboration with others) for the specific situation in question. Our "daily reality" follows its own dynamics and in order to cope with it we need to adopt a process of inquisitive learning in a close

correlation between theory and practice. Children and adolescents should learn from early on that they can develop their own ideas and tackle challenges themselves.

- Adequate feedback uses the "backwards design model". The competences that are to be achieved are made clear at the beginning of the learning cycle. Following a phase of independent and creative work (Slahova, Volonte, & Čačka, 107, p. 106), feedback is provided in the form of "teacher assessment", "peer assessment" (students) or "self-assessment".
- Reflection offers learners an opportunity to process their personal experience in the challenge and the feedback phases (Boud, Keogh, & Walker, 1985) and to develop internal structures or attitudes. The strengthening of attitudes has to do with a person's self-efficacy, i.e. the conviction that we actually can do and want to do what we are currently doing or planning to do. It is precisely this internal conviction that determines whether we succeed at what we are doing or not.

Self-efficacy is important and it develops in our childhood. The good news is that it can be developed further and improved throughout our lives. Self-efficacious learning (Bandura, 1997; Pervin, 2000) takes place:

- in an environment with competent role-models;
- if we consciously perceive a situation as a challenge;
- if we confront the challenge in a deliberate and active manner and successfully master it;
- if we reflect on ourselves, the development of our ideas and our self-evaluation – metacognition (Kolb, 1983).

Entrepreneurial challenge-based learning is intended to inspire joy in learning. Independence is an essential feature of learning. Learning in its "full" form is always self-regulated. This has major implications for the design of the content and pedagogics of teaching-learning arrangements and requires a combination of various learning methods (Table 4).

Entrepreneurial challenge-based learning focuses on practical competences by linking cognitive, personal and social competences to entrepreneurial content and situations (cf. Jambor & Lindner, 2018). Entrepreneurship education centres on the development of new ideas and their creative and conceptual implementation (Faltin, 2013). The approach is based on several different learning methods:

- Advocates of **experience-based learning** (Dewey, 1933) argue that competences are best acquired if they are demonstrated and experienced in real situations. Entrepreneurship education promotes an experimental process of inquisitive learning in close correlation between theory and practice, combined with creativity and teamwork (Faltin & Zimmer, 1995).
- **Critical and communicative learning** in entrepreneurship education is realised through communication between teachers and students in the form of dialogue that is characterised by respect, empathy and encouragement. The focus is on the development of respectful relationship with other people that facilitates cooperation and fosters joint creativity (Rosenberg, 2013).

- **Service learning** means **learning through commitment** to an existing idea. This method introduces students to the possibility of performing practical community *service* that is related to content they learn in school (Calvert, 2011, pp. 118–120; Comed, 1994). "Service" and "learning" will thus benefit from each other. Assuming social responsibility is a key element in entrepreneurship education. Volunteer work (see *My Volunteer Challenge*) opens up an opportunity to develop ideas to solve social problems (as social entrepreneurs).
- **Learning through discourse** encourages learners to engage in debates, thus offering insight into the diversity of positions and interests with regard to questions of society. The method aims to enhance students' argumentative skills and promote basic values. In the context of entrepreneurship education, debate clubs are an interesting teaching-learning arrangement. Arguing ideas for the civil society is important because democratic processes and values cannot be learnt by heart. Rather, they unfold through a combination of attentive listening, convincing arguments and the willingness to empathize with others. In order to develop a greater interest in social topics, students need to be confronted with these issues and become involved (Lindner et al., 2012).

