Entrepreneurship education programme tailored to Eastern European neighbouring countries

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Abstract

The purpose of this research was to develop a framework for an Entrepreneurial Education (EE) programme tailored to Eastern European neighbourhood universities. A transversal design employing Delphi method involving sixteen experts in EE from the EU and Eastern European neighbouring countries has been used. The research has concluded that an Entrepreneurial Education programme in the Eastern Europe should ideally include the following five modules: Entrepreneurship; Innovation management; Business planning; Intellectual Property law; Leadership and start-up project management. The modules should ideally be delivered in start-up centres where opportunities are provided for the application of the theoretical concepts. The findings provide empirical evidence and arguments for the development of a structure and content that is the most useful to the students enrolled on EE programmes in the Eastern European universities.

Keywords: entrepreneurship in Eastern Europe, higher education, entrepreneurship education

Introduction

Eastern European neighbouring countries' need for viable solutions to socio-economic development is fostering intense research and debate. Encouraging students enrolled in higher education to set-up their own companies is one of the most frequently suggested approaches (Cotelnic, 2008; Chasovschi *et al*., 2014; Pazdrii *et al*., 2017; Kulishov, 2018). Entrepreneurs are regarded as engines of development and entrepreneurial education has been employed in the last decades to

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form specific competences and attitudes (Stavytskyy *et al*., 2019). The assumption is that entrepreneurship education has a positive impact on students' entrepreneurial intentions and this in turn leads to enterprise formation which has a positive impact on the socio-economic progress of these countries. There is intense debate, worldwide, regarding the effectiveness of Entrepreneurial Education (EE) with some researchers highlighting the limits of EE and others arguing that EE in general has a positive impact. Predominantly politicians like to think that EE has a positive impact on developing entrepreneurship and thus has a positive impact on socio-economic development.

If one is to implement an EE programme there are countless paradigms and ready-made programmes that could be used for inspiration. However, the literature also indicates that EE programmes, in order to be effective, need to take into account a multitude of factors such as the socio-economic environment of the country, political regime, legislation, people's attitude, culture and many others.

The aim of this research was to identify competence-based components of an EE programme and the implementation framework for students from Eastern Europe neighbouring countries. The specific objectives, derived from this aim were to: propose a list with possible modules and to select, using a Delphi method, the five most appropriate modules.

The goal and specific objectives determined the logical structure of the paper. The section 1 is dedicated to the literature review of entrepreneurship education and how it is promoted in the Eastern European neighbouring countries. Section 2 of the paper focuses on data and methodology, and the results and data analysis are presented into the section 3. The final remarks are presented in the conclusions section.

1. Literature review

1.1. Existing approaches in Entrepreneurship Education programmes

It has been suggested that the university is the best place to take advantage of entrepreneurial opportunities (Gibbs, 2002). Throughout the world, EE is supported by different learning and teaching activities such as learning by doing (Rasmusen and Sorheim, 2006); student centred learning (Harkema and Schout, 2008); competence-based learning (Nab *et al*., 2010); Klapper and Tegmeier, (2010) underline the importance of employing an interdisciplinary approach. According to Guenther and Wagner (2008), technology transfer activities and EE have to be interrelated and mutually complementary. Lucas *et al.* (2009) explained the importance of industry placement of venturing and technology self-efficacy. EE programmes delivered within universities are extremely diverse. For example, Sanchez (2011); Crane (2014); Solesvik *et al*. (2013); Solesvik *et al*. (2014) focus on concept learning so that students "know about entrepreneurship". Other

programmes focus on various kinds of interventions, such as: short-term intensive experiential interventions (Fayolle and Gaily, 2015); longer residential-based programmes (Boukamcha, 2015); student led entrepreneurship clubs that facilitate collaborative work to accomplish concrete projects including real life situations (Gondim and Mutti, 2011; Pittaway *et al*., 2011; Neergard *et al*., 2012; Chang and Rieple 2013); starting and running a real business (Burrows and Wragg, 2013; Kirkwood, Dwyer and Gray, 2014); EE based on actually starting new businesses and based on solving real world problems or taking advantage of real opportunities in industry-engaged environments to enhance social interaction and deeper learning (Vincett and Farlow 2008; Gilbert, 2012; Gordon *et al*., 2012).

While trying to develop the structure of a programme tailored to Eastern Neighbouring countries, the promoters also had in mind Lautenschlager and Hasse's (2011) seven arguments that question the legitimacy of current EE at universities. The authors suggest that most educational programmes are nothing but temporary fashion. They claim that the existing shortcomings in entrepreneurial interests and abilities of students are caused by educational approaches, which do not promote opportunity recognition, creativity and problem-solving abilities. This suggests that EE programmes should focus on the promotion of entrepreneurial soft skills than on teaching how to start a business. Most of the EE programmes envisage an element of "on the job training" which is anchored in the real world but difficult to organise and requires a tremendous organisational support. Other initiatives (Pazdrii *et al*., 2017) propose the utilisation of business simulation platform which is easier to deploy but has the disadvantage of being disconnected from the real world of business.

