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## ENTREPRENEURSHIP EDUCATION PROGRAMME- STUDENTS' OPINIONS

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**Abstract:** *the purpose of this research was to identify students' opinions regarding the relevance and preferred learning approaches in an Entrepreneurship Education programme.*

*A transversal design, using a questionnaire on 139 students from seven universities from Belarus, Moldova and Ukraine was employed.*

*The study concluded that Entrepreneurship and Business Planning were perceived as essential modules. Leadership and Project Management and Innovation Management were perceived as very relevant. Intellectual Property Law was perceived as of little relevance. Overall, the preferred delivery modes were: "Practical module within a start-up", "Optional module within a Master's programme" and "Learning by running a business". However, different approaches were suggested for different modules.*

**Key words:** *Entrepreneurship Education, Higher education, Start-up*

### 1. Introduction

Throughout the world, Entrepreneurship Education (EE) is regarded as an effective means to produce competent entrepreneurs who will establish successful enterprises which will inherently contribute to the socio-economic development. In most countries, encouraging an entrepreneurial culture has been offered as the solution for rising level of graduate unemployment, declining economic output and lack of innovative drive (e.g. Gray, 1998; Jack and Anderson, 1999; Karmel and Bryon, 2002; Matlay and Carey, 2006). The European Commission (2013) produced an "Entrepreneurship 2020 action plan" which intended to "Reignite the entrepreneurial spirit in Europe". More recently in an attempt to tackle the complexity of entrepreneurship education the Joint Research Centre (JRC) of the EC on behalf of the Directorate General for Employment, Social Affairs and Inclusion has produced the "EntreComp" which attempts to develop a common conceptual approach to support the development of entrepreneurship competence in Europe (Bacigalupo et al. 2016). The EntreComp Framework consists of 3 competence areas: 'Ideas and opportunities', 'Resources' and 'Into action'. The framework provides a comprehensive list of 442 learning outcomes connected to

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entrepreneurship education in various contexts and at various levels.

The assumption that entrepreneurship education is a panacea to economic development has been, however, challenged by many (Mietzner and Reger, 2005; Matlay, 2008; Nabi et al. 2017). With very good reason, Henry, (2013, p.2) suggests that all those involved in Entrepreneurship Education should answer a couple of fundamental questions; “What are we teaching? How are we teaching? And Who is teaching?” Pertinent questions have been previously asked: “Enterprise education: for all or just some? (Jones et al. 2012). Does entrepreneurship education have a role in developing entrepreneurial skills and venture effectiveness? ( Elmuti et al., 2012). The debate around entrepreneurship education reveals its very complex nature and the fact that this is an element of reality that is difficult to describe or explain in brief. The reason for conducting this research was to help the organisers of an entrepreneurial education programme that was conducted over a period of one year in seven universities in Belarus, Moldova and Ukraine, understand what students thought about its relevance and mode of delivery. This reflective approach to practice is designed to refine and improve an area of entrepreneurship education that is extremely complex. The rationale is that if we knew how students perceive it, then we could improve it. A huge amount of research has been conducted to measure the impact of EE on students’ entrepreneurial intentions, skills and competences, employment and enterprise establishment. Not many studies are dedicated to assessing students’ opinions on the actual implementation process. The aim of this research was to understand students’ opinions regarding the content and the mode of delivery of an EE programme designed to help them develop entrepreneurial attitudes, skills and competences.

