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“Be Competent in Entrepreneurship”:

**Knowledge Alliances for Developing Entrepreneurship
Competencies for the Benefit of Higher Education and Business**



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1 Introduction

The collection of best practices is taking place through the review of literature and cases from other universities in order to capture distinctive examples of teaching design and methods for supporting the development of learners' EC. Constant exchange of relevant information between partners and wider audience through various channels (e.g. academic and company channels: project website, website, seminars with SMEs etc). The main areas for collection of best practices are: teaching and learning approaches and models; pedagogies used; teachers' understanding of entrepreneurship phenomena (EE and subject-specific courses); the specifics of the creation of learning environment and methods for supporting the development of learners' EC; the best practice in embedding EC development into curricula (of EE and subject-specific courses) of universities.

The aim of the document is to identify the results of exchange of relevant information between partners and wider audience in main teaching and learning approaches, and models used in entrepreneurship and other courses in order to summarise what are the best practices in embedding EC development into curricula (of EE and subject-specific courses) of universities. Objectives are:

- to contribute for the understanding and creation of a positive learning environment for the development of EC;
- what are the best practices of teaching and learning approaches and models in supporting the development of EC in EE;
- the experiences of embedding the development of EC into the study programmes of EE and subject-specific courses

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2 Creation of a positive learning environment for the development of Entrepreneurship Competences (ECs)

In the last decade, scholars and practitioners have recognized the importance of entrepreneurship competencies for the entrepreneurial teaching process (e.g., Mitchelmore, & Rowley, 2010) and consequently a crucial predictor of business growth and success (e.g., González-Lopez, et al., 2021), and personal development of students (Venesaar, et al., 2022). Entrepreneurship competence (EC) describes the set of knowledge, skills, beliefs, and motivational aspects that help individuals cope more efficiently with the increasing complexity of the world (Gibb 2002; Lackéus 2015; Venesaar, Malleus, Arro & Toding, 2022). Moreover, scholars have recognized entrepreneurship as a key competence of lifelong learning (e.g., Venesaar, et al., 2022). Venesaar, et al. (2022) also proposed the model of EC and demonstrated how EC may be developed and trained. The BeComE project has adopted this model and aims to expand its application in a wider High Education environment.

Emmanuel (2010) described entrepreneurship as the ability and readiness of a person to create a new investment prospect, develop a venture based on this and manage it effectively for the social benefit or making of profit. Entrepreneurship competence should be trained and developed not only for those who attend management higher education degrees but at all educational levels (including the lower ones), as it has been demonstrated that it impacts organisational growth and success (e.g., Ataei, et al., 2020).

However, until recently, higher education institutions only included EC for management-related courses which was identified as a common gap in educational settings (e.g., Venesaar, et al., 2022). Moreover, entrepreneurship education has been mainly focused on competencies related to the use of business opportunities and new venture creation (e.g., Lackéus, 2015) which leads to the “skills gap” regarding personal development (e.g., Venesaar et al., 2022), or other employability skills – such as self-reliance, self-discipline, problem-solving skills, motivation, teamwork, leadership, communication, IT skills and financial literacy (e.g., Moore & Morton, 2017; O’Neil, 2014). These competencies are crucial in the long run, for personal purposes, such as active personal development, but also for professional growth (Nagele, & Stalder, 2017), and active citizenship and employability in modern society (Venesaar, et al., 2022).

There has been a significant change in EC (de La Fuente et al., 2018), aimed to overcome the older thought that when students are enrolled in entrepreneurship courses focused on, for example, identifying entrepreneurial opportunities, they naturally develop other skills needed for the workplace settings (Garnefski, & Kraaij, 2014) and that these skills do not need formal teaching. Nevertheless, several studies have consistently shown that other skills, related to entrepreneurship

competence, need specific and formal teaching, and are not acquired or developed naturally (Lawson, et al., 2019). As a result, EC has been settled as a way of thinking and acting, because all the stages of an entrepreneurship process rely on individual competencies, such as communication or emotional regulation (Draycott & Rae, 2011; Neck & Greene, 2011).

Competency is a comprehensive concept that includes both generic and specific aspects and is extrapolated from performance and observable activity to implied attributes (Gonczi, 2013).

