

# Model of entrepreneurship competence as a basis for the development of entrepreneurship education

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## Summary

In the last decades, the focal point of entrepreneurship education (EE) research has been developing a better understanding of the competencies related to entrepreneurship competence (e.g. Cope, 2005; Neck & Greene, 2011; Sarasvathy & Venkataraman, 2011). Moving toward competency-based education and entrepreneurship competence development provides opportunities to see EE broader than learning for creating new businesses. Also, several researchers have started to make a distinction between “narrow” and “broad” approach to entrepreneurship (Gibb, 2010; Lackéus, 2015, and others). The narrow approach to entrepreneurship is understood as the creation and development of new businesses, and the broad approach to entrepreneurship is seen as the day-to-day activity of creating value in society (Blenker et al., 2012). Adopting the broad approach means creating entrepreneurial mindsets and active citizens. Developing learners’ entrepreneurial mindsets requires learning processes that support active, experiential learning and fosters the development of entrepreneurship competencies. Broad, competency-based approach, in turn, allows seeing entrepreneurship education from two different points of views: 1) as a discipline (e.g., offering a separate course), or 2) as a method (e.g., as a teaching approach, embedding entrepreneurship education into the curriculum) (Blenker et al., 2011; Fayolle, 2013).

According to previous studies, entrepreneurship has been taught very differently (Fayolle *et al.*, 2006). Latter is grounded on the lack of consensus on the

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fundamental concepts “entrepreneurship”, “enterprise” and “entrepreneurial” (Mwasalwiba, 2010) and how entrepreneurship should be taught (Bennett, 2006). This situation has created confusion in the organisation of entrepreneurship courses and training (Pittaway & Cope, 2007) in setting learning goals, formulating learning outcomes, and using learning assessment methods (Mwasalwiba, 2010).

Historically, in Estonia, entrepreneurship courses followed the principles of the narrow approach, meaning that courses mainly aimed at supporting the creation of new businesses. Recently, the implementation of the broad concept of EE has become more important, i.e. embedding entrepreneurship education into the curricula and to the general and speciality courses. Adopting the broad approach earlier was complicated due to different definition and theories for designing the courses, and lack of a consistent framework that would highlight how EE should be approached throughout the educational levels. To address this gap, the Estonian Ministry of Education and Research launched the programme “Systemic Development of Entrepreneurship and Entrepreneurship at All Educational Levels” (Edu ja Tegu ..., 2016). Following the previous line of thought, this article aims to highlight and justify the entrepreneurship competence model designed for the developments of entrepreneurship education in Estonia throughout the educational levels. Based on this aim we set the following research questions: 1) What competencies are needed to implement ideas to create value in different environments? 2) How to validate selected sub-competencies empirically?

The entrepreneurship competence and its sub-competencies are developed on the basis a definition: “Entrepreneurship is when you act upon opportunities and ideas and transform them into value for others. The value that is created can be financial, cultural, or social.” (FFE-YE, 2012). The development of an entrepreneurship competence model is based on understanding the entrepreneurship process, and what competencies are needed in different phases of this process for the opportunity, discovery and implementation of ideas to find new and value-generating solutions. Ardichvili and colleagues (2003) claim that identifying opportunities for new business is one of the most important abilities of a successful entrepreneur. However, for identifying opportunities, also transferable competencies are necessary, namely, creative thinking, problem-solving, planning, communication and teamwork skills, self-management, and more. For explaining the content and mutual relationships of chosen sub-competencies for the entrepreneurship competence model, the theories from fields related to entrepreneurship (e.g., psychology, education, entrepreneurship) were used as the theoretical basis, and, at the same time, we took into account the laws of human thinking and general development and functioning.

In the process of designing the entrepreneurship competence model, we also developed the assessment tool for measuring the competencies. The assessment is based on the adopted constructs from earlier studies as well as on the supplemented statements characterising the sub-competences of the model.

The structure of the entrepreneurship competence is presented to emphasise the way sub-competencies are interconnected. The sub-competencies are divided into four competence areas, namely – 1) self-management, 2) solving of social situations, 3) creative thinking and finding solutions, and 4) acting on opportunities, all together into 14 sub-competencies. Three prior competence areas are highlighting competencies needed for developing entrepreneurial mindsets, creative and entrepreneurial members of society. The fourth competence area – acting on opportunities – is necessary for entrepreneurial action and becoming an entrepreneur. Also, it is beneficial and essential for those choosing a career as an employee. The fourth competence area should be developed together with entrepreneurship sub-competencies of the other three competence areas.

The empirical study conducted, consisting of a sample numbering 1,479 higher education students, aged 16–66 ( $M = 26$ ;  $SD = 8.06$ ). Based on the study a statistical basis for the interconnectedness of various entrepreneurship sub-competencies was established. The result of the study highlighted that the relationships between assessed competencies are logical and confirmed the results of previous research on different sub-competencies that were assessed. The self-assessment analysis confirmed that most of the sub-competencies' relations were anticipated correctly and at the same time, they were also separately significant. Only two sub-competencies, namely, 1) understanding the context, and 2) ethics and values, appeared to be not related with other sub-competencies and indicated the need to correct or rearrange the instrument accordingly.

The development of entrepreneurship competence model and the constructed self-assessment tool offers internationally – in addition to other countries' entrepreneurship competence models – a new solution for the development of entrepreneurial mindset and entrepreneurship competencies that are needed in all areas of life. Establishing the entrepreneurship competence model and related assessment tool is the first stage in the ministry-initiated EE programme. The competence model can be used as a basis for formulating learning outcomes for all educational levels, as well as planning the programmes for entrepreneurship courses (based on established outcomes) and developing pedagogical tools and instructions.

The implementation of competence-based learning into practice based on entrepreneurship competence model is an essential for various stakeholders within the education system (e.g. education authorities, curricula developers,

teachers and lecturers, students, etc.). The results provide the basis for the systematisation, visualisation, and application of expertise relating to how, when, and which entrepreneurship sub-competencies should be developed as part of a particular education programme. Indeed, the feasibility of the applied entrepreneurship competence model needs to be investigated further, and far-reaching conclusions cannot be drawn based only on the data from the current study.

The competence model's applicability validation is a long-term process. However, this study allows proposing the initial description of the entrepreneurship competence model. Further, while describing the relationship between competences, the effects of the learning environment must be emphasised more in the future research. The entrepreneurship competence model presented in this article is designed based on considering both the previous and recent scientific literature, and it may change together with the developments in the education system and society. This article contributes to the discussion on the use of the entrepreneurship competence model for the development of entrepreneurship education at all levels of education in Estonia.

*Keywords:* entrepreneurship education, model of entrepreneurship competence, acting upon opportunities, self-management, creative thinking and finding solutions, solving social situations