## **2. Literature Review**

### **2.1. How Entrepreneurial Education is being taught?**

Entrepreneurship education is now formally recognised as a taught discipline within higher education and as a result research on entrepreneurship education has now been established as a legitimate field of enquiry (Henry, 2012). There seem to be four main ways in which entrepreneurship education is promoted in higher education. Firstly, EE is promoted as a subject that could be taught to all students aiming at encouraging the development of an entrepreneurial mind-set. Secondly, EE is used to prepare students for taking part in start-ups and develop specific knowledge and skill-sets. Thirdly, EE is designed to help students commercialise their ideas and their research results. Fourthly, EE is just another subject, alongside finance, marketing and economics and is being taught in a business school (Jones et al. 2012). But how is EE being taught? Measuring the effectiveness of different programmes is extremely difficult as, according to Nabi et al., (2017, p.1) EE impact research “...tends to severely under-describe the actual pedagogies being tested”. In such circumstances it is very difficult to establish what actually works and what doesn’t. Meta-analytical studies by Martin et al. (2013) and Bae et al. (2014) tend to argue that the contradictory findings of EE impact studies may be due in part to methodological or statistical designs such as cross-sectional survey

methodology and lack of control groups. Other reasons why measuring EE impact is controversial have to do with the fact that contextual factors are not taken into account when describing the pedagogical interventions (Pittaway and Cope, 2007). For those who intend to take into account the conclusion of existing research in order to develop new programmes and to assess their impact there are multiple sources of confusion. There is a wide diversity of pedagogical methods employed in EE programmes (Fretschner and Weber, 2013). This is further complicated by the lack of detail on pedagogical interventions (Martin et al., 2013). For those trying to decide on the assessment method for a specific intervention, there is a need for a theory-driven framework. Baptista and Naia, 2015; Fayolle and Gailly, 2008; Krueger, 2015; Lackeus, 2015; Neergaard et al., 2012). There seem to be four major limitations to measuring the effectiveness of an EE programme. In the first place it is extremely difficult to establish a relation of causality between how an EE programme is being taught and its outcomes. Secondly, it is extremely difficult to actually measure the output of an EE programme. Thirdly, it is almost impossible to establish which were the factors that had a positive impact as there are myriads of aims and objectives that are being pursued in parallel. Fourth, evaluation is mostly based on self-reporting which contains a bias in itself. The present study's limitations are also due in part to the fact that the intention is to identify students' opinions on the delivery of a set of five modules over a period of one year. Students' perceptions are influenced by their feelings, self-perception, the perception of the situation, the perception of the lecturers and of other colleagues, memory etc. In spite of all these, we think the systematic approach to make future decisions on collecting and analysing the data has significant value and it is a way of doing what we, educators, are preaching- basing our decisions on empirical research.

## **2.2. Content of Entrepreneurship Education programmes**

Hytti and O'Gorman, (2004, p.7) identified eight predominant methods in which various entrepreneurial competences are being formed. "Traditional teaching methods; business simulations; workshops; counselling and mentoring; setting up a business; study visits; games and competitions and practical training."

The existing literature reveals that traditional teaching methods are organised under the form of lectures and seminars, assessed using essays and case studies (Morris et al., 2013; Sanchez, 2013). The content consists in learning about business planning, leadership and management, innovation management etc.

Games and competitions are often used in order to raise students' interests in becoming entrepreneurs and in creating an entrepreneurial mindset (Piperopoulos and Dimov, 2014). This approach is often used in combination with study visits to successful companies to motivate students towards considering setting up firms as alternatives to employment (Solesvik, 2013).

Business simulation approaches are mostly based on using case studies where students have the opportunity to apply knowledge acquired in other modules that are taught in parallel such as opportunity recognition, market research, decision making, financial planning (Chang and Rieple, 2013; Welsh and Dragusin, 2013). Computer game

simulations are more and more employed as they are an attractive means of learning by playing and are enjoyed by the new student population (Pazdrii et al., 2017).

