Revista Românească pentru Educație Multidimensională
ISSN: 2066-7329 | e-ISSN: 2067-9270
Covered in: Web of Science (WOS); EBSCO; ERIH+; Google Scholar; Index Copernicus; Ideas RePeC; Econpapers; Socionet; CEEOL; Ulrich ProQuest; Cabell, Journalseek; Scipio; Philpapers; SHERPA/RoMEO repositories; KVK; WorldCat; CrossRef; CrossCheck

2024, Volume 16, Issue 2, pages: 71-104 | https://doi.org/10.18662/rrem/16.2/847
Submitted: February 25th, 2024 | *Accepted for publication:* February 25th, 2024

Designing and Delivering a Cross-Campus Entrepreneurship Education Program

Karla BARTH [1]
Anca Otilia DODESCU [2]
Elena Aurelia BOTEZAT [3]
Ioana Crina POP-COHUT [4]

[1] University of Oradea, Romania, karla_barth@yahoo.com
[2] University of Oradea, Romania, adodescu@uoradea.ro
[3] University of Oradea, Romania, ebotezat@uoradea.ro
[4] University of Oradea, Romania, ipop@uoradea.ro

Abstract: *Are entrepreneurs born or made on campus? is one of the most frequent questions in the literature dedicated to student entrepreneurship. The field of study in relation to career anchors is one of the most investigated factors, and it is widely recognized that entrepreneurship education should be expanded beyond economics faculties and business schools. The purpose of this paper is to present the process of designing and delivering of a cross-campus Entrepreneurship course customized on varied non-economic fields of study (engineering, mathematics and nature sciences, health, social sciences, humanities and arts) and tailored on local business environment developed in an integrated manner in the package with two other courses: Career coaching and Life skills. The courses were developed within a project financed by the European Social Fund and were integrated into the curricula of all faculties of a comprehensive university, as optional or facultative courses. The paper provides an innovative approach to cross-campus entrepreneurship education, specifically on course design and delivery that integrates education for entrepreneurship with career coaching and life skills education.*

Keywords: *cross-campus entrepreneurship education, entrepreneurial competencies, curriculum design, Entrepreneurship course, Career coaching course, Life skills course.*

How to cite: Barth, K., Dodescu, A. O., Botezat, E. A., & Pop-Cohut, I. C. (2024). Designing and delivering a cross-campus entrepreneurship education program. *Revista Românească pentru Educație Multidimensională, 16*(2), 71-104. https://doi.org/10.18662/rrem/16.2/847

©2024 Published by LUMEN Publishing. This is an open access article under the CC BY-NC-ND license http://creativecommons.org/licenses/by-nc-nd/4.0/

Introduction

In today's quick-changing global economy, entrepreneurial skills and mindsets are in more demand, and the importance of entrepreneurship education has increased, especially in universities. Moreover, entrepreneurial skills, in addition to professional skills, allow students to be successful in the process of transition to the labor market and increase employability (Jardim & Sousa, 2023; OECD, 2019; UK Commission for Employment and Skills, 2014). European Commission identifies entrepreneurship as one of the eight key competencies for employability, active citizenship, social inclusion, personal fulfillment, and a sustainable lifestyle (Bacigalupo et al., 2016). Are entrepreneurs born or made on campus? This is a commonly asked question in the literature on student entrepreneurship (Krabel, 2018; Sánchez, 2011; Hyclak & Barakat, 2010). The discussion about the impact of entrepreneurial education on the birth of entrepreneurs and start-ups on campus is somewhat unidirectional. Developing entrepreneurial competencies is the primary objective of entrepreneurship education. In addition to its primary objective, entrepreneurship education can also increase learning performance, economic success, and social engagement, as well as motivation, self-efficacy, perseverance, confidence, proactiveness, and innovativeness. (Sousa, 2018; Smith et al., 2017; Pittaway & Cope, 2007). Despite the paucity of studies on the relationship between non-cognitive competencies and entrepreneurial education, this is a "promising area of research" (Lackéus, 2015, 13), where entrepreneurial education can help to improve general education. One of the most examined variables regarding career anchors is the field of study, and it is strongly advised that entrepreneurship education be expanded beyond business administration and economics (Turner & Gianiodis, 2018).

Our proposal of a cross-campus Entrepreneurship course developed in an integrated package with Career coaching and Life skills courses is inspired by good practice examples on cross-campus or radiant wide-university entrepreneurship programs (Schneider, 2015; Katz et al., 2013; Welsh, 2014; Morris et al., 2013; Streeter et al., 2002) and Lackéus's (2015) framework of entrepreneurial competencies. The Entrepreneurship, Career coaching and Life skills courses were developed within "Entrepreneur for the future" (AntreV) project, co-financed from the European Social Fund, implemented between 2019-2021 by the University of Oradea, Romania. The AntreV project was designed to increase the attractiveness of the University of Oradea's entrepreneurship educational offer from the perspective of "**about, for, though,** and **in**" entrepreneurship strategy

(Pittaway, 2023; Pittaway & Edwards, 2012). Starting with 2021-2022 academic year, the Entrepreneurship, Career coaching and Life skills courses were integrated into the curricula of 14 faculties of the University of Oradea (as optional or facultative courses).

This paper aims to promote entrepreneurship education in universities in all fields of study and its benefits, especially on students' non-cognitive competencies, through an innovative approach that integrates entrepreneurship with career coaching and life skills education. The general objective of the paper is to analyze the process of designing and delivering a cross-campus Entrepreneurship education program that integrates Entrepreneurship, Career coaching, and Life skills courses customized to varied non-economic fields of study. The first specific objective is to describe the curriculum design process (administrative preparation, preparation of theoretical and practical working materials, teacher training) within the AntreV project, as well as the constraints faced during the introduction of the Entrepreneurship, Career coaching, and Life skills courses in the curriculum of all faculties with a non-economic profile (14 faculties out of a total of 15) of the University of Oradea, at the end of the project. The second specific objective is to analyze the delivery process of the cross-campus Entrepreneurship program to a significant target group (450 Bachelor students) within the AntreV project (conducting courses, specific challenges, feedback from participants) as well as practical interconnections and educational implications to ensure the sustainability of the educational offer at the end of financing.

Literature review

The skills that underpin the entrepreneurial culture have gradually been included in educational curricula, with a prevalence in higher education, as entrepreneurial competencies. Most of the literature (Sousa, 2018; Sánchez, 2011; Fisher et al., 2008; Kraiger et al., 1993) agrees with the following definitions of entrepreneurial competencies - "**knowledge, skills, and attitudes that affect the willingness and ability to perform the entrepreneurial job of new value creation**" (Lackéus, 2006,12). Designing, testing, and scaling a successful business model requires a complex set of competencies (Jardim, 2021). The European Commission's entrepreneurial competencies framework - EntreComp, reflects this complexity and is recognized as a reference for entrepreneurship curriculum design (Bacigalupo et al., 2016). The EntreComp framework considers entrepreneurship as a transversal competence, which can be applied from start-up (commercial, social, or cultural ventures) and self-employment to

employment, personal development, and active citizenship. The EntreComp conceptual model develops competencies made up of the following three competence areas: a. 'Ideas and opportunities' (Spotting opportunities, Creativity, Vision, Valuing ideas, and Ethical and sustainable thinking), b. 'Resources' (Self-awareness and self-efficacy, Motivation and perseverance, Mobilizing resources, Financial and economic literacy, Mobilizing others) and c. 'Into action' (Taking the initiative; Planning and management; Coping with uncertainty, ambiguity, and risk; Working with others, and Learning through experience). Each of the above-mentioned fifteen competencies is accompanied by descriptors developed through a mixed-methods approach, as can be seen in Annex 1.