EC models aimed to identify skills needed for the entrepreneurial process (Venesaar, et al., 2022). Venesaar, et al. (2022) developed the Comprehensive Entrepreneurship Competence Model (CECM), which in the current project we use as the EC model. This model is framed in a learner-centred environment and aims to reach all educational levels and all kinds of students and trainees. The EC model includes four fields of competencies: (1) self-management; (2) creative thinking and finding solutions; (3) managing social situations, and (4) acting upon opportunities and ideas. The model includes 14 sub-competencies that were described in terms of essential knowledge, skills, and individuals' attitudes that are essential for value creation during the implementation of ideas, for the development of the entrepreneurial mindset of learners, and for efficiently coping with work and daily life (Venesaar et al., 2022) (see Figure 1).

The EC model goals were twofold: (1) to offer a set of competencies that help to understand the behaviour of entrepreneurial people in changing situations (in more specific business-related situations but also in everyday management situations) and (2) to create a basis for the development of educational interventions (entrepreneurship programs and study assignments in various other courses) where skill development is more explicitly supported.

Moreover, the EC model is based on five premises that show the interconnectedness of EC and their sub-competencies. First, entrepreneurship competence includes a hierarchical and integrative perspective. Second, EC is context-dependent (Mulder et al. 2007). Hence, EC cannot be understood without describing the environment in which it should be expressed. Third, EC can be learned and trained (e.g., Sánchez 2011). Fourth, EC should consider sub-competencies that can be identified as latent constructs, that is, not all sub-competencies are explicitly shown in performance (e.g., autonomous motivation, emotion regulation). Fifth, in creating a holistic model of EC certain structural principles should be considered. Hence, the subdivisions can range from more specialised competencies (e.g., functional, cognitive) to more general ones (e.g., personal, metacognition) (Larson et al. 2007).

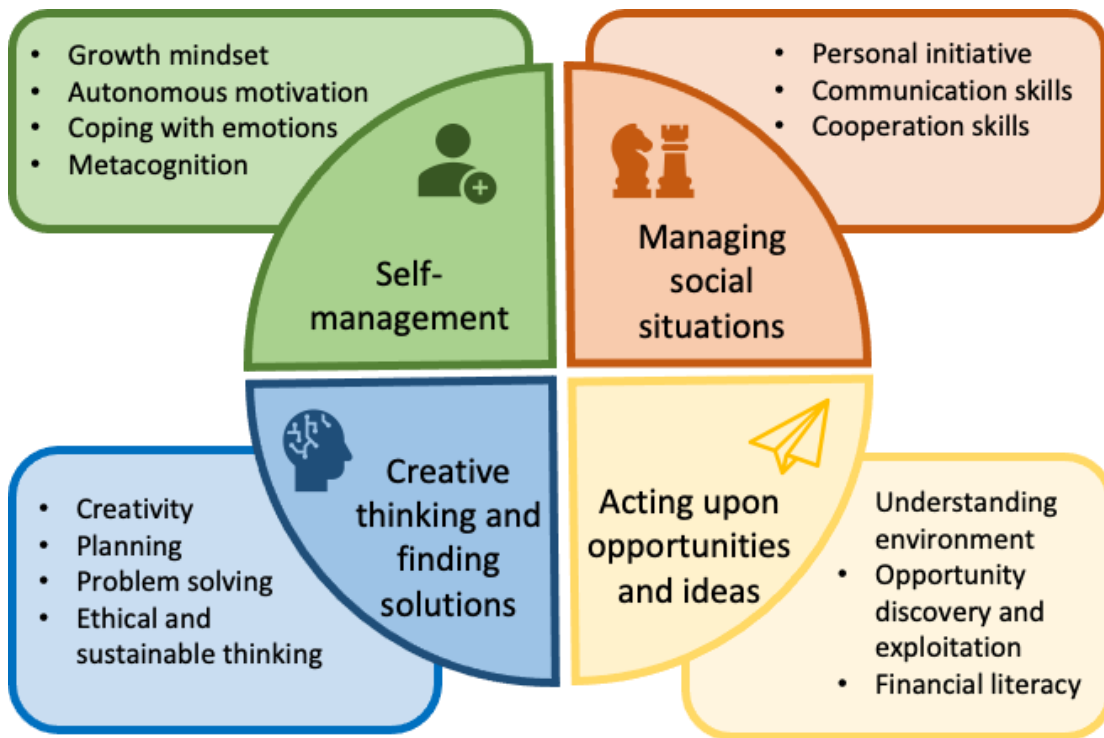


Figure 1. Entrepreneurship competence model (Venesaar, et al., 2022).

2.1 The implementation of CECM in practice

It is important to understand what must be included in teaching curricula, and what methods must be adopted to teach EC (Chaker & Jarraya, 2021).