Approaches based on workshops utilise concept learning and problem solving methods and encourage group work, team-work, cooperation, role playing and sometimes have specific themes such as market research, product development, fund raising and intellectual property law (Heinonen and Poikkijoki, 2006; Piperopoulos and Dimov, 2014; Mentoring and counselling are often used in more advanced instances within start-ups when students have already produced a business plan and have secured seed funding and are in the stage of product or service development where the expertise of a lecturer or of an entrepreneur is employed. In more advanced phases, EE are based on actually setting up a business and running it (Landqvist and Williams-Middleton, 2013). This approach is based on an experiential approach (learning by doing) and it is regarded as one of the most efficient but also more difficult to organise within the higher education setting (Corbett, 2005; Harmeling and Sarashvathy, 2013). A module based approach to teaching entrepreneurship is widely used all over the world. Some of the most frequently encountered modules are: innovation, creativity, market research, opportunity recognition, business planning, growth strategies, international business, exit? strategies, value rareness, immutability and organisation analysis, risk management, intellectual property law, product development, leadership and management, finance planning, managing change, business models etc. (Gedeon, 2013; Sirelkhathim and Gangi 2015; Besterfield et al.,2016). The selection of the modules and the way of delivery depends on many factors such as field of study, previous experience, socio-economic environment of the country, students' motivation, level of support affordable and many others.

### **3. Methodology**

In order to identify participants' opinions regarding the relevance of five modules that have been implemented within an EE programme a paper based questionnaire was employed. The questionnaires were distributed to participants by research operators on the premises of the participant universities and collected immediately after completion. The questionnaires were translated in Romanian, Russian and Ukrainian and accompanied by the English version. Although the translation was conducted by experts proficient in both, the national language and English some biases might have been observed as a result of translation. All participating students were enrolled on Management programmes at Masters' level. Participants have been invited to take part in the research because they have been exposed to EE programmes. Respondents volunteered to take part in the research and no incentives were offered. The authors of this article have not been involved directly in the delivery of the EE programmes. Data were collected from Belarus State University, Belarus National Technical University, Ternopil National Technical University-Ukraine, Kharkiv National University of Economics-Ukraine, Kharkiv National University of Civil Engineering and Architecture-Ukraine, Academy of Economic Sciences of Moldova and Komrat State University-Moldova. The aim of the research was explained on the questionnaire form (Appendix 1)

and the fact that participation was optional and anonymous were also made clear to respondents.

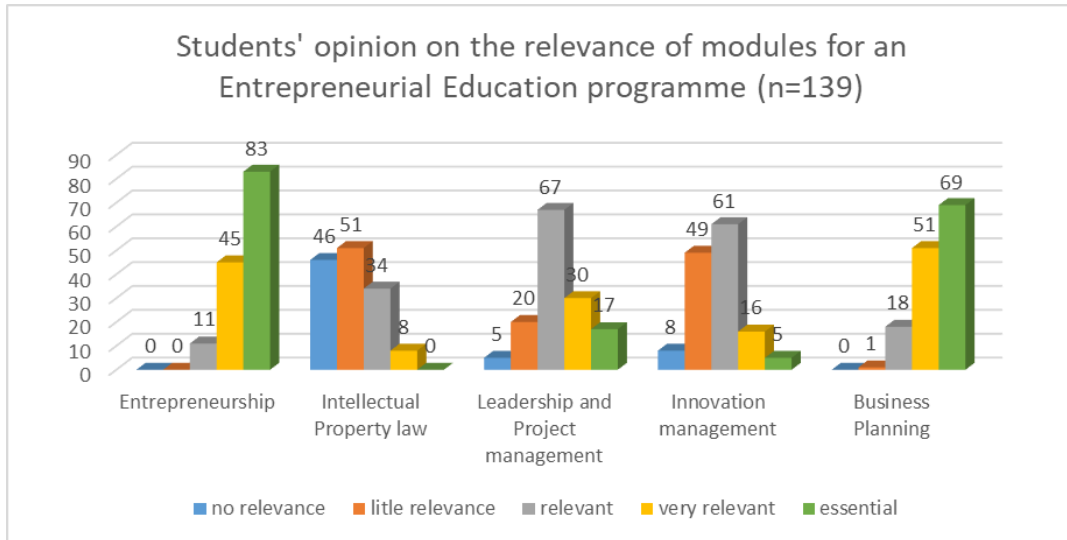
A five point Likert type questionnaire was employed where respondents were asked to express their opinions regarding the relevance of each of the five modules that they have been involved in within the start-up centre. We are aware of the possible distortions caused by using a five point Likert type questionnaires as explained by Boari and Ruscone (2015). Respondents may avoid using extreme response categories (central tendency bias) Gorrell et. al. (2011). To mitigate for this, participants have been verbally encouraged to express their view in order to help the university improve the EE programme and had been explained that their honest response is highly valued. Another possible bias related to using a five point Likert questions is that respondents might agree with the statements as presented (acquiescence bias) discussed by Joshi et. all., (2015). To mitigate for this aspect, the scale was designed in such a way so that equal number of positive and negative aspects were present. Another issue with using questionnaires is that sometimes respondents choose an answer that they think is socially desirable, see Agresti, (2007). To mitigate for this, respondents have been explained just before filling in the form that they should consider all aspects of taking part in each of the modules and the only reason for being asked to take part in the survey was to help with the improvement of the EE programme. Of course tackling the central tendency bias is more problematic that is why a Chi test of independence was deemed as the most appropriate to assess the extent to which the expressed opinions differ from a random selection (Joshi et. all. 2015). Descriptive statistic was employed to analyse the results and the answers were treated as ordinal data therefore non-parametrical tests have been employed to render the interpretation meaningful. The mode rather than of the average? was used as suggested by Awang et al. (2016).