Table 4
Entrepreneurial Challenge-Based Learning Combines Various Learning Methods
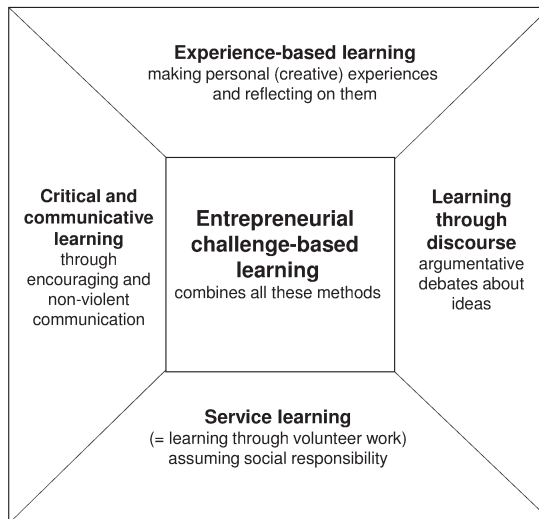
Entrepreneurship competences – such as developing solutions for problems, assuming responsibility for one's actions and showing personal initiative, as well as joy in innovation, readiness to take calculated risks and increase of self-confidence – are indispensable for a functioning market economy, a vivid civil society and the mastering of challenges in our private lives.
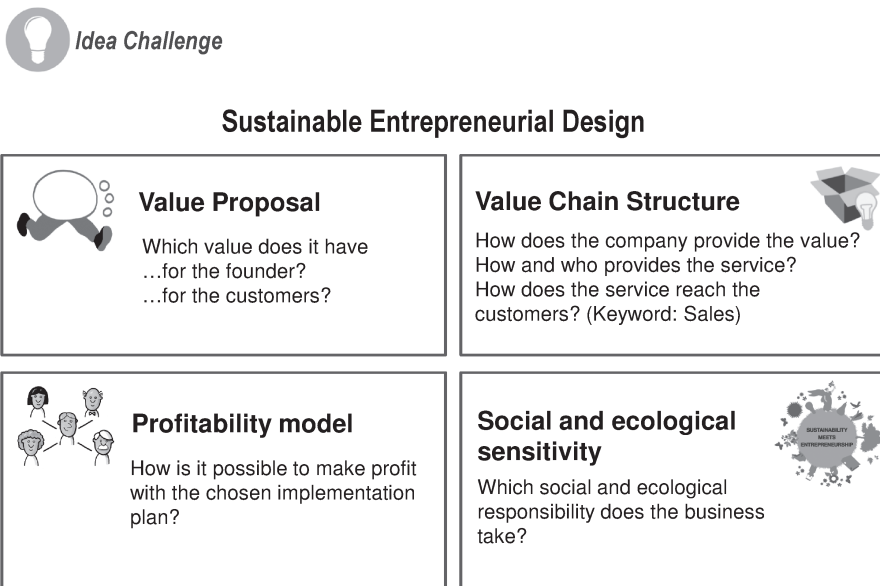
The approach of *entrepreneurial-challenge based learning* is based on the Framework of Reference for Entrepreneurship Competences and the Trio Model and uses challenges from various areas as learning opportunities. Table 5 briefly presents the categories of these challenges.

Table 5
Youth Start – Entrepreneurial Challenges (Jambor & Lindner, 2018, www.youthstart.eu), author's graphic

Core Entrepreneurial Education		
Idea challenge I can develop an idea (and a model how to implement it).	**Hero Challenge** I can identify a personal role model.	**My Personal Challenge** I can solve personal challenges.
Lemonade Stand Challenge I can sell products.	**Real Market Challenge** I can develop a business plan for the market.	**Start Your Project Challenge** I can plan and implement my project as a team.
Case Study Challenge I can work on real case studies.	**Enterprise Challenge** I can launch a business.	**Entrepreneurship Team Challenge** I can develop an entrepreneurial design together with a team.
Entrepreneurial Culture		
Empathy Challenge I can identify with others.	**Storytelling Challenge** I can tell stories.	**Buddy Challenge** I can support others in achieving their goals.
Perspectives Challenge I can understand I am part of my environment.	**Trash Value Challenge** I can create something valuable out of garbage.	**Open Door Challenge** I can network with others.
Extreme Challenge I can set and achieve difficult goals.	**Be A YES Challenge** I can say "yes" to myself and the world around me.	**Expert Challenge** I can use my expertise to give constructive feedback.
Entrepreneurial Civic Education		
My Community Challenge I can do things for the community where I live.	**Volunteer Challenge** I can engage in community service.	**Debate Challenge** I can develop my opinion and enter into a debate about it.

Each of these categories features individual variants for the different competence levels of the Framework of Reference for Entrepreneurship Education. The *Idea Challenge* (level A1), for instance, comprises a workshop called "Get your ideas moving". Level A2 introduces various examples of *Design Thinking* (Plattner et al., 2009, Hartman, Johnston, & Hill, 2017, p. 39), with different, age-appropriate starting points. At level B1 students develop a sustainable entrepreneurial design (Table 6), using *Entrepreneurial Design* (cf. Lindner et al., 2014). Level B2 is based on *The Business Model Canvas* (Osterwalder & Pigneur, 2010).