There are various other models of entrepreneurial competencies in the literature regarding higher education (Balushi et al., 2023). Most of these consider transversal skills that bring success in a business, such as learning skills, academic skills, life skills, social skills, etc., to those that allow one to be successful in university life and future career (Kucel et al., 2016), in personal life and social life (Popescu, 2014), in the global and digital world (Jardim, 2021). Lackéus's (2006) comprehensive framework of entrepreneurial competencies offers both a wide and a narrow perspective on 'Knowledge' ('Mental models', 'Declarative knowledge', 'Self-insight'), 'Skills' ('Marketing skills', 'Resource skills', 'Opportunity skills', 'Interpersonal skills', 'Learning skills', 'Strategic skills') and 'Attitudes' ('Entrepreneurial passion', 'Self-efficacy', 'Entrepreneurial identity', 'Proactiveness', 'Uncertainty/ambiguity tolerance', 'Innovativeness', 'Perseverance') of entrepreneurial competencies and their relation to cognitive and non-cognitive competencies (see Annex 2).

Our proposal for the conception and delivery of the Entrepreneurship education program at the University of Oradea was based on the EntreComp conceptual model (Bacigalupo et al., 2016) and Lackéus's (2015) framework of entrepreneurial cognitive and non-cognitive competencies and thought from the perspective of **"about, for and through" entrepreneurship** (Kakouris & Liargovas, 2021; O'Connor, 2013; Heinonen & Hytti, 2010; Gibb, 2002), complemented by **"in"** entrepreneurship strategy (Pittaway & Edwards, 2012).

'About entrepreneurship' refers to entrepreneurship as a concept and phenomenon in a social context (Hoppe et al., 2017), means a theoretical and content approach (Jardim & Sousa, 2023) designed to provide a broad overview of the issue through traditional methods (lectures, seminars) (Pittaway, 2023). **'For entrepreneurship'** is occupationally focused (Jardim & Sousa, 2023), looking at entrepreneurship as a job or self-

employment and aims to provide the necessary knowledge and skills to aspiring entrepreneurs, including knowledge about business planning, budgeting, and human resource management (Hoppe et al., 2017). **'Through entrepreneurship'** refers to a process-based and experiential approach (Jardim & Sousa, 2023) in which students actually engage in an entrepreneurial learning process are involved in discussions on concrete cases, making entrepreneurial simulations (Pittaway, 2023; Middleton & Donnellon, 2014; Kyrö, 2008; Kyrö, 2005). This strategy relies on the broader meaning of entrepreneurship, can be included in other general education courses, and can also be considered a complementary didactic method for achieving learning objectives that can be difficult to achieve in other ways (Hoppe et al., 2017). **'In entrepreneurship'** involves a practical approach (Jardim & Sousa, 2023) through which students learn how to put a business idea into practice, how to start-up and how to create value (Pittaway, 2023; Hoppe et al., 2017).

As a singular approach, the **'about entrepreneurship'** strategy it is the most criticized by the entrepreneurship education literature (Jardim & Sousa, 2023). **'About** and **for entrepreneurship'** is the most common strategy in universities (Lackéus, 2015; Mwasalwiba, 2010). **'Through'** and **'in entrepreneurship'** raise a series of constraints in higher education (limited resources and time, teacher resistance, assessment and evaluation issues, etc.), but it deserves to be explored and implemented due to their high relevance to all students from all fields of study.

In this context, our cross-campus Entrepreneurship course, customized on varied non-economic fields of study and developed in an integrated package with Career coaching and Life skills courses, advocates for generalizing entrepreneurial education to all fields of study due to the benefits it has on students' non-cognitive competencies and social impact. The project proposal started from our conviction that entrepreneurial education must be developed not only inside the economic field of study but also outside it for the promotion of entrepreneurial culture and the development of entrepreneurial competencies, and implicitly of non-cognitive ones, at large scale, which will help the future graduates not only to start a business but also to be successful on the labor market and in everyday life.

The present work completes our research concerns in the field of entrepreneurial education regarding the application and the impact from the perspective of students of a radiant (cross-campus) entrepreneurship program model at the university level (Dodescu & Caus, 2020; Dodescu et al., 2021a), the impact of entrepreneurial education on the entrepreneurial intention of students from different fields and cycles of study (Dodescu et

al., 2021b; Hatos et al., 2022) and the evolution of entrepreneurial intentions of students and its antecedents during the COVID-19 pandemic with the exploration of inter-individual differences and intra-individual changes (Botezat et al., 2022).

Cross-Campus Entrepreneurship Program at the University of Oradea, Romania

University of Oradea and AntreV project

Located on the Western border of Romania, built on a tradition of uninterrupted higher education for 60 years, the University of Oradea has a decisive role in the socio-economic and cultural development of the area. It has obtained annually, successively, the authorization and accreditation of 172 study programs (106 - bachelor's degrees, 66 - master's degrees, and 18 doctoral fields). In the academic year 2022-2023, the University of Oradea had 20.445 beneficiaries of educational services (12.114 students in bachelor's programs, 2.820 students in master's programs, 571 doctoral students, and 4.940 in other types of education); 864 teaching staff (109 professors, 237 associate professors, 409 lecturers, and 109 assistants). The University of Oradea has, in its structure, 15 faculties with 47 didactic departments, seven doctoral schools with 18 doctoral fields, a department for distance learning education, a department for the training of teaching staff, a center for postgraduate study programs, and 27 research centers. To respond to the university's third mission - actions aimed at entrepreneurship in a broader sense, technology transfer and commercialization, spin-off creation, and partnerships with a wide range of innovation stakeholders and with society in general, the University of Oradea has implemented several projects for the development and promotion of entrepreneurial culture, e.g., the AntrES project - **Entrepreneurial school for women**, implemented between 2009-2011 (University of Oradea, 2011, Dodescu et al., 2011), selected by the European Commission as a success story and recognized by OECD & European Commission as an example of good practice (OECD & European Commission, 2012, 2013), in which 1800 women from 6 counties on the Western border of Romania benefited from entrepreneurial skills courses and led to the establishment of 209 new businesses. At the end of the financing, within the University of Oradea, two courses (72 training hours each) were included in the educational offer of the Faculty of Economic Sciences: "Entrepreneurial School: Business Start-up" (University of Oradea, 2012a) and "Entrepreneurial School: Business Development" (University of Oradea, 2012b). Also, several institutional development