According to Gibb (1997): “the predominant contextual learning mode in this environment is that of learning from peers; learning by doing; learning from feedback from customers and suppliers; learning by copying; learning by experiment; learning by problem-solving and opportunity taking, and learning from making mistakes”. We must also consider that entrepreneurship is a continuous process of learning (Chaker & Jarraya, 2021) that must include both theory-oriented and practice-oriented courses. Moreover, the combination of methods shows the complexity and interrelatedness of the tasks that face entrepreneurs, especially if one of the teaching objectives is to develop EC (Gibb, 2002).

One of the principal aspects to develop EC as a lifelong process is to promote critical thinking, and the ways to apply it in their work environments (Kakouris, 2015). Educators should promote the use of principles of critical methods and support the outcomes of the critical instruction process. Educators should assume an active role. The use of critical pedagogy (e.g., Brookfield, 1987), based on the critical–dialectical-discourse enhances the feeling of participation and the reflexive aspects of learning, allowing to choose which judgements are more suitable and how to fulfil gaps of what is not transmitted.

Chaker and Jarraya (2021) also demonstrated that the most important methods for teaching EC must include theory-oriented courses and practical ones that encompass active methods such as case studies, creating a business plan, pedagogies with real projects, train creative thinking - e.g., mind mapping, divergent thinking, brainstorming, lateral thinking, and metaphorical techniques - and identify and/or create business opportunities.

3 Best Practices

First, what this project brings as a major innovation is the use of **active learning** on Entrepreneurship, using **self-expression and self-reflection** as a way of focusing the pedagogic strategies. Moreover, we suggest that the **clarification of expectations** about learning makes the competence model salient to empower learners' on the development of their own competences and integrate them with the different course contents.

Second, the project emphasises the importance of **self-reflection** (reflexive techniques) and **self-expression** (presentation techniques) within and outside the classes. These aspects are relevant because (1) the learner must have a critical reflection on the learning process; (2) both improve the learners' self-conscious of their role in the learning process; (3) stimulate the students' learning upgrades they got with the vivid processes in classes; (4) and stimulate the development of the learner's self-concept. It has also been shown that the focus on self-reflection exercises contributes to self-development as it makes the individual experience meaningful learning events. Plus, the more meaningful learning experiences, the higher the readiness to learn, the orientation to be part of the learning process, and the higher the motivation to develop competencies (Venesaar, et al., 2022).

3.1 Continuous exchanges between partners to discuss learning environments and elaboration of Guidelines to support the EC development

The discussion about the promotion of positive learning environments universities, the development of guidelines for EC, and the reflection about the possible nitration of the BeComE conclusions on the study programmes of EE was achieved through a continuous exchange between partners. These exchanges followed a specific methodology: A) Exchanges among partner's university representatives; B) Broad exchange between partner's university representatives and teachers; C) Local exchange between partner's university representatives and teachers; D) Broad exchange between partner's university representatives and companies' managers; E) Local exchange between partner's university representatives and companies' managers; F) Integrative workshops promoting exchange between partner's

university representatives and company managers. G) Local events of dissemination. H) Project website.

3.1.1 Managing social situations competence area

According to the EC model (Venesaar, et al., 2022), the area of managing social situations includes three sub-competencies - personal initiative, communication, and cooperation. To develop the Managing Social Situations competence area the recommended pedagogical strategies were:

- (1) Combination of traditional lectures (online or face-to-face) to expose the concepts to practise.
- (2) Diagnosis of the initial level of the learner's competence and assess it at the end of the course – analyse whether there was a significant (or not) improvement in the competence.
- (3) Introduce and implement active learning sessions with:
 - a. Case studies.
 - b. Mixing groups technique
 - c. Discussions
 - d. Role plays
 - e. Coach and coachee programs
 - f. Imagination techniques
 - g. Self-reflection moments

3.1.2 Creative thinking and problem solving competence area

According to the EC model (Venesaar, et al., 2022), the area of competence of *creative thinking* includes four sub-competencies: creativity, problem-solving, planning and ethical and sustainable thinking. A possible way to integrate the teaching of these two competences is using the Creative Problem Solving (Osborn, 1952; Creative Education foundation, 2014; Myszkowski, et al. 2015) which defines the possibilities of problem solving, integrating the divergent and the convergent thinking with the planning aspects, proposing the following phases:

- Clarification: exploring what is aimed, collecting data about the current situation and formulate the challenge (define the specific problem) is a more analytical and convergent way of thinking
- Ideation: trigger possible solutions, individually, or collectively opening paths for a wide range of possibilities to the challenges.
- Development: filter the more fitted solutions, evaluate the possibilities of implementation.
- Implementation: Establishment of a plan with phases and resources to achieve the goals associated with proposed solutions