The participant universities have agreed to have their names disclosed but respondents' anonymity was required for ethical and also methodological reasons (to avoid respondents' giving socially acceptable answers rather than what they really thought).

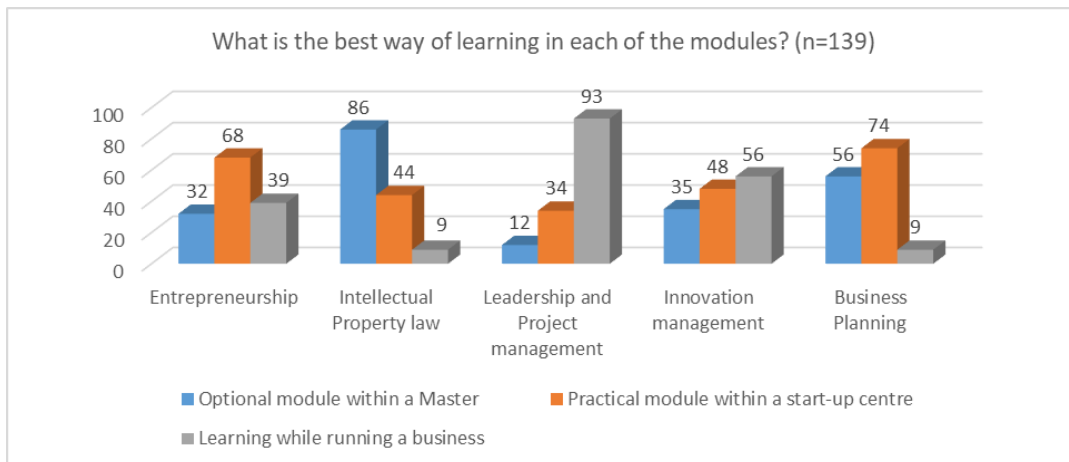
#### **4. Results and Discussion**

Answers from 139 respondents who have been involved in an Entrepreneurship Education programme in seven universities from Belarus, Moldova and Ukraine were collected using a paper based questionnaire using a five point Likert scale. The aim was to identify students' opinions regarding the relevance of each of the five modules they have been attending within the start-up centre in their university.

The results are presented in figure 1 and figure 2 and then discussed below.