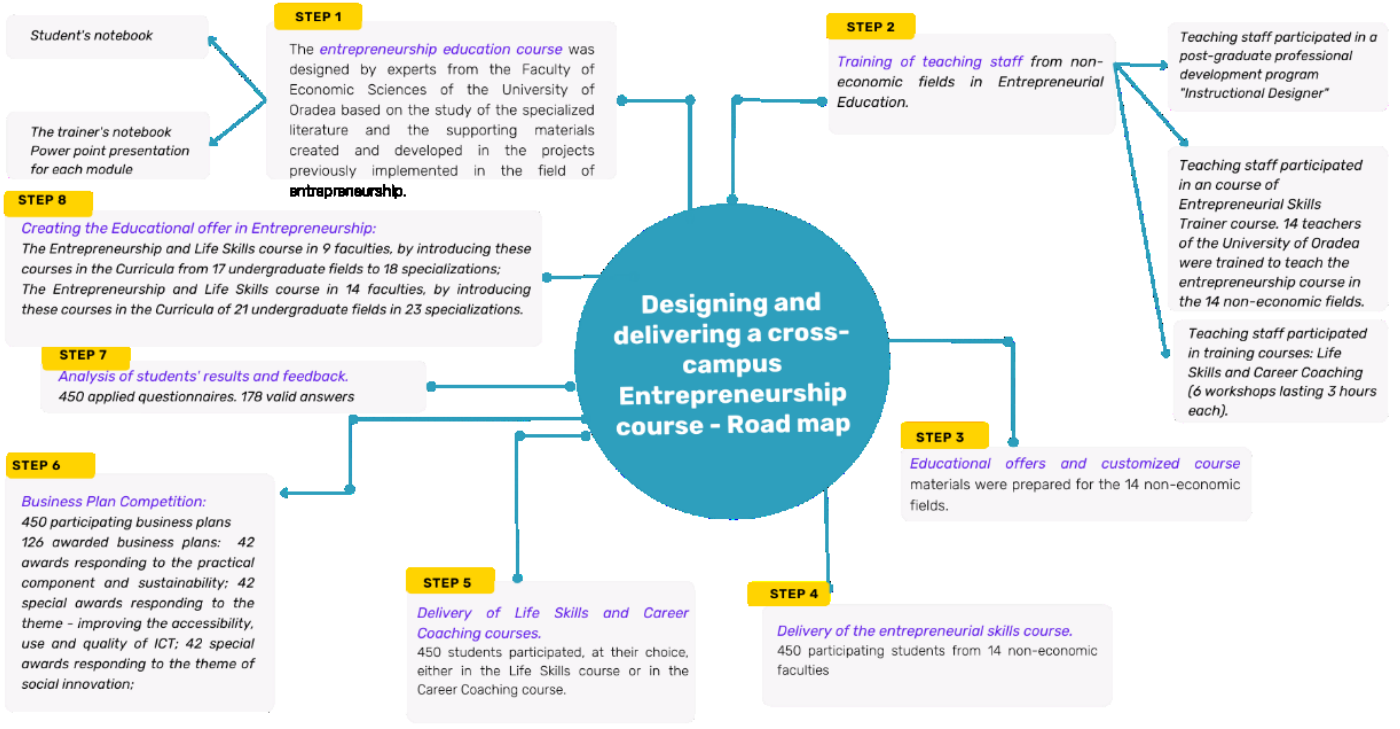
projects with an entrepreneurial training component (workshops, role model meetings, business plan competition, etc.), financed by the Romanian Government, were implemented on a smaller scale, such as AntreNet (University of Oradea, 2019a), ANTRECOM (University of Oradea, 2020), ANTREco (University of Oradea, 2021), ANTREcowo (University of Oradea, 2022). However, after the completion of these projects, the lack of funding, dedicated human resources, and an integrated cross-campus framework of entrepreneurship education did not lead to notable results outside the Faculty of Economic Sciences.

The AntreV project - "Entrepreneur for the future" (University of Oradea, 2019b), implemented in the period 2019-2021, wanted to continue the activity of promoting and supporting entrepreneurship education and managed to implement entrepreneurial competencies training courses within the curricula of all faculties, which means that for the following university years, these courses are available and accessible to all students of the University of Oradea in their own faculty, in an officially organized framework, even if the financing of the AntreV project was completed in 2021. The general objective of the project was to increase the number of students at the University of Oradea by stimulating the participation of students in undergraduate study programs, especially those from vulnerable categories, and by increasing the attractiveness of educational offers, especially in terms of entrepreneurship, correlated with the improvement the competences of teaching staff. During the two years of implementation, within the project, a total target group of 450 students of the University of Oradea enrolled in a non-economic bachelor's degree program were selected and trained, as well as 84 teaching staff from higher education employed by the University of Oradea. The main activities of the project were: Project management and implementation; Information and advertising; Target group selection and monitoring; The preparation of course materials from the project and the development of specialized educational offers by fields of study - Entrepreneurial Competencies for non-economists, Career Coaching, Life Skills; Ensuring integrated packages of support services for pupils and students, especially for those from vulnerable groups, to increase the rate of access and participation in the undergraduate programs of the University of Oradea; Improving the qualification of the teaching staff of the University of Oradea; Entrepreneurship program for students related to the field of study with a practical component; Personalized transversal skills training program for students - Career Coaching and Life Skills.

The AntreV framework for a cross-campus Entrepreneurship program

The activity of designing Entrepreneurship, Career Coaching, and Life Skills courses and the development of specialized educational offers by fields of study was carried out within Activity 4 of the AntreV project. This activity was aimed to diversify the entrepreneurship educational offer of the University of Oradea in non-economic fields of study by validating, authorizing, and implementing three new courses - Entrepreneurship, Career Coaching, and Life Skills, complementing the university entrepreneurship programs in non-economic education and correlated with the needs of the labor market in the competitive economic sectors and smart specialization areas of the North-West region of Romania. The AntreV framework for designing and delivering the cross-campus Entrepreneurship program is presented in Figure 1.

Figure 1. The main stages in designing and delivering the cross-campus Entrepreneurship course at the University of Oradea



Source: created by the authors

Stage 1 – *Preparation of the general educational offers and course support for Entrepreneurship, Career Coaching and Life Skills*

The Entrepreneurship course was designed by experts from the Faculty of Economic Sciences of the University of Oradea based on the study of the specialized literature and the support materials created and developed in the previous AntreS project (Bibu et al., 2010a,b), previously implemented by the University of Oradea. The course materials for the Life Skills and Career Coaching courses were designed by experts from the business environment employed by the partner of the University of Oradea in the project. The course materials had the following components: course support, power point presentation for each module, student's notebook, trainer's notebook.

Entrepreneurship Course

Duration: 56 hours (42 hours of theoretical training; 14 hours of practical training)

Main objective: acquisition of entrepreneurial competencies

Course objectives:

- Knowing the advantages and disadvantages of being an entrepreneur;
- Creating a business plan;
- Knowledge of possible development strategies in the medium and long term for a company;
- Formation and management of a team;
- Realization of a marketing strategy, a communication strategy, and a sales strategy;
- Understanding the financial accounting management of the business and the legal implications of creating a company and signing contracts;
- Creating a risk management plan.

Table 1. Entrepreneurship Course Structure

Reference objectives	Basic content on theoretical or practicla training chapters/Modules
At - To know the reasons that can be the basis of the entrepreneurial decision in order to become aware of the real motivation to establish their own business; - To know the qualities and skills necessary for a successful entrepreneur to achieve an objective self-evaluation; - To be familiar with the possible sources of information that can lead to finding a successful business idea.	Introduction to entrepreneurship (5 hours) 1. Motivations 2. Abilities and skills - The ability to assume risk - Innovative spirit - Propensity for action - Winning mentality - The ability to learn permanently - Resistance to weights - Responsibility - Communication skills - Adaptability - Perseverance - Organizational capacity 3. Sources for business ideas 4. The decision to invest - Personal considerations - Business considerations
– To highlight the importance of the business environment for future entrepreneurs; - To understand the role of SMEs and entrepreneurs in local development; – To understand the process of choosing a feasible business idea; - To know the influences of the external environment on the future business; - To understand the responses that companies can give to the action of environmental factors.	Understanding the business environment (6 hours) 1. The business environment: - Assessment of opportunities and risks - Environmental characteristics and classifications 2. Identifying and choosing the business idea - Business types - Criteria to evaluate pre-selected business ideas - Scientific methods for identifying the probability of success of a business
- To know the possibilities of authorizing a business in Romania; - To identify the elements that must be taken into account in substantiating the decision to choose the most suitable form of business authorization;	Business authorization (6 hours) 1. Forms of organization: - With legal personality *versus* Without legal personality - Forms of organization for businesses with legal personality - Business types without legal personality

- To know the stages that must be followed to authorize a business in Romania; - To acquire basic information about the fiscal obligations that are specific to the different forms of operation of a business in Romania.	- Types of fiscal obligations that require study before choosing the form of organization 2. Steps: - Steps to follow for the authorization of a commercial company in Romania - Documents required for registration at the Trade Register - Steps to follow after registration at the Trade Register until the start of activity for businesses with legal personality - Steps to follow after registration at the Trade Register until the start of activity for businesses without legal personality
- To form the skills of analyzing the competitors present on the market; – To know the buying habits and behaviors of customers; – To understand the essential role that sales forces play in a business; – To form skills for effective sales of products; – To train their skills in applying low-budget marketing tools.	Customers, competitors, ways of selling (10 hours) 1. Types of customers - The importance of knowing the types of customers and the types of categories - The client's environment - Factors that influence consumer behavior - Typology of purchasing behavior - Attracting and retaining customers 2. Competition - Who are the competitors? - Forms of competition - What are the competitors doing? 3. Tailored selling - Direct sale - Indirect sale - Wholesale intermediaries - Retail intermediaries - Forms of retail trade - Franchise - Which sales method should I choose? 4. Marketing with low-budget - The product (What do I offer my customers?) - Pricing - Delivery (Product placement) - Product promotion (How will the product be known in the market?) - Identification of the promotion target, potential consumers