But could entrepreneurship be taught? Kurato (2003) explains that entrepreneurship, can be taught by business educators, either before, during and after commencement of entrepreneurial activities. Others, Johannison (1991, p. 79) argue that "to teach individuals to become not only more enterprising but businessmen as well (…) is an undertaking that in both time and scope is beyond the capabilities of an academic business school". On this point, Rae (1997, p. 199) argues that "the skills traditionally taught in business schools are essential but not sufficient to make a successful entrepreneur". Matlay (2006) explains that in spite of the opposite perspectives and lack of empirical evidence, governments and policy makers prefer to think that EE can make a positive contribution to developing future entrepreneurs and subsequently contributing to the economic development. This point of view is strongly adopted by the European Commission, which decided to financially support EE programmes within Europe but also within aid packages to other countries throughout the world.

The promoters of the EU funded projects tend to take into account the fact that the understanding of the particular characteristics of the entrepreneur has demonstrated that entrepreneurs' key attributes do not consist in their knowledge about starting a business, but mostly in their abilities to attract resources, to develop innovative ideas and to follow a goal. The prevalent assumption is that

entrepreneurs' personal characteristics such as creativity, ability to spot opportunities, to innovate, to take risks and need for achieving success are key features. Entrepreneurs have to be multi-taskers, performing a variety of roles that are far from being ordinary or a 'habit'. They must be able to operate in unknown territories, acting and constantly finding new and alternative solutions (Lautenslager and Hasse, 2011).

The questions proposed by Blenker *et al*. (2011, p. 2) remain valid today. "How can we educate students to start new ventures? How can we educate students to create high growth firms? How can we educate students to solve a broad range of societal problems entrepreneurially? How can we educate students to adopt an entrepreneurial mind-set?"

In Europe, an attempt was made to answer the above questions by creating a framework that could be used as a flexible source of inspiration to support EE in different contexts (Bacigalupo *et al*., 2016). "EntreComp Framework" could inspire the reform of curricula in the formal education and training sector, the design of practical entrepreneurial experiences in non-formal learning contexts, or the development of tools for students to self-assess their entrepreneurial proficiency. The EntreComp Framework is made up of 3 competence areas: 'Ideas and opportunities', 'Resources' and 'Into action'. Each area includes 5 competences. Together, these constitute the building blocks of entrepreneurship as a competence. The 15 competences are described along an 8-level progression model. The Framework provides a comprehensive list of 442 learning outcomes.

The dominant paradigms in EE are built on a series of assumptions regarding the nature and scope of entrepreneurial activity, representing different learning outcomes and indicating different pedagogical methods. This might suggest that at least some of the paradigms are incompatible as they embody different views of entrepreneurship and seek to promote different forms of value.

Many of the existing entrepreneurship programmes utilise what Hannon (2007) refers to as teaching 'about' or 'for' entrepreneurship. This is based on a business planning ideology. Learning "about" or "for" entrepreneurship seems to be the dominant position in entrepreneurship education even today as it is the easiest to organise. Four distinct features of this approach justify the claim to serve as a universal, approach to entrepreneurship education (Blenker *et al*., 2011, p. 6):

(1) It assumes that the students are already to some extent willing or motivated to engage in entrepreneurial activity;
(2) It is based on the Anglo-Saxon educational culture in which students return to university after having worked in an organization, bringing with them extensive practical knowledge;
(3) The intention underlying courses is for students to become entrepreneurs either during their studies or immediately following their graduation; and

(4) There may be a strong self-selection bias because typically students are already predisposed to entrepreneurship – the reason why they choose to follow the courses.

The teaching for or about the creation of new firms' approach is not necessarily applicable or relevant in all contexts of entrepreneurship education or in all socio-cultural settings. University lecturers are most of the time confronted with students who have no intention of pursuing an entrepreneurial lifestyle. Many students in Eastern Europe enrol on a post-graduate programme immediately following their Bachelor's degree and their mind-set is not geared up to setting up a company. This is especially true when the job market is favourable. The vast majority of students do not initially perceive themselves as entrepreneurs. The implication of this fact is that before students are taught how to write a business plan, they have to first develop an entrepreneurial mind-set and corresponding self-perceptions.

Therefore, pragmatically rather than basing the EE programme on a unique paradigm, entrepreneurship education programmes could be more effective by seeking to integrate multiple paradigms. This is the approach suggested within the EntreComp Framework. An EE programme at "Foundation" or "Intermediate" levels (Bacigalupo *et al*., 2016) should be based on a teaching portfolio that is relevant to a large number of students. Another key element is providing the students with a broader range of entrepreneurial skills, competences and the motivation to set up a firm. The sequence more likely to lead to successful businesses set-up by students in Eastern European neighbouring universities seem to be: understand what being an entrepreneur is and wanting to be one, learning key concepts and develop key competences by starting a business.