To develop the Creative Thinking and Problem Solving competence area, there are specific techniques to promote divergent thinking (Brainstorming; Forced

Connections etc) and convergent thinking (Highlighting; Evaluation matrix, etc) that might be used (Creative Education foundation, 2014). Exercises using the CPS framework (Osborn, 1952; Creative Education foundation, 2014) might promote simultaneously divergent and convergent thinking and will contribute to develop Creativity and Problem-Solving Competences. Moreover, methods that use an active learning approach must be used. For example, the use of videos, case studies (focused on real problems), or imaging techniques might be privileged to develop these competencies. Overall, the techniques most used to train creative thinking and problem-solving competence areas are Brainstorming, Highlighting and Evaluation matrix.

3.1.3 Self-Management competence area

Self-management includes four sub-competencies: *growth mindset*, *autonomous motivation*, *metacognition* and *regulating emotions*. The activities within entrepreneurship courses often take place outside the classroom, involve teamwork and have a problem-based orientation demanding creativity and innovation. Teaching strategies should be based on articulating clear expectations, granting support for self-monitoring and self-consciousness, providing explicit and coherent guidelines and providing opportunities for learners to follow their progress towards the set goals. They should include the use of methods enabling self-observation and self-reflection, self-expression in setting goals, communication, juxtaposition of different perspectives and arguments, interpretation, self-regulation, and monitoring own actions.

3.1.4 Acting upon opportunities and ideas competence area

The area of “Acting upon opportunities and ideas” includes the *ability to discover and exploit opportunities*, *understanding the environment* and *financial literacy*.

The recommended approaches include action-learning (case studies), experiential learning (self-observation and self-reflection), and problem-based learning (Case studies). Teachers can promote discussions by attributing the role of entrepreneurs to students (role-play) and discuss what are the environmental factors that entrepreneurs have to take into account in their activities on a daily basis. starting its activity). Furthermore, students can analyse the macro environment of their business idea. This is often explored with PESTLE (political 'political', 'economic', 'social', 'technological').

Conclusions

EC is important not only for students' life but for workplaces as they can make the difference between a positive learning environment and a poor one. A positive learning environment can efficiently support the development of EC of employees at the workplace (Lehtonen et al., 2022; Pylväs & Nokelainen 2018). Employees learn at the workplace through training and education but much of learning is unplanned and implicit, often collaborative, highly contextualised, and occurs through informal learning in everyday work-related activities (Kyndt et al., 2014; Rintala et al., 2015; Hager, 2004; Janssens et al., 2017).

On the BeComE project we verified that receiving acknowledgement and feedback has an important role for learning (Harteis et al., 2015). When employees experience that their learning is appreciated, they will be more willing to engage in workplace learning (Sanders et al., 2011). Acknowledgement, encouragement and positive feedback on employees' work are also related to job satisfaction that is further related to career satisfaction (Lehtonen et al., 2022). Companies should come to identify precise assessment schemes at the individual and behavioural level, rather than resorting to assessment mechanisms linked only to the final economic and financial results. It may be necessary to introduce these new mechanisms, if absent, or simply communicate them better to employees, making employees more informed and directly involved in the assessment, with maximum transparency.

Overall, BeComE project suggests a framework theoretically (Venesaar, et al., 2022) and empirically guided that focus on four main areas of core competencies in entrepreneurship: (1) managing social situations; creative thinking; (3) self-management, and; (4) acting upon opportunities and ideas. As such, we propose that some competencies in the EC model (Venesaar et al., 2022), may be learned synergistically. First, personal initiative could be paired with cooperation; second, communication could be taught with coping with emotions – as regulating emotions is commonly associated with efficient communication techniques . Third, creativity and problem solving could be taught together, as well as planning and ethical sustainable thinking. Fifth, growth mindset and metacognition might be synergistically combined.

Moreover, it is suggested (1) an active learning approach with (2) several pedagogic strategies that emphasise the use of self-reflection and self-expression during the learning process of the EC model. This switches from an approach that emphasises the active role of the teacher, and a passive role of the learner that must learn, memorise, and understand processes and competencies, to an active and learner-centred approach but using several pedagogical strategies (see Table 4 for a summary). This disrupts what is the tendency so far in the teaching of entrepreneurial competencies and what is mostly proposed by most scholars (e.g., Chaker and Jarraya, 2021.) Moreover, entrepreneurial active learning processes

and a focus on the learner are required to collaborate, connect and to combine the knowledge stocks to produce innovation and other entrepreneurial-related outcomes (Anderson, et al., 2011)

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