**Fig. 1. Students' opinions on module's relevance**



**Fig. 2. Students' preferred way of learning in each of the modules**

**4.1. Entrepreneurship (E) module**-How relevant was this module to developing your entrepreneurial competences? Students' opinions regarding the relevance of this module have been obviously influenced by the learning outcomes of this module. These included: "Competence to identify customer need and estimate the size and value of the market"; "Competence to spot opportunities and manage an embryonic enterprise"; "Competence to employ, conduct research, plan and manage a small team". Student's perception of module's relevance could have also been influenced by other factors such as the personality of the lecturer, lecturer's perceived competence, the way in which the module was organised and delivered, students' expectations and aspirations, students' gender, the extent to which the content responded to their personal educational needs and ideas for future career, and perceived support (aspects discussed in detail by Turker

and Selcuk, 2008). However, these variables are extremely difficult to measure and due to various constraints they have not been taken into account which gives this study a limited applicability. From the 139 respondents 83 rated this module as “essential”, 45 as “very relevant” and 11 as “relevant”. As the data collected was ordinal a Chi square test for independence (Pearson Chi Square Test) was employed to assess the extent to which the result is significantly different from a random allocation of preferences ( $p < 0.05$ ,  $df = 4$ ). These findings are congruent with what Kirkwood et al. (2014, p.307) found, conducting a research project based on students’ reflection of their experience with an EE programme; “the main benefits that graduates gain is increasing confidence, insights into the feasibility of a business idea, entrepreneurship knowledge and skills and a realistic understanding of what being an entrepreneur means”.

Regarding the way in which students want to see this module delivered, a small number (32 out of 139) think that this module should be “optional module within a Master’s programme. The majority 68 out of 139 want it run as “practical module within a start-up centre” and 39 out of 139 as “Learning while running a business”. Solesvik et al. (2014, p.692) surveyed 321 Ukrainian students and found that “participation in EE was, however, found to be associated with higher entrepreneurial intention”. It must be acknowledged the fact that those students who volunteer to take part in EE programmes have a different motivation and hence attitude towards entrepreneurship. As such, extrapolating to the whole student cohort is seen as problematic.

**4.2. Intellectual Property Law (IPL) module-**How relevant was this module to developing your entrepreneurial competences? From the 139 respondents none of them rated this module as “essential”, only 8 as “very relevant”, 34 as “relevant”, 51, the majority, as “of little relevance” and surprisingly 46 as “irrelevant”. The Chi square test result ( $p < 0.05$ ,  $df = 4$ ) revealed that respondents’ opinions were statistically different from a random allocation of ranks for this variable. Students’ overall opinion of the relevance of the module is in contrast with the designers of the EE programme, conducted by a panel of 16 experts in entrepreneurship education. The experts argued that including this module is important for students in engineering who need to be competent in dealing with IPL especially in countries from Eastern Europe that base their economy on importing technology and know-how in order to develop their productivity (Cotelnic, 2008; Grinciuc and Litvin, 2013). The low scores received by the IPL module could be explained by the fact that overall, society features little concern for the legal aspects of using foreign technology and IPL is seen as something that could be easily ignored (Pogorevici, 2019, p.16). Another explanation could be the way in which the module is being delivered, mostly by using lectures and seminars. Perhaps the association between the classical, less interesting, way of delivery has impacted on students’ overall perception of the module. Another explanation could stem from students’ perception of the learning outcomes proposed; “Develop understanding regarding the IPL legislation”; “Develop the competence to identify IPL related issues”; “Develop competences in applying IPL to business practice”. For students who are at the very beginning of starting a business these concerns could be perceived as “minor” or “not essential” at this stage.



Regarding the way in which students want to see this module delivered, a great majority (86 out of 139) think that this module should be an “optional module within a Master’s programme. Only 44 out of 138 want it as a “practical module within a start-up centre” and 9 out of 139 as “Learning while running a business”.