1.2. Entrepreneurial education in Eastern European neighbouring countries

The EU is also encouraging in the Eastern Europe neighbouring countries, a model of development based on fostering an entrepreneurial culture and supporting the establishment of the SMEs. In this respect, Belarus, Moldova and Ukraine are typical examples where entrepreneurship education, with strong support from abroad, became the basis for managers' professional development (Bondarchuk *et al*., 2019). Entrepreneurs establishing SMEs are regarded as the motors of economic development in these countries and universities are believed to be the ideal place where entrepreneurs could be educated and formed (Pogorevici, 2019; Verblane and Mets, 2010).

This rationale became very attractive to countries, which were part of the Soviet Union where the entrepreneurial culture was almost inexistent. These countries, after the collapse of the communist system, are still struggling to establish an entrepreneurial culture that could spark the economic development (Danis and

Shipilov, 2002; Bodnarchuk *et al*., 2019). However, the legacy of the communist regime proved to be much stronger than anticipated. The historical absence of SMEs led to the situation where the citizens of these countries had little experience working in entrepreneurial environments where they might develop competences such as opportunity recognition, initiative, innovation and risk-taking. (Ernst *et al*., 1996; Varnaliy, 2004). Part of the communist legacy many citizens, even after 1999, regard entrepreneurs with suspicion and many see entrepreneurs as corrupt, dishonest, practicing tax avoidance and connected to the corrupt state employees (Johnson *et al*., 1997; Danis and Shipilov, 2002; Ghedrovici and Ostapenko, 2016). In such circumstances, developing an entrepreneurial culture became the focus of state-owned initiatives and of many foreign aid projects (Sabat *et al*., 2019).

Among the entities supporting the economic development of these countries, such as the World Bank Organisation, the International Monetary Fund, the EU has directed significant funding for the transition to the market economy. This funding includes assistance for the capacity building of the HE sectors the modernisation of which is regarded as a key priority for the economic development (Hilorme *et al*., 2018; Stoyanov, 2019). Within the Erasmus Plus Programme of the European Commission there is a specially designated stream, Capacity Building in Higher Education, which aims at supporting the modernisation of HE in the Partner Countries (Erasmus Plus Programme Guide, 2019). Within this Programme many projects promoting entrepreneurial education have been funded in an attempt to encourage and support the development of an entrepreneurial culture and entrepreneurial competences (Erasmus Plus Results Platform, 2019). The transition to the regulated market economy, argues Maikovska (2018), requires a change of the personality of future members of social production and of their willingness to be included in the progressive forms of economic relations based on entrepreneurial world outlook.

2. Data and methodology

In order to select five modules that could be included in an Entrepreneurship Education programme an adapted Delphi method was employed. The Delphi method is based on structured anonymous communication between professionals who possess expertise on a specific topic with the purpose of arriving at a consensus in certain areas of practice (Birdsall, 2004). The Delphi method is a research approach based on the philosophical ideas of the educator John Dewey who maintained that the research in social science should relate to and inform real-world practice and the process of decision making (Kirk and Reid, 2002). It also originates in the philosophy of Locke, Kant, and Hegel (Turoff, 1970). Philosophers highlight the importance of opinions and perceptions of experts in considering what reality is. According to Denzin and Lincoln (2005), some consistent criteria apply to all qualitative Delphi studies that include: emergent design, purposive sampling,

anonymous and structured communication between participants, and thematic analysis. The expertise of participants on the area of research is one of the most important requirements in Delphi studies.

Delphi method is a forecasting process framework based on the opinions of experts (16 experts in our research) through a series of carefully designed questionnaires interspersed with information and opinion feedback in order to establish a convergence of opinion. The anonymous responses were aggregated and shared with the group of experts after each round. Since multiple rounds of questions are asked and the experts were informed what the panel thinks as a whole, the Delphi method seeks to reach the correct response through consensus.

Procedure: a set of 16 experts in Entrepreneurship Education from eight European countries have been selected in the Delphi panel. These included two academics from each Belarus, Moldova and Ukraine; one academic from each Belgium, England, Portugal, Spain; one manager from each Belgium, Portugal, France and one entrepreneur from each, Belgium, England and Ukraine.

Following a review of the existing literature on EE throughout the world, a set of 20 modules have been identified as potential components of the EE programme.