	Positioning Defining promotion objectives Establishing the promotional budget Designing the promotion message Selection of message transmission channels Establishig the promotional mix Evaluation and control of promotional actions
- To understand the concept of human resources and their importance in the success of starting a business; - To know how to use resources through the lens of a company's functions; - To acquire skills in identifying the sources of financing necessary for starting the business.	Estimating the necessary resources and identifying funding sources (6 hours) 1. Types of resources Financial resources Material resources Human resources Information resources 2. Choosing the right resources and using them appropriately The added value chain Use of resources within the company Production Marketing Research and development Staff Finances 3. Funding resources Own funds Bank loans Funding obtained through EU programs for SMEs Venture capital funds Leasing Credits from suppliers and customers
- To know the role of a business plan; - know the content of a business plan; - To train the specific skills of drawing up a business plan; - To draw up a business plan.	Business Plan (29 hours) Theoretical training (9 hours) 1. Presentation Sources of data necessary for the preparation of a Business Plan - The need for a Business Plan 2. The components (chapters) of the Business Plan: - Synthesis of the Business Plan

	- Business (company, field of activity, objectives) - Market (customers, products and services, market segment, competitors) - Management and personnel (production, management, personnel) - Financial forecasts (estimates, forecasted initial balance sheet, income and expenditure budget, cash flow budget, economic-financial indicators) - Appendices Practical training (14 hours) 3. Elaboration of the Business Plan of the business proposed to be established Business Plan Structure: - General company data and field of activity, identification of objectives - Detailing the business, products, and services, potential market and competitors - Description of the company's basic activity/s, as well as those related to management activities and those in the field of Human Resources - Cash flow, business financing sources, efficiency and profitability indicators - Elaboration of financial projections and financial forecasts 1-5 years

Source: own elaboration based on Bibu et al., 2010 a,b.

Career Coaching Course

Duration: 28 hours

Main objective: acquisition of transversal skills for career development

Basic content on modules:

- Module 1 - Introduction to Coaching
- Module 2 - Behavioral patterns
- Module 3 - Cognitive behavioral coaching
- Module 4 - SMART objectives
- Module 5 - Coaching for performance (GROW)

- Module 6 - Application of coaching methods in career development and integration of horizontal themes: Improving the accessibility, use and quality of ICT and Social Innovation

Life Skills Course

Duration: 28 hours

Main objective: acquisition of transversal skills for personal and social life

Basic content on modules:

- Module 1 – Intro and vision (Planning/organization, Leadership, Active citizenship);
- Module 2 – Personal values and decisions (Decision making, Social skills, Teamwork);
- Module 3 – Stress Management (which includes Flexibility, Critical Thinking, Problem Solving);
- Module 4 – Mindfulness (which also includes elements of Stress Management, Acceptance of Differences);
- Module 5 – Nonviolent Communication (Communication and cooperation, Conflict resolution, Accepting differences);
- Module 6 – Discipline and integration of horizontal themes (Active Citizenship, Critical Thinking, Planning/organization).

Stage 2 – *Teacher training*

The teacher training had three components and consisted of:

- Participation of 84 selected teachers from each faculty of the University of Oradea in an "in-house" postgraduate professional development program entitled "Instructional Designer", which aimed at innovative educational content and modern and flexible learning resources with a particular focus on improving the accessibility and use of information and communication technologies in the educational process;
- Participation of 14 selected teachers (1 from each faculty of the University of Oradea except Faculty of Economic Sciences) in "Entrepreneurial Competencies" Training for Trainers (42 hours) organised by the partner (a training company recognized on the labor market) and finalized with an exam and a graduation certificate, recognized by the Romanian Ministry of Labor and Social Protection and the Ministry of Education.
- Participation of 56 selected teachers (from each faculty of the University of Oradea) in the Life Skills or Career Coaching Training

for Trainers courses, organized in the form of 6 workshops with a duration of 3 hours each completed by examination and obtaining a participation certificate issued by partner (a training company recognized on the labor market).

Stage 3 – *Customization of the educational offers and course support Entrepreneurship, Career Coaching and Life Skills*

The customization of the educational offers and course support Entrepreneurship, Career Coaching and Life Skills in the 14 non-economic fields of study was carried out by the trained teaching staff, with the support and advice of the University of Oradea entrepreneurship experts and Partner trainers.

Stage 4 – *Delivering of the "Entrepreneurial Competencies" course for students by previously trained teachers from their own faculty*

The cross-campus entrepreneurship education program with a practical component for non-economics students, improved, adapted and customized for all areas of undergraduate studies of the University of Oradea, took place over a period of 6 months within the AntreV project. Practically, 450 students selected from 14 faculties of the University of Oradea participated in the activities of the " *Entrepreneurial Competencies* " course, lasting 56 hours, of which 42 hours for theoretical training and 14 hours for practical training. During the practical activities, 450 Business Plans were drawn up in relation to each student's field of study. At the end of the activities, the students were evaluated and certified for *Entrepreneurial Competencies*, by the Bihor County Agency for Payments and Social Inspection within the Ministry of Labor and Social Solidarity.

Stage 5 - *Delivering of the Life Skills and Career Coaching courses for students by previously trained teachers from their own faculty*

The transversal component of the cross-campus entrepreneurship education program, improved, adapted, and customized for all areas of undergraduate studies of the University of Oradea, took place over a period of 3 months within the AntreV project. Four hundred fifty students participated, by choice, in one of the courses, **Career Coaching** and **Life Skills**, with a duration of 28 hours of training, at the end of which the students received a certificate of participation.

Stage 6 - *Organization of the Business Plan Competition*

The business plan competition was held at the University of Oradea. 450 business plans prepared by students from non-economic fields participated in this competition, and 184 business plans were awarded, including special awards for business plans that responded to the horizontal themes of social innovation and improving the accessibility, use, and quality of ICT.

Stage 7 - *Analysis of results and students feedback*

To analyze the results of the entrepreneurship program, we applied a questionnaire, with response options with 4-point Likert scales: Total Agreement, Agreement, Disagree and Total Disagree, on the following ten themes: Understanding the fundamental concepts of entrepreneurship – 5 items; The relevance of the Entrepreneurial Competencies course – 5 items; Modeling beliefs during course activities – 6 items; Active learning – 5 items; Teacher-student relationship – 5 items; The motivation to participate and acquire entrepreneurial skills – 6 items; Course organization mode - 6 items; The teacher's flexibility in establishing the pace of learning and communication with students - 5 items; Evaluation of the Entrepreneurial Competencies course - 5 items; Demographic aspects – 5 items (age; gender; marital status; nationality; ethnicity). The questionnaire was applied online to a total of 450 students, with a response rate of 39.55% (178 validated responses). The students' feedback and the analysis of the results of the implementation of the entrepreneurial skills program were extremely positive and were previously published (Dodescu et al., 2021a).