**4.3. Leadership and Project Management (LPM)** module-How relevant was this module to developing your entrepreneurial competences? We assume that students’ opinions regarding the relevance of this module were strongly influenced by the learning outcomes of this module: “Competence to lead project teams through effective communication”; Competence to identify motivational value systems to improve productivity and cooperation”; “Competence to recognise the role of business and personal ethics in leadership”; Competence to define predictable change stages and identify appropriate leadership strategies for each stage”. These competences are similar to what the vast majority of respondents (67 out of 139) ranked LPM as “relevant”, 30 as “very relevant” and 17 as “essential”. Only 5 students regarded this as “irrelevant”. The study did not propose to identify the reasons why students have ranked the module as they did, which is a clear shortcoming of this research. However, informal conversations with students (not recorded) revealed that some students thought that learning how to lead and manage projects could only be learned by actually doing it. This explains perhaps why the vast majority of respondents (93 out of 139) thought that this module could better be taught by “Learning while running a business”. A small proportion, 34 out of 139 thought this module could be delivered as a “practical module within the start-up”. Only 12 respondents thought students could reach the learning outcomes by learning within “an optional module within a Master’s programme”. Covas and Solcan (2018) conducting a study within the Erasmus “ReSTART” project also highlight the importance of involving stakeholders including students in shaping up of EE programmes. Maikovska, and Semenog, (2008, p.207) in a study on Ukrainian students found that “leadership and communication competence is the pivotal point in any entrepreneurial education programme and ethical issues should be also included”. Students’ opinions regarding this module could have been strongly influenced by the way in which it was delivered. Students had to lead a small team of colleagues in developing a service or a product within the start-up centre. However, the actual experience of leading a long-term project is different from leading activities in a controlled environment with very few real constraints. In future, the organisers of the module must take into account students’ suggestion to learn by running a business. This is obviously extremely difficult to organise especially in the context of higher education in the Eastern European countries involved.

**4.4. Innovation Management (IM)** module-How relevant was this module to developing your entrepreneurial competences? From the 139 respondents 5 rated this module as “essential”, only 16 as “very relevant”, the majority, 61 as “relevant”, 49, as “of little relevance” and, surprisingly, 8 as “irrelevant”. The Chi square test result ( $p < 0.05$ ,  $df = 4$ ) revealed that respondents’ opinions were statistically significant. Students’ overall opinion of the relevance of the module is in line with the promoters of

the EE programme. The experts argued that including this module is important for students in engineering who need to know how to develop and exploit innovation. Moreover, the learning outcomes of this module are congruent with the declared aims of all of the universities involved in the research who all state that they foster innovation. "Competence to utilise design thinking and lean design to problem solve and generate innovation"; "Competence to innovate business models in order to commercialise solutions"; "Competence to discriminate between different types of innovation".

Regarding the way in which students want to see this module delivered only (35 out of 139) think that this module should be "optional module within a Master's programme. A good proportion, 48 out of 138 want it as "practical module within a start-up centre" but, unsurprisingly, most of them, 56 out of 139 as "Learning while running a business". A very interesting perspective is presented by Donceam 2013, p.220) in a study conducted in three neighbouring countries who concludes that "...innovation through the establishment of business incubators and technology transfer is an indicator for regional stability". Indeed innovation is based on cooperation and could be a binding factor that leads to high performance and productivity. The literature in EE reveals that the majority of EE programmes in the world include an innovation" component (Sirelkhatim and Gangi 2015; Besterfield et al., 2016).

**4.4. Business Planning (BP)** module-How relevant was this module to developing your entrepreneurial competences? Students' opinions regarding the relevance of this module is similar to the Entrepreneurship module. From the 139 respondents 69 rated this module as "essential", 51 as "very relevant", 18 as "relevant", one respondent, as "of little relevance" and none as "irrelevant". The Chi square test result ( $p < 0.05$ ,  $df = 4$ ) revealed that respondents' opinions were statistically different from a random allocation of ranks for this variable. Students' overall opinion of the relevance of the module is in line with the promoters of the EE programme. The experts argued that including this module is important for students in engineering who need to know how to produce a business plan in order to