The Delphi rounds took place between September and December 2018. In a first round the list containing the twenty modules, arranged in alphabetical order (Appendix 1) and the learning outcomes has been sent to the experts. They were asked to rank in descending order the 20 modules. The most important module, in experts' opinion was to be given a score of 1 and the least important a score of 20. The results collected from all sixteen experts was then shared among experts alongside some basic statistics. The mean, mode, standard deviation, the coefficient of variation and the correlation between each expert's set of value and the mean score of the panel were shown to the experts so that each could assess their own sore in comparison with the score of the others and of the whole group. These were meant to help with reaching a consensus in the following round.

In the second round, only the top 10 modules, as identified in the first stage, were sent to the experts asking them to rank these ten modules. The new ranking list was again shared among the experts and constituted the basis of discussion for the next round.

In a third round a face-to-face meeting was organised. This is because the analysis of the two previous phases revealed the fact that there was a significant level of lack of consensus. In this round the experts had to provide arguments as to why some modules should be included and some excluded. The pro and cons arguments were used to reach a consensus on the final list of five modules that were to be included. The result of the third round consisted in a list that was agreed by all experts.

3. Results and data analysis

3.1. Results of the first round

In a first round, the set of 20 modules and the learning outcomes were presented to 16 experts in EE in alphabetical order (Appendix 1). This was done in order to minimise biases due to the way in which data was presented. Each expert ranked the modules in the order of importance and a table presenting the results where then compiled and shared (Table 1).

Table 1. Results of first Delphi round

Module	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	total	mode	mean	SD	CV
Leadership and project management	12	9	10	3	3	6	1	6	12	7	2	9	5	2	9	2	98	9	6.1	3.7	61%
Innovation management	3	11	5	4	5	9	2	16	3	13	5	3	9	5	3	3	99	3	6.2	4.2	67%
Start-up funding	4	1	7	7	7	3	6	10	7	11	7	10	10	7	1	10	108	7	6.8	3.2	47%
Intellectual property law	16	5	1	12	12	5	5	4	11	5	13	5	6	1	5	5	111	5	6.9	4.4	64%
Product research	13	4	2	2	8	8	15	8	1	9	6	11	2	10	8	11	118	8	7.4	4.2	57%
Entrepreneurship	11	6	3	5	10	2	18	3	10	2	12	1	18	3	2	14	120	3	7.5	5.8	78%
Business planning	8	3	18	6	1	4	20	5	9	1	3	12	4	20	4	4	122	4	7.6	6.5	85%
Product development	6	7	19	10	11	1	10	1	5	8	1	7	7	19	6	7	125	7	7.8	5.3	68%
Idea generation	18	2	6	1	9	7	11	7	4	4	9	18	8	6	7	8	125	7	7.8	4.8	61%
Networking	10	8	8	8	6	11	7	11	8	3	8	2	11	8	11	9	129	8	8.1	2.7	33%
Evaluating ideas	1	10	9	9	2	10	16	9	6	10	11	8	12	9	10	18	150	10	9.4	4.2	45%
Market research	19	12	4	11	20	12	12	20	2	6	4	19	1	18	12	19	191	12	11.9	6.8	57%
Business and environment	9	19	20	15	14	20	4	14	13	17	18	4	3	4	20	12	206	20	12.9	6.3	49%
Teamwork	17	13	16	19	13	13	9	18	17	12	14	6	13	16	13	6	215	13	13.4	3.9	29%
Social responsibility and ethics	2	20	13	14	16	18	3	15	15	19	16	13	19	13	18	13	227	13	14.2	5.1	36%
Legislation and regulation	7	17	12	16	19	17	19	13	16	16	19	14	17	12	17	1	232	17	14.5	4.8	33%
Opportunity recognition	5	15	15	17	18	16	14	2	20	20	20	16	16	15	16	16	241	16	15.1	4.9	33%
Starting an online business	15	16	14	18	17	15	8	19	18	15	10	17	15	14	15	17	243	15	15.2	2.9	19%
Financial analysis	14	14	17	20	4	14	13	17	19	14	15	20	14	17	14	20	246	14	15.4	3.9	26%
Strategic planning	20	18	11	13	15	19	17	12	14	18	17	15	20	11	19	15	254	15	15.9	3.1	19%
Correlation Expert-Group	0.19	0.85	0.52	0.86	0.64	0.86	0.23	0.5	0.74	0.76	0.73	0.56	0.56	0.49	0.88	0.51	**0.61**				

Source: authors' representation

3.2. Results of round two

In a second round the experts were asked to rank the ten modules, as identified in the first round and after having seen the opinions of the other experts. The results could be seen in Table 2.