Table 6
Sustainable Entrepreneurial Design (Jambor & Lindner, 2018)

Idea Challenge

Sustainable Entrepreneurial Design

Value Proposal

Which value does it have
…for the founder?
…for the customers?

Value Chain Structure

How does the company provide the value?
How and who provides the service?
How does the service reach the customers? (Keyword: Sales)

Profitability model

How is it possible to make profit with the chosen implementation plan?

Social and ecological sensitivity

Which social and ecological responsibility does the business take?

The promotion of entrepreneurship education for a sustainable future is an interdisciplinary task. *Entrepreneurial Challenge-Based Learning* touches on the basic personal and social issues of responsibility and autonomy and is intended to foster a culture of solidarity in our society – aspects that are also part of the school curricula in many countries (cf. European Commission/EACEA/Eurydice, 2016).

Entrepreneurs keep our economy and society vibrant by implementing new ideas, which is why our society needs people with entrepreneurship competences. Entrepreneurship education can trigger and support this process. A common goal of entrepreneurship education is to strengthen entrepreneurs with value orientation for a sustainable society. All entrepreneurs of the future are in school today, the nature of their value-oriented education and their willingness to participate is shaped by today's learning.

Note:

(1) The TRIO Model for Entrepreneurship Education was developed during the scientifically monitored pilot project Schumpeter College (cf. Aff & Lindner 2005).

References

Aff, J., & Lindner, J. (2005). Entrepreneurship education zwischen "smallandbigideas" – Markierungen einer Entrepreneurship Education an wirtschaftsberuflichen Vollzeit-schulen. In Aff, J., & Hahn, A. (eds.). *Entrepreneurship-Erziehung und Begabungs-förderung an wirtschaftsberuflichen Vollzeitschulen.*[Entrepreneurship education between "small and big ideas" – marks of entrepreneurship education at full-time business schools]. Innsbruck: StudienVerlag, 83–138.

Bacigalupo, M., Kampylis, P., Punie, Y., & Van den Brande, L. (2016). *EntreComp: The entrepreneurship competence framework*. JRC Science for Policy Report. Luxem-bourg.

Bandura, A. (1997). *Self-efficacy. The exercise of control*. New York: Worth Publishers.

Boud, D., Keogh, R., & Walker, D. (1985). *Reflection: Turning experience into learning*. London: Routledge Palmer.

Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process* (2nd edition). Lexington: D.C. Heath & Co.

Drayton, B. (2003). *Ashoka's theory of change*. Arlongton: SSRN. Retrieved from https://ssrn.com/abstract=980092

Drucker, P. F. (1986). *Innovation and entrepreneurship, Practice and principles*. New York: Harper Business.

European Commission. (2005). *Recommendations of the European Parliament and the Council on key competences for life-long learning*. Brussels: KOM 548. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=LEGISSUM: c11090&from=EN (01-04-2018).

European Commission. (2013). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. *Entrepreneurship 2020 Action Plan. Reigniting the entrepreneurial spirit in Europe*. COM(2012) 795 final.

European Commission/EACEA/Eurydice. (2016). *Entrepreneurship Education at School in Europe*. Luxembourg. Retrieved from https://webgate.ec.europa.eu/fpfis/mwikis/ eurydice/images/4/45/195EN.pdf

European Council. (2014). *Conclusions on entrepreneurship in education and training*. Retrieved from http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX: 52015XG0120(01)&from=EN

Faltin, G. (2013). *Brains versus Capital. Entrepreneurship for everyone lean, smart, simple*. Berlin: Entrepreneurship Foundation.

Faltin, G. (2015). *Wir sind das Kapital* [We are the capital]. Berlin: Murmann.

Faltin, G., & Ripsas, S. (2011). *Das Gestalten von Geschäftsmodellen als Kern des Entrepreneurship*. [Designing business models as the core of entrepreneurship]. Working Papers 61. Berlin: Institute of Management at the Berlin School of Econ-omics and Law.

Faltin, G., &. Zimmer, J (1995). *Reichtum von unten – die neuen Chancen der Kleinen*. [Wealth from below – the little ones' new opportunities]. Berlin: Aufbau.

Fueglistaller, U., Müller, Ch. A., & Volery, T. (2004). *Entrepreneurship: Modelle, Umset-zung, Perspektiven* [Entrepreneurship: Models, implementation, perspektives]. Wiesbaden: Springer.