Stage 8 - *Creation of the Entrepreneurship educational offer at the University of Oradea*

Therefore, as part of the AntreV project, the University of Oradea developed, in 2020, an educational offer – for the optional Entrepreneurship course (56 hours) and two complementary educational offers related to the Entrepreneurship course: an optional/facultative Career Coaching course and an optional/facultative Life skills course, correlated with the needs of the labor market in the competitive economic sectors and smart specialization fields of the North-West region of Romania (Romanian Government & Ministry of Education, 2020) and specialized in 14 fields of study from the University of Oradea as follows:

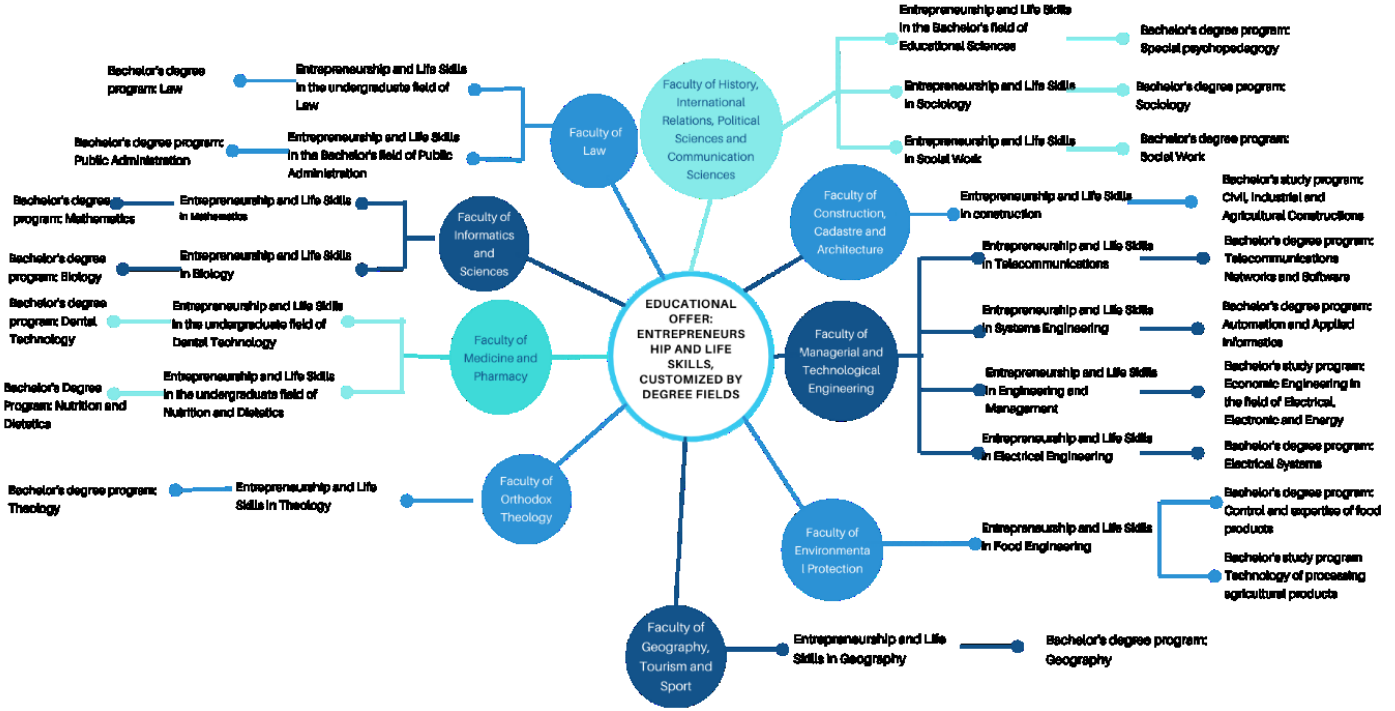
1. Bachelor's field in Electronic Engineering, Telecommunications, and Information Technologies (fundamental field: Engineering Sciences).

2. Bachelor's field of Geodetic Engineering (fundamental field: Engineering Sciences).
3. Bachelor's in engineering and management (fundamental field: engineering sciences) at the Faculty of Energy Engineering and Industrial Management.
4. Bachelor's field of Engineering and Management (fundamental field: Engineering Sciences) at the Faculty of Managerial and Technological Engineering.
5. Bachelor's field of Agronomy (fundamental field: Engineering Sciences).
6. Bachelor's degree in the field of Geography (fundamental field: Mathematics and natural sciences).
7. Bachelor's field of Mathematics (fundamental field: Mathematics and natural sciences).
8. Bachelor's field of Health (fundamental field: Biological and biomedical sciences).
9. Bachelor's field of Law (fundamental field: Social Sciences).
10. Bachelor's field of International Relations and European Studies (fundamental field: Social Sciences).
11. Bachelor's fields of Social Care, Pedagogy of primary and preschool education, Psychology, Special psychopedagogy, Sociology (fundamental field: Social Sciences).
12. Bachelor's field of Philology (fundamental field: Humanities and Arts).
13. Bachelor's field of Music (fundamental field: Humanities and Arts).
14. Bachelor's field of Theology (fundamental field: Humanities and Arts).

At the end of the AntreV project, the developed course materials were transformed into educational offers lasting 28 hours each, which can be found in the curriculum (as optional or optional subjects) starting from the 2021-2022 academic year. Thus, the *Entrepreneurship* and *Life Skills* courses package was implemented in 9 faculties by introducing these courses in the curriculum from 17 bachelor's fields of study and 18 specializations, as can be seen in Figure 2.

Therefore, as part of the AntreV project, the University of Oradea developed, in 2020, as an educational offer

Figure 2. Map of the educational offer of the Entrepreneurship and Life Skills courses package at the University of Oradea, starting with the academic year 2021-2022



Source: created by the authors

The *Entrepreneurship* and *Career Coaching* courses package was implemented in 14 faculties, by introducing these courses in the curriculum from 22 bachelor's fields of study and 24 specializations, as can be seen in Figure 3.

Figure 3. Map of the educational offer of the Entrepreneurship and Career Coaching courses package at the University of Oradea, starting with the academic year 2021-2022



Source: created by the authors

Limits and discussions

When discussing the limits of our article one ought to keep in mind that is based on qualitative (descriptive) data acquired to present a case study. Our approach is consistent with Lackéus (2015, 22), who emphasized the applicability of case studies to produce generalizable knowledge for assessing the impact of entrepreneurship education. Our study case supports prior empirical research findings that entrepreneurship education can help to improve general education (Lackéus, 2015) and must be expanded beyond business administration and economics (Turner & Gianiodis, 2018). We contribute to existing literature (Jardim & Sousa, 2023, Balushi et al., 2023; Kakouris & Liargovas, 2021; Krabel, 2018; Sousa, 2018; Smith et al., 2017; Lackéus, 2015; Hyclak & Barakat, 2010; Pittaway & Cope, 2007; Gibb, 2002), bringing evidence regarding a cross-campus entrepreneurship education program designed to contribute on general education through developing entrepreneurial competencies of students (and staff), but also their non-cognitive competencies related with career development and life skills. Our study case is relevant as it describes the process of curriculum designing and delivering of Entrepreneurship, Career coaching and Life skills courses as an integrated package. We also bring additional support about entrepreneurship education customization on the field of study to facilitate the transition to the labor market and increase employability. Our study case is more relevant as it describes the process of curriculum designing and delivering an entrepreneurial education program customized at the same time and in parallel to a large number of fields of Bachelor' s degree study, which have been very rarely investigated before.

Comparing our program with those from previous research (Jardim & Sousa, 2023; Balushi et al., 2023; Hoppe et al., 2017; Smith et al., 2017; Pittaway & Cope, 2007), it appears the importance of dedicated financing. These findings are consistent with literature regarding cross-campus or radiant wide-university entrepreneurship programs (Katz et al., 2013; Welsh, 2014; Morris et al., 2013; Streeter et al., 2002) that described the cross-campus programs appealing for students, but costly and challenging for universities management. In our case, due to the ESF financing, the cross-campus entrepreneurship pedagogical experience is made more approachable and pleasurable for students by having them choose a business idea and develop a business plan that aligns with their field of study and by providing them with access to faculty members trained to become trainers in entrepreneurship customized on the field of study. This cross-campus model, very rarely applied and investigated before, especially in Europe,

might be extrapolated in European universities and generalized to the literature on the topic of cross-campus or radiant wide-university entrepreneurship education.

Our in-depth analysis of a particular program (cross-campus entrepreneurship program), university (University of Oradea, Romania), and target group (students from large and mixed fields of study, all existing fields of study in the University of Oradea, outside the Faculty of Economic Sciences), to in a has the inherent geographical and methodological limitations of a case study. Our cross-campus entrepreneurship program might definitively apply to another university or generalize at a larger scale in higher education (regional, national scale), but in the absence of dedicated financing, it's challenging, expensive, and time-consuming. Also, it's difficult to establish whether the findings drawn in our case - a comprehensive university encompasses almost all the fundamental fields of study (from Engineering sciences, Biological and biomedical sciences, Mathematics and natural sciences, Social sciences to Humanities and Arts) - might be found in other universities cases or extend to a broader population. Given the qualitative (descriptive) nature of our investigation and its limitations, the findings are only preliminary. Further efforts are required to ensure the sustainability of the Entrepreneurship, Career Coaching and Life Skills educational offers, after ESF financing, and future research to enlighten impact of cross-campus entrepreneurship education on general education and non-cognitive competencies.

Conclusions

This article provides, in our opinion, an innovative approach of cross-campus entrepreneurship education that integrates entrepreneurship with career coaching and life skills education customized on field of study. Analyzing the curriculum design process and the delivery process of this program to a significant target group of Bachelor students makes it clear that integrated and study field-oriented entrepreneurship, career coaching, and life skills education might respond successfully to the EntreComp conceptual model (Bacigalupo et al., 2016), to Lackéus's (2015) framework of entrepreneurial cognitive and non-cognitive competencies and to „**about, for, through and in" entrepreneurship** educational strategy (Kakouris & Liargovas, 2021; O'Connor, 2013; Pittaway & Edwards, 2012, Heinonen & Hytti, 2010; Gibb, 2002).

The study case of the University of Oradea presented in this article might be taken into account when designing a tailored and impact-maximizing cross-campus entrepreneurship education. Scaling this cross-campus entrepreneurship education model requires a careful revision of the

integrated set of entrepreneurial cognitive and non-cognitive competencies and also of the appropriate pedagogical methods for **„about, for, though, and in" entrepreneurship**. Future research development will focus on the impact of cross-campus entrepreneurship education on students' academic performance and non-cognitive competencies.

Acknowledgments:

The AntreV ("Entrepreneur for the future") project, financed by the European Social Fund – Investing in People!, Human Capital Operational Programme, POCU/379/6/21/OS.6.7,6.9,6.10, MySMIS Code: 124167, Value: 7.282.442 lei (approx. 1,500,000 Euros), Period of implementation: 24.05.2019 - 26.06.2021, Coordinator: University of Oradea, Romania, Partner: Corporactive Consulting Ltd., website: https://antrev.uX.ro/ro/.

References

Bacigalupo, M., Kampylis, P., Punie, Y., & Van den Brande, G. (2016). EntreComp: The entrepreneurship competence framework. *Luxembourg: Publication Office of the European Union*, *10*, 593884. https://publications.jrc.ec.europa.eu/repository/handle/JRC101581

Balushi, S., Balushi, H., Shukaili, N., Naidu, V. R., Reales, L., & Jesrani, K. (2023). *The influence of higher education curriculum on entrepreneurship education*. https://doi.org/10.46529/socioint.202331

Bibu, N., Botezat, E., Ionescu, Gh. & Predişcan, M. (coord.). (2010a). *Iniţierea afacerii: Suport de curs şi aplicaţii, şcoala antreprenorială pentru femei*. Oradea: The University of Oradea Publishing House.

Bibu, N., Botezat, E., Ionescu, Gh. & Predişcan, M. (coord.). (2010b). *Dezvoltarea afacerii. Suport de curs şi aplicaţii Şcoala antreprenorială pentru femei*. Oradea: The University of Oradea Publishing House.

Botezat, E.-A., Constăngioară, A., Dodescu, A.-O., & Pop-Cohuţ, I.-C. (2022). How stable are students' entrepreneurial intentions in the COVID-19 pandemic context? *Sustainability*, *14*(9), 5690. https://doi.org/10.3390/su14095690

Cotton, J. (1991). Enterprise education experience: a manual for school-based in-service training. *Education+ Training*, 33, 6-12.

Dodescu, A. O., Căuş, A., Pop Cohuţ, I. C., Pop, P., & Borza, A. (2021a). Impact Assessment of a Radiant University-Wide Program in Entrepreneurship Education. The Case of University of Oradea, Romania. *Proceedings of the European Conference on Innovation and Entrepreneurship 2021*. European Conference on Innovation and Entrepreneurship 2021. https://doi.org/10.34190/EIE.21.234

Dodescu, A.-O., & Căuş, A. (2020, September 17). Application of radiant university-wide program model in entrepreneurship education: A case of University of Oradea in Romania. *Conference Proceedings of 15th European Conference on Innovation and Entrepreneurship (ECIE20)*. 15th European Conference on Innovation and Entrepreneurship (ECIE20), Roma, Italy. https://doi.org/10.34190/EIE.20.179

Dodescu, A.-O., Bădulescu, A., Giurgiu, A., & Pop Cohuţ, I. C. (2011). Women entrepreneurship in the Western Romania. Research results and policy recommendations. *Theoretical and Applied Economics*, *XVIII (2011),* (1 (554)), 25–48

Dodescu, A.-O., Botezat, E.-A., Constăngioară, A., Pop-Cohuţ, I.-C. (2021b). A partial least-square mediation analysis of the contribution of cross-campus entrepreneurship education to students' entrepreneurial intentions. *Sustainability*.; *13*(16):8697. https://doi.org/10.3390/su13168697

Fisher, B., Turner, K., Zylstra, M., Brouwer, R., De Groot, R., Farber, S., Ferraro, P., Green, R., Hadley, D., Harlow, J., Jefferiss, P., Kirkby, C., Morling, P., Mowatt, S., Naidoo, R., Paavola, J., Strassburg, B., Yu, D., & Balmford, A. (2008). Ecosystem services and economic theory: Integration for policy-relevant research. *Ecological Applications*, *18*(8), 2050–2067. https://doi.org/10.1890/07-1537.1

Gibb, A. (2002). In pursuit of a new "enterprise" and "entrepreneurship" paradigm for learning: Creative destruction, new values, new ways of doing things and new combinations of knowledge. *International Journal of Management Reviews*, *4*(3), 233–269. https://doi.org/10.1111/1468-2370.00086

Hatos, R., Cioban, S., Bea, G., Dodescu, A., & Hatos, A. (2022). Assessing the impact of entrepreneurial education on entrepreneurial intentions among Romanian doctoral students and postdoctoral researchers. *Sustainability*, *14*(14), 8369. https://doi.org/10.3390/su14148369

Heinonen, J., & Hytti, U. (2010). Back to basics: The role of teaching in developing the entrepreneurial university. *The International Journal of Entrepreneurship and Innovation*, *11*(4), 283–292. https://doi.org/10.5367/ijei.2010.0006

Hoppe, M., Westerberg, M., & Leffler, E. (2017). Educational approaches to entrepreneurship in higher education: A view from the Swedish horizon. *Education + Training*, *59*(7/8), 751–767. https://doi.org/10.1108/ET-12-2016-0177

Hyclak, T., & Barakat, S. (2010). Entrepreneurship education in an entrepreneurial community. *Industry and Higher Education*, *24*, 475–486. https://doi.org/10.5367/ihe.2010.0018

Jardim, J. (2021). Entrepreneurial skills to be successful in the global and digital world: proposal for a frame of reference for entrepreneurial education. *Education Sciences*, *11*(7), 356. https://doi.org/10.3390/educsci11070356

Jardim, J., & Sousa, M. J. (2023). Research and trends in entrepreneurship education. *Education Sciences*, *13*(7), 673. https://doi.org/10.3390/educsci13070673

Kakouris, A., & Liargovas, P. (2021). On the about/for/through framework of entrepreneurship education: A critical analysis. *Entrepreneurship Education and Pedagogy*, *4*(3), 396–421. https://doi.org/10.1177/2515127420916740

Katz, J., Roberts, J., Strom, R. & Freilich, A. (2013). Perspectives on the development of cross campus entrepreneurship education. *Entrepreneurship Research Journal*, *4*(1), 13-44. https://doi.org/10.1515/erj-2013-0062

Krabel, S. (2018). Are entrepreneurs made on campus? The impact of entrepreneurial universities and graduates' human capital on graduates' occupational choice. *Journal of International Entrepreneurship*, *16*(4), 456–485. https://doi.org/10.1007/s10843-017-0218-z

Kraiger, K., Ford, J. K., & Salas, E. (1993). Application of cognitive, skill-based, and affective theories of learning outcomes to new methods of training evaluation. *Journal of Applied Psychology*, *78*(2), 311–328. https://doi.org/10.1037/0021-9010.78.2.311

Krueger, N. F. (2005). The cognitive psychology of entrepreneurship. In: Acs, Z. J. & Audretsch, D. B. (eds.) *Handbook of entrepreneurship research: An interdisciplinary Survey and introduction*. New York: Springer

Krueger, N. F. (2007). What lies beneath? The experiential essence of entrepreneurial thinking. *Entrepreneurship Theory and Practice*, 31, 123-138

Kucel, A., Róbert, P., Buil, M., & Masferrer, N. (2016). Entrepreneurial skills and education-job matching of higher education graduates. *European Journal of Education*, *51*(1), 73–89. https://doi.org/10.1111/ejed.12161

Kyrö, P. (2008). A theoretical framework for teaching and learning entrepreneurship. *International Journal of Business and Globalisation*, *2*(1), 39. https://doi.org/10.1504/IJBG.2008.016133

Lackéus, M. (2015). *Entrepreneurship in education. What, why, when, how. Entrepreneurship 360*. OECD. https://www.oecd.org/cfe/leed/BGP_Entrepreneurship-in-Education.pdf

Markman, G. D., Baron, R. A. & Balkin, D. B. 2005. Are perseverance and self-efficacy costless? Assessing entrepreneurs' regretful thinking. *Journal of Organizational Behavior*, 26, 1-19

Middleton, W. K., & Donnellon, A. (2014). Personalizing entrepreneurial learning: A pedagogy for facilitating the know why. *Entrepreneurship Research Journal*, *4*(2). https://doi.org/10.1515/erj-2013-0040

Morris, N., Kuratko, D. & Pryor, C. (2013). Building blocks for the development of university-wide entrepreneurship. *Entrepreneurship Research Journal*, *4*(1), 45-68. https://doi.org/10.1515/erj-2013-0047

Murnieks, C. Y. (2007). *Who am I? The quest for an entrepreneurial identity and an investigation of its relationship to entrepreneurial passion and goal-setting*. Doctoral Thesis, University of Colorado

Mwasalwiba, S. E. (2010). Entrepreneurship education: A review of its objectives, teaching methods, and impact indicators. *Education + Training*, *52*(1), 20–47. https://doi.org/10.1108/00400911011017663

O'Connor, A. (2013). A conceptual framework for entrepreneurship education policy: Meeting government and economic purposes. *Journal of Business Venturing*, *28*(4), 546–563. https://doi.org/10.1016/j.jbusvent.2012.07.003

OECD & European Commission (2012). *OECD-EU Report 2012 – The Panorama of Entreprenorial Activity in Europe*. LEED Programme (Local Economic and Employment Development). http://www.cop-ie.eu/node/485.

OECD & European Commission. (2013). *The Missing Entrepreneurs. Policies for Inclusive Entrepreneurship in Europe*. OECD Publishing. http://www.oecdbookshop.org/oecd/display.asp?lang=EN&sf1=identifiers&st1=5k423dnnbkd4.

OECD. (2019). *OECD future of education and skills 2030* [OECD Learning Compass 2030. A series of concept notes]. https://www.oecd.org/education/2030-project/teaching-and-learning/learning/learning-compass-2030/OECD_Learning_Compass_2030_Concept_Note_Series.pdf

Pittaway, L. (2023). Entrepreneurship theory and ideation teaching techniques. In A. C. Corbett, L. D. Marino, & G. A. Alsos (Eds.), *The Age of Entrepreneurship Education Research: Evolution and Future* (Vol. 23, pp. 65–90). Emerald Publishing Limited. https://doi.org/10.1108/S1074-754020230000023005

Pittaway, L., & Cope, J. (2007). Entrepreneurship education. A systematic review of the evidence. *International Small Business Journal, 25*, 479–510. https://doi.org/10.1177/0266242607080656

Pittaway, L., & Edwards, C. (2012). Assessment: Examining practice in entrepreneurship education. *Education + Training*, *54*(8/9), 778–800. https://doi.org/10.1108/00400911211274882

Popescu, S. (2014). Controllable and uncontrollable variables in the study of entrepreneurship, in small and medium businesses. *International Review of Management and Business Research*, *3*(2), 762-770. https://irmbrjournal.com/papers/1399191796.pdf

Romanian Government & Ministry of Education (2020). *H.G. nr. 229 /2020, cu completările ulterioare prin HG 739/2020, privind programele de licență, respectiv HG 297/2020 cu completările ulterioare prin HG 7382020, privind programele de master*. https://www.edu.ro/sites/default/files/fisiere%20articole/HG-nr.-299-din-2020-nomenclator_acreditari-licenta.pdf

Sánchez, J. C. (2011). University training for entrepreneurial competencies: Its impact on intention of venture creation. *International Entrepreneurship and Management Journal*, *7*(2), 239–254. https://doi.org/10.1007/s11365-010-0156-x

Schneider, M. (2015). *Kauffman campuses initiative: A study that explores the phenomenon of cross-campus entrepreneurship*. Ph.D. Thesis, University of Pennsylvania.

Smith, A. M. J., Jones, D., Scott, B., Stadler, A. (2017). Designing and delivering inclusive and accessible entrepreneurship education. In P. Jones, G. Maas, & L. Pittaway (Eds.), *Contemporary Issues in Entrepreneurship Research* (Vol. 7, pp. 335–357). Emerald Publishing Limited. https://doi.org/10.1108/S2040-724620170000007019

Sousa, M. (2018). Entrepreneurship skills development in higher education courses for teams leaders. *Administrative Sciences*, *8*(2), 18. https://doi.org/10.3390/admsci8020018

Streeter, D.H., Jaquette, J.P., Hovis, K., Streeter, D.H., Jaquette, J.P., Hovis, K. (2002). *University-wide entrepreneurship education: Alternative models and current trends*. Cornell University

Turner, T., & Gianiodis, P. (2018). Entrepreneurship unleashed: Understanding entrepreneurial education outside of the business school. *Journal of Small Business Management*, *56*(1), 131–149. https://doi.org/10.1111/jsbm.12365

UK Commission for Employment and Skills. (2014). *The future of work: Jobs and skills in 2030* [Evidence Report 84]. https://assets.publishing.service.gov.uk/media/5a7e312aed915d74e6224b43/er84-the-future-of-work-evidence-report.pdf

University of Oradea, official web site. (n.d.). www.uoradea.ro

University of Oradea. (2011). *Project AntrES - "Entrepreneurship and equal opportunities. An inter-regional model of entrepreneurial school for women", project financed by the European Social Fund—"Invest in people!", Contract no. POSDRU/9/3.1/S/5, Beneficiary: University of Oradea; Partners National Agency for Equal Opportunities*

between women and men; West University of Timişoara; "Aurel Vlaicu" University from Arad; University of North Baia Mare; "Eftimie Murgu" University Reşita; "Satu Mare Commercial Academy" Foundation; Romanian Scientific Management Society, Implementation period: 01.05.2009—01.05.2011, Value: 12,500,104 lei.

University of Oradea. (2012a). *Program "Entrepreneurial School: Business Development", University of Oradea, Faculty of Economic Sciences,* http://steconomiceuX.ro/wp/wp-content/uploads/2010/12/formare-continua-scoala-antreprenoriala-initiere.pdf

University of Oradea. (2012b). *Program "Entrepreneurial School: Business Start-up", University of Oradea, Faculty of Economic Sciences.* http://steconomiceuX.ro/wp/wp-content/uploads/2010/12/formare-continua-scoala-antreprenoriala-initiere.pdf

University of Oradea. (2019a). *Project AntreNet—Entrepreneurship Networking.* https://antrenet.uX.ro/ro/antrenet-2019/proiectul-fdi-antrenet

University of Oradea. (2019b). *Project AntreV - "Entrepreneur for the future" (AntreV), is financed by the European Social Fund – Investing in People!, Human Capital Operational Programme, POCU/379/6/21/OS.6.7,6.9,6.10, MySMIS Code: 124167, Value: 7.282.442 lei (approx. 1,500,000 Euros), Period of implementation: 24.05.2019—26.06.2021, Coordinator: University of Oradea, Romania, Partner: Corporactive Consulting Ltd.* https://antrev.uX.ro/ro/

University of Oradea. (2020). *Project ANTRECOM - Entrepreneurial communication.* https://antrenet.uX.ro/ro/antrecom-2020/proiectul-fdi-antrecom

University of Oradea. (2021). *Project ANTREco—University Entrepreneurial Ecosystem.* https://www.uX.ro/display26016

University of Oradea. (2022). *Project ANTREcowo—Student entrepreneurial coworking.* https://sas.uX.ro/ro/

Welsh, D.H.B. (2014). *Creative cross-disciplinary entrepreneurship: A practical guide to a cross campus program*. Palgrave-MacMillan

Annex 1

Table 1: EntreComp conceptual model

Source: Bacigalupo M, Kampylis P, Punie Y and Van Den Brande L. (2016). EntreComp: The Entrepreneurship Competence Framework. EUR 27939 EN. *Luxembourg (Luxembourg): Publications Office of the European Union*. JRC101581, 12-13

Areas	Competences	Hints	Descriptors
1. Ideas and opportunities	1.1 Spotting opportunities	Use your imagination and abilities to identify opportunities for creating value	Identify and seize opportunities to create value by exploring the social, cultural and economic land-scape Identify needs and challenges that need to be met. Establish new connections and bring together scattered elements of the landscape to create opportunities to create value
	1.2 Creativity	Develop creative and purposeful ideas	Develop several ideas and opportunities to create value, including better solutions to existing and new challenges Explore and experiment with innovative approaches Combine knowledge and resources to achieve valuable effects
	1.3. Vision	Work towards your vision of the future	Imagine the future Develop a vision to turn ideas into action Visualize future scenarios to help guide effort and action
	1.4 Valuing ideas	Make the most of ideas and opportunities	Judge what value is in social, cultural and economic terms Recognize the potential an idea has for creating value and identify suitable ways of making the most out of it

	1.5 Ethical and sustainable thinking	Assess the consequences and impact of ideas, opportunities and actions	Assess the consequences of ideas that bring value and the effect of entrepreneurial action on the target community, the market, society and the environment Reflect on how sustainable long-term social, cultural and economic goals are, and the course of action chosen Act responsibly
2 Resources	2.1 Self-awareness and self-efficacy	Believe in yourself and keep developing	Reflect on your needs, aspirations and wants in the short, medium and long term Identify and assess your individual and group strengths and weaknesses Believe in your ability to influence the course of events, despite uncertainty, setbacks and temporary failures
	2.2 Motivation and perseverance	Stay focused and don't give up	Be determined to turn ideas into action and satisfy your need to achieve Be prepared to be patient and keep trying to achieve your long-term individual or group aims Be resilient under pressure, adversity, and temporary failure
	2.3 Mobilizing resources	Gather and manage the resources you need	Get and manage the material, non-material and digital resources needed to turn ideas into action Make the most of limited resources Get and manage the competences needed at any stage, including technical, legal, tax and digital competences
	2.4 Financial and economic literacy	Develop financial and economic know how	Estimate the cost of turning an idea into a value-creating activity

			Plan, put in place and evaluate financial decisions over time Manage financing to make sure my value-creating activity can last over the long term
	2.5. Mobilizing others	Inspire, enthuse and get others on board	Inspire and enthuse relevant stakeholders Get the support needed to achieve valuable outcomes Demonstrate effective communication, persuasion, negotiation and leadership
3. Into action	3.1 Taking the initiative	Go for it	Initiate processes that create value Take up challenges Act and work independently to achieve goals, stick to intentions and carry out planned tasks
	3.2 Planning and management	Prioritize, organize and follow-up	Set long-, medium- and short-term goals Define priorities and action plans Adapt to unforeseen changes
	3.3 Coping with uncertainty, ambiguity and risk	Make decisions dealing with uncertainty, ambiguity and risk	Make decisions when the result of that decision is uncertain, when the information available is partial or ambiguous, or when there is a risk of unintended outcomes Within the value-creating process, include structured ways of testing ideas and prototypes from the early stages, to reduce risks of failing Handle fast-moving situations promptly and flexibly
	3.4 Working with others	Team up, collaborate and network	Work together and co-operate with others to develop ideas and turn them into action Network

			Solve conflicts and face up to competition positively when necessary
	3.5. Learning through experience	Learn by doing	Use any initiative for value creation as a learning opportunity Learn with others, including peers and mentors Reflect and learn from both success and failure (your own and other people's

Annex 2

Table 2. Entrepreneurial competencies. Framework outlining some key entrepreneurial competencies and their relation to cognitive and non-cognitive competencies

Source: Lackéus, M. (2015). Entrepreneurship in Education. What, Why, When, How. Entrepreneurship 360. OECD. https://www.oecd.org/cfe/leed/BGP_Entrepreneurship-in-Education.pdf, p.13

	Main theme	Sub themes	**Primary source**	**Interpretation used in this report**
Cognitive competencies	**Knowledge**	**Mental models**	(Kraiger et al., 1993)	Knowledge about how to get things done without resources, Risk and probability models.
		Declarative knowledge	(Kraiger et al., 1993)	Basics of entrepreneurship, value creation, idea generation, opportunities, accounting, finance, technology, marketing, risk, etc.
		Self-insight	(Kraiger et al., 1993)	Knowledge of personal fit with being an entrepreneur / being entrepreneurial.
	Skills	**Marketing skills**	(Fisher et al., 2008)	Conducting market research, Assessing the marketplace, Marketing products and services, Persuasion, Getting people excited about your ideas, Dealing with customers, Communicating a vision.
		Resource skills	(Fisher et al., 2008)	Creating a business plan, Creating a financial plan, Obtaining financing, Securing access to resources
		Opportunity skills	(Fisher et al., 2008)	Recognizing and acting on business opportunities and other kinds of opportunities, Product / service / concept development skills
		Interpersonal skills	(Fisher et al., 2008)	Leadership, Motivating others, Managing people, Listening, Resolving conflict, Socializing

		Learning skills	(Fisher et al., 2008)	Active learning, Adapting to new situations, coping with uncertainty
		Strategic skills	(Fisher et al., 2008)	Setting priorities (goal setting) and focusing on goals, Defining a vision, Developing a strategy, Identifying strategic partners
Non-cognitive competencies	**Attitudes**	**Entrepreneurial passion**	(Fisher et al., 2008)	"I want". Need for achievement.
		Self-efficacy	(Fisher et al., 2008)	"I can". Belief in one's ability to perform certain tasks successfully.
		Entrepreneurial identity	(Krueger, 2005, Krueger, 2007)	"I am / I value". Deep beliefs, Role identity, Values.
		Proactiveness	(Sánchez, 2011, Murnieks, 2007)	"I do". Action-oriented, Initiator, Proactive.
		Uncertainty / ambiguity tolerance	(Sánchez, 2011, Murnieks, 2007)	"I dare". Comfortable with uncertainty and ambiguity, Adaptable, Open to surprises.
		Innovativeness	(Krueger, 2005, Krueger, 2007)	"I create". Novel thoughts / actions, Unpredictable, Radical change, Innovative, Visionary, Creative, Rule breaker.
		Perseverance	(Markman et al., 2005, Cotton, 1991)	"I overcome". Ability to overcome adverse circumstances.