Table 2. Results of Delphi round two

Module	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	total	mode	mean	SD	CV
Innovation management	1	10	4	4	3	9	2	10	2	10	4	3	7	4	3	2	78	4	4.9	3.2	66%
Leadership and project management	8	9	8	3	2	6	1	5	10	6	2	6	3	2	9	1	81	2	5.1	3.1	61%
Start-up funding	2	1	6	7	5	3	4	8	5	9	6	7	8	6	1	8	86	6	5.4	2.6	47%
Intellectual property law	9	5	1	10	10	5	3	3	9	5	10	4	4	1	5	4	88	5	5.5	3.1	57%
Business planning	4	3	9	6	1	4	10	4	7	1	3	9	2	10	4	3	80	4	5.0	3.1	62%
Product development	3	7	10	9	9	1	6	1	4	7	1	5	5	9	6	5	88	9	5.5	3.0	54%
Entrepreneurship	6	6	3	5	8	2	9	2	8	2	9	1	10	3	2	10	86	2	5.4	3.3	61%
Idea generation	10	2	5	1	7	7	7	6	3	4	8	10	6	5	7	6	94	7	5.9	2.5	43%
Product research	7	4	2	2	6	8	8	7	1	8	5	8	1	8	8	9	92	8	5.8	2.8	49%
Networking	5	8	7	8	4	10	5	9	6	3	7	2	9	7	10	7	107	7	6.7	2.4	36%
Correlation Expert-Group	0.3	-0.1	-0.07	0.14	0.28	0.39	0.16	0.2	-0.2	-0.3	0.41	-0.13	0.3	0.19	0.58	0.52	0.17				

Source: authors' representation

3.3. Results of round three

A third round took place face to face and the experts had the opportunity to express their thoughts and present arguments for and against the inclusion of some modules in the list of five to be selected. The results are presented below.

Table 3. Results of Delphi round three-final ranking

Module	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	total	mode	mean	SD	CV
Innovation management	1	2	4	4	3	1	2	1	2	2	4	3	5	4	3	2	43	2	2.7	1.3	47%
Intellectual property law	3	5	1	1	4	5	3	3	4	5	1	4	4	1	5	4	53	4	3.3	1.5	46%
Business planning	4	3	9	2	1	4	4	4	7	1	3	2	2	5	4	3	58	4	3.6	2.1	58%
Leadership and project management	5	4	2	3	2	6	1	5	1	6	2	6	3	2	9	1	58	2	3.6	2.3	64%
Entrepreneurship	2	1	3	5	5	2	9	2	8	9	9	1	1	3	2	5	67	2	4.2	3.0	73%
Start-up funding	6	6	6	7	8	3	10	8	5	10	6	7	8	6	1	8	105	6	6.6	2.3	35%
Product research	7	9	8	6	6	8	8	7	10	8	5	8	10	8	8	9	125	8	7.8	1.4	18%
Idea generation	10	10	5	10	7	7	7	6	3	4	8	10	6	10	7	6	116	10	7.3	2.3	31%
Product development	9	7	10	9	9	9	6	10	9	7	10	5	5	9	6	10	130	9	8.1	1.8	22%
Networking	8	8	7	8	10	10	5	9	6	3	7	9	9	7	10	7	123	7	7.7	1.9	25%
Correlation Expert-Group	0.89	0.85	0.64	0.86	0.87	0.76	0.6	0.9	0.5	0.34	0.67	0.73	0.72	0.87	0.4	0.9	0.72				

Source: authors' representation

Leadership and project management came-up on the top of the first round with a mean rank of 6.1. However, it could be noted that the mean rank was 9 and the Coefficient of Variation was 61% which indicates that the level of agreement regarding the rank of this module in the 20-module list is low. After the Delphi third round however, this module was ranked number 4 and included in the list of five modules with a mean rank of 3.6 and a mode of 2. Among the arguments brought to support its inclusion was the fact that "this is a key competence not taught in other modules during the post-graduate studies" and "entrepreneurs should firstly know

how to lead and manage". This is not surprising as the need to lead and manage a business is regarded as a core competence (Bacigalupo *et al*., 2016; Bodnarchuk *et al*., 2019; Chasovschi, 2014).

Innovation management, surprisingly, came on the second place as ranked by experts in the first round. Interestingly, although the mean rank is 6.2 the mode is 3 which indicates that most of the experts regarded innovation management as a priority for the EE in the neighbouring countries. Following the next two Delphi rounds this module moved to the top position with a mean rank of 2.7 and a mode of 2. The level of agreement among the experts was quite high, CV=47%. This is congruent with many authors who argue that the competence to innovate and manage innovation should be a top priority for EE. (Ernst *et al*., 1996; Kuratko, 2003; Shavinina, 2013; Kulishov, 2018; Maikovska, 2018, Kalantaridis and Labrianidis, 2004).

Start-up funding module was ranked number three by the experts in the first round with a mean rank of 6.8 and a mode of 7 which indicates that the experts consider very highly the need to educate students on how to access funding and how to set-up a company. The agreement between experts (measured by using the CV) was fairly high 47%. Within the "EntreComp" Framework developed by Bacigalupo *et al.* (2016), this is associated to the competence of "Mobilising resources" and it is a competence that needs developing in the early stages of EE. In universities where EE is delivered through start-up centres the competence of accessing funding at an early stage is regarded as essential (Vincent and Farlow, 2008; Pittaway *et al*., 2011; Sanchez, 2011; Solesvik *et al*., 2013).