Hartman, R., Johnston, E., & Hill, M. (2017). Empathetic design: A sustainable approach to school change. *Discourse and Communication for Sustainable Education*, 8(2), 38–56.

Gibb, Y. K., & Nelson, E. G. (1996). Personal competences, training and assessment: A challenge for small business trainers. *Proceedings of the European Small Business Seminar*, 97–107.

Jambor, E. & Lindner, J. (2018). *Youth start entrepreneurial challenges, materials for teachers and students*. Retrieved from www.youthstart.eu

Kolb, D.A. (1983). *Experiential learning: Experience as the source of learning and development*. New Jersey: Prentice Hall.

Lindner, J. (2009). Entrepreneurship Education zwischen ökonomischer Ausbildungs- philosophie und Schlüsselkompetenz für das lebenslange Lernen. [Entrepreneurship Education between economic education philosophy and key competence for lifelong learning]. In Stock, M. (Ed.). *Entrepreneurship – Europa als Bildungsraum – Europä- ischer Qualifikationsrahmen* [Entrepreneurship – Europe as an educational area – European Qualifications Framework]. Vienna: Manz.

Lindner, J. (2012). *Entrepreneur: Misch dich ein – der Debattierclub*. [Entrepreneur: Get involved – the debating club]. IFTE/KPH (Ed.). Vienna: Initiative for Teaching Entrepreneurship.

Lindner, J. (2014). *Reference framework for entrepreneurship competences*, Version 15. EESI Austrian Federal Ministry of Education/IFTE (Eds.). Vienna. Retrieved from http://www.youthstart.eu/en/approach (01-04-2018).

Mertens, D. (1974). *Schlüsselqualifikationen. Thesen zur Schulung für eine moderne Gesellschaft*. [Key qualifications. Theses on trainingfor a modern society]. *Mittei- lungen aus der Arbeitsmarkt- und Berufsforschung*, 7(1), 36–43.

Neck, H., Greene, P., & Brush, C. (2014). *Teaching entrepreneurship, a practice-based- approach*. Cheltenham/Northampton: Edward Elgar.

Osterwalder, A., & Pigneur, Y. (2010). *Business modelgeneration. A handbook for visionaries, game changers, and challengers*. New Jersey: John Wiley & Sons.

Pervin, L. A. (2000): *Persönlichkeitstheorien*. Munich: Ernst Reinhardt.

Plattner, H., Meinel, Ch., & Weinberg, U. (2009): *Design thinking. Innovation lernen – Ideenwelten öffnen*. Munich: Mi-Wirtschaftsbuch.

Rosenberg, M. B. (2013). *Gewaltfreie Kommunikation*. [Nonviolent communication]. Paderborn: Junfermann.

Schumpeter, J. A., [1911] (2008). *The theory of economic development: An inquiry into profits, capital, credit, interest and the business cycle*, translated from the German by Redvers Opie, New Brunswick (U.S.A) and London (UK): Transaction Publishers.

Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *The Academy of Management Review*, 25(1), 217–226.

Šļahova, A., Volonte, I., & Čačka, M. (2017). Interrelations in the development of primary school learners' creative imagination and creative activity when depicting a portrait in visual art lesson. *Discourse and Communication for Sustainable Education*, 8(1), 102–120.

Spinelli, St., & Timmons, J. A. (2008). *New venture creation: Entrepreneurship for the 21st Century*. London: McGraw-Hill/Irwin.

Sternad, D., & Buchner, F. (2016). *Wissenschaftliche Grundlagen des Lernens durch Herausforderung.* In *Lernen durch Herausforderung.* [Scientific foundations of learning through challenge. In Learning by Challenge]. Wiesbaden, 41–46.

Suonpää, M. (2013). *Constructing an opportunity centred collaborative learning model through and for Entrepreneurship.* Jyväskylä: University Printing House.

Wunderer, R. (1999). *Mitarbeiter als Mitunternehmer – ein Transformationskonzept.* In Wunderer, R. (Ed.). *Mitarbeiter als Mitunternehmer.* [Employees as co-entrepreneurs – a transformation concept]. In Wunderer, R. (Ed.). *Employees as co-entrepreneurs.* (pp. 22–58). Neuwied: Hermann Luchterhand, pp. 22–58.

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