Interestingly after the next two rounds this module was ranked number six and therefore in the end was not included in the proposed list of five. However, members of the panel highlighted the need to include some competences associated to this module in the "Entrepreneurship" module.

Intellectual property law was seen as the fourth most important module to be included in the EE programme after the first Delphi round. The mean rank was 6.9 but the mode was 5 which shows that a good proportion of the experts see this as being very important for the Eastern European students. A series of comments made by experts in the final round has moved this module on the second place in the final agreed version. Some of the arguments included "There are no such modules taught to students especially in engineering" and "IPL is essential when setting up a company and help students in avoiding unintentional breaking of the law". This could be explained by the fact that the programme is destined to students in engineering and they see as crucially important to understand IP and its application to engineering and innovation in the context of the type of countries. Boyle (2007), in his suggestion for a new model of EE in central and Eastern Europe mentions the importance of forming competences related to patent protection and IP law. Grinciuk and Litvin (2013, p. 179) explain the "deviation from ethics-sometimes if successful is regarded as a deviation from the values of professional ethics".

Product research, after the first Delphi round was ranked number five by the experts with a mean rank of 7.4 and a mode of 8. It is not surprising that "product research" is seen as an important module taking into account that the beneficiaries of this EE programme are students in engineering. In many EE programmes throughout the world, the ability to develop a product is seen as essential and included in training programmes (Ciloci, 2019, p. 48; Covaș *et al.*, 2019, p. 72) However, after the next two rounds of Delphi this module was ranked number seven and therefore in the end was not included in the proposed list of five. Experts' agreement on this decision was very high (CV=18%).

Entrepreneurship was ranked number six, after the first round, among the twenty modules listed and the average rank received was 7.5 although the mode was 3, which indicates that most experts placed it in position three. However, the CV 78% indicates a high level of disagreement on the place of this module. After the final Delphi round this module ended up on the fifth place and was eventually included in the EE programme. Among the strongest arguments for the inclusion (Appendix 2) were: "Starting a business is actually more important than knowing how to start"; "Such a module is not being delivered in the EEN countries"; "We could include essential elements not included in the five modules"; "It is a generic module that should be focused on identifying and forming key personal competences of those who are thinking of starting a business". Following all these arguments the module was included in the list of five. Many EE programmes include entrepreneurship in the syllabus and it constitutes the core of many start-up centres and business incubators. Being able to identify customers' need and to estimate the size and the value of the market, to spot opportunities and to manage an embryonic enterprise are seen as desirable competences (Jones and Iredale, 2008; Ogreglicka and Shulgina, 2017; Kulishov, 2018; Iakovleva *et al*., 2011).

Business planning was ranked number seven by the team of experts, after the first round, with a mean rank of 7.5 and a mode of 4. This means that many experts placed this module on position four out of the twenty modules. During the final Delphi round many arguments to support the inclusion of this module were presented (Appendix 2): "This is essential because students in engineering do not have such a module during the studies"; "This should be included because obtaining funding is impossible if they do not know how to produce a business plan"; "This module encompasses key competences that are proposed in other modules but in less detail"; "This is a multi-disciplinary module that brings together innovation, marketing, finance, opportunity recognition and reveals students' motivation and general competence". As a result of these arguments the module was eventually ranked as number 3 with a mean rank of 3.6 and a mode of 4 and therefore included in the list of five modules. The competence to produce a business plan was deemed as important in many other EE programmes. Throughout the world though, Business Planning is one of the most frequently delivered module (Stratan, 2016; Pazdrii *et al*., 2017; Maikovska, 2018).

Product development was ranked number eight with a mean score of 7 and a mode of 7, similar to idea generation. The ability to select the right product configuration based on value, cost, time to markets and risks is highly ranked by experts. However, many experts saw this as a competence necessary in a more advanced stage of entrepreneurship but others thought this is a must have in the very initial stage and it must be included. After the final Delphi round this module was ranked number nine and therefore not included in the list of five. Experts' agreement on this position on the ranking was very high (CV=22%).

Idea Generation after the first Delphi round was ranked number nine by the experts with a mean rank of 7 and a mode of 7. In EE in other universities throughout the world the ability to generate an idea and assess it before working on the development of a service or products or services is highly regarded. However, this competence is also formed in other modules such as "entrepreneurship" or "innovation management" (Cobzari and Erhan, 2014, p. 59). After the second Delphi round this module was ranked number 8 and therefore not included in the list of five. Experts' agreement on this rank was quite high (CV=31%).

Networking was ranked number 10 by the team of experts with a mean rank of 8.1 and a mode of 8. What is interesting is the high level of agreement between the experts on the place of this module after the first round (CV=33%). It seems to be a consensus regarding the need in the Eastern European business environment for entrepreneurs to be able to tap on their social networks if they are to succeed. This is perhaps due to the perception that the socio-economic environment is often hostile (Doncean, 2013; Covaș and Solcan, 2018) and surviving or thriving is only possible if one has an extended network of friends positioned in the right place (Crucerescu *et al.*, 2018). In other universities throughout the world the ability to identify, cultivate and use a personal social network is not regarded as extremely important although it is mentioned (Bugaian, 2018). However, after the second Delphi round this module was ranked number 10 and therefore not included in the list of five. Experts' agreement on the rank awarded was very high (CV=25%).

Conclusions

The aim of this research was to use the expertise of a panel of 16 academics and entrepreneurs from the EU and the Eastern Europe neighbouring universities in order to propose a list of five modules that are to be included in an Entrepreneurship Education programme in Eastern European neighbouring universities. A three round Delphi method was employed and the conclusions are presented below.

Innovation management was selected as number one and the arguments for this include: "We should encourage innovation not the development of a corner shop", "This should be linked to the research students are conducting", "We should form competences to commercialise students' research", "We should encourage students to come with new business models that are specific to the country",

"Innovation in engineering is not enough, they should know how to innovate in commercialise their ideas and products", "This is something new in these countries", "They know how to innovate but then they don't know what to do with these ideas or products and other people profit from them", "Students should develop a mind-set that has at the centre the idea of innovation".

Intellectual property law (IPL) was selected as a second important module and the arguments brought forward included: "This is needed because in these countries little attention is paid to this aspect", "Students should be able to understand IPL so that they can have a meaningful dialogue with the lawyers", "This is a practical aspect of business ethics and will provide tools for understanding key elements to protect their ideas", "There are no such modules taught to students especially in engineering".

Business planning was selected on the third position and some of the arguments for its inclusion were: "This is essential because students in engineering do not have such a module during the studies", "This should be included because obtaining funding is impossible if they do not know how to produce a business plan", "This module encompasses key competences that are proposed in other modules but in less detail".

Leadership and project management was ranked number for by the panel of experts and some of the arguments for its inclusion were: "Key competence that is not being taught in other modules during the post-graduate studies", "An entrepreneur should firstly know how to lead and manage", "Entrepreneurs should know what the difference is between leading and managing", "Successful entrepreneurs are first leaders and then managers", "Competence to lead is essential for entrepreneurs in the early stage. If they don't know how to lead, they will never start a business".

Entrepreneurship was the last module recommended to be included due to strong arguments presented: "Starting a business is actually more important than knowing how to start", "Such a module is not being delivered in the EEN countries", "We could include essential elements not included in the five modules", "It is a generic module that should be focused on identifying and forming key personal competences of those who are thinking of starting a business", "Teaches students how to spot opportunities and to assess the extent to which their idea responds to a need", "This module should include the ability to collaborate with mentors and to learn from experience".

This research does not suggest that the set of proposed modules are the best, they seemed the best to the panel of experts that were involved and offers an example on how to develop EE programmes using experts' opinions. The practical value of this research consists in the fact that it offers a suggestion on the content of an EE programmes targeting students in Eastern European neighbouring countries based on empirical evidence. The theoretical value consists in the fact that it offers an

example on how a new programme could be developed by a team of experts through international cooperation.

Throughout the literature on entrepreneurship, as suggested by Nabi *et al*., (2017) there is a scarcity of examples of EE programmes. Most research is focused on how EE is delivered and on the outcomes of EE but very little on the actual EE programmes and their content. The proposed framework could therefore constitute a basis for the development of new Entrepreneurship Education programmes in the Eastern European neighbouring countries.

One of the limitations of the present study consists in the fact that it only included a relatively small number of participants within a qualitative type of research which is often criticised for its lack of replicability.

Further research could benefit from conducting a survey on a larger scale involving, perhaps within a quantitative approach, a wider range of stakeholders.

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Appendix 1. Initial list of twenty modules and the learning outcomes

Module title	Learning outcomes / Competence to:
Business planning	-Produce a business plan by applying key aspects of new venture creation and development, including: deciding upon a business idea, developing a value proposition for customers, and refining a business model to deliver the value proposition to customers
Business and natural environment	-Identify opportunities and threats of an organisation arising from climate change, environmental policy and societal change -Develop a strategy that takes into account and responds to environmental changes such as supply chain management, logistics, life cycle analysis, green accounting and carbon trading.
Entrepreneurship	-Identify customer need and estimate the size and value of the market -Spot opportunities and manage an embryonic enterprise -Employ research, plan and management of a small team
Financial analysis	-Utilise financial analysis in order to make sound decisions regarding a company -Raise financial capital, to evaluate investment projects and utilise funding for growth
Idea generation	-Evaluate consumer response to an idea before introducing a product to market. -Test the needs of a product or service as the foundation of targeting and positioning a product in the market-place
Innovation management	-Utilise design thinking and lean design to problem solve and generate innovation -Innovate business models in order to commercialise solutions -Differentiate between different types of innovation
Intellectual property law	-Understand and apply IP law to the context of own enterprise -Utilise knowledge related to Industrial property Objects in the successful promotion to the market -Investigate, analyse and communicate relevant legal information and issues
Leadership and project management	-Lead project teams through effective communication -Identify motivational value systems to improve productivity and cooperation -Competence to recognise the role of business and personal ethics in leadership -Define predictable change stages and identify appropriate leadership strategies for each stage
Legislation and regulation	-Understand and apply country specific legal frameworks that drive financial institutions -Understand and interpret taxation laws -Develop operations that comply fully with existing legislation and regulations
Market research	-Estimate the size of the market and value of customers -Use market data in order to validate a business idea

	-Develop a business based on the market intelligence
Networking	-Understand and utilise the benefits of a personal social network for the success of a company -Nurture and growing a business network that is instrumental in developing a business
Opportunity recognition	-Recognise meaningful business opportunities and to strategically position the business -Utilise social networks and be alert to meaningful opportunities -Complete the development of a product or service in response to an opportunity
Product development	-Select the right product configuration based on value, cost, time to market and risks. -Develop a feasible plan for a product -Execute the plan in an uncertain, dynamic environment using the right tools and techniques.
Product research	-Conduct research and base decisions on the research conducted before launching a new product or service -Assess existing products and services features
Screening and evaluating ideas	-Make business decisions based on identifying the need for the product or service -Assess the market for the product or service -Identify the customer and the price
Social responsibility and business ethics	-Understand the relationship between organisations and stakeholder groups -Organise operations and make decisions that are based on sound ethical principles
Start-up funding	-Attract and utilise funding in order to establish a company -Raise funding to further develop the company and make it viable
Starting an online business	-Identify customer need and estimate the size and value of the market -Employ social media to reach customers and suppliers -Provide value to customers through online provision
Strategic planning	-Assess the external and internal factors that affect a business -Recognise competitive practices and develop sources of competitive advantage -Produce a strategic plan that takes into account essential variables on which business success depends
Teamwork	-Understand and apply teamwork principles to promote successful outcome -Utilising adequate strategies to overcome teamwork barriers and achieve success

Appendix 2. Comments and suggestions to support the selection of the five modules.

Module	Why this should be included?
Innovation management	-We should encourage innovation not the development of a corner kiosk -This should be linked to the research they are conducting -We should form competences to commercialise their research -We should encourage students to come with new business models that are specific to the country -Innovation in engineering is not enough, they should know how to innovate in commercialising their ideas and products -This is something new in these countries -They know how to innovate but then they don't know what to do with these ideas or products and other people profit from them -Students should develop a mind-set that has at the centre the idea of innovation -This should include competences for product development but not in too much detail.
Intellectual property law	-This is needed because in these countries little attention is paid to this aspect -Students should be able to understand IPL so that they can have a meaningful dialogue with the lawyers -This is a practical aspect of business ethics and will provide tools for understanding key elements to protect their ideas -There are no such modules taught to students especially in engineering -IPL is essential when setting up a company and help students in avoiding unintentional breaking of the law
Business planning	-This is essential because students in engineering do not have such a module during the studies -This should be included because obtaining funding is impossible if they do not know how to produce a business plan -This module encompasses key competences that are proposed in other modules but in less detail. -This is a multi-disciplinary module that brings together innovation, marketing, finance, opportunity recognition and reveals students' motivation and general competence. -It is a key competence to develop a plan that is feasible -It helps students form the competence of thinking to all aspects of the business from marketing to customers, suppliers, competitors, personnel and organisational procedures.
Leadership and project management	-Key competence that is not being taught in other modules during the studies -An entrepreneur should firstly know how to lead and manage

	-Entrepreneurs should know what the difference is between leading and managing. -Successful entrepreneurs are first leaders and then managers -Competence to lead is essential for entrepreneurs in the early stage. If they don't know how to lead they will never start a business.
Entrepreneurship	-Starting a business is actually more important than knowing how to start. -Such a module is not being delivered in the EEN countries -We could include essential elements not included in the five modules -It is a generic module that should be focused on identifying and forming key personal competences of those who are thinking of starting a business -Teaches students how to spot opportunities and to assess the extent to which their idea responds to a need -This module should include the ability to collaborate with mentors and to learn from experience -This is the only module that is actually prompting them to start a business before they are capable of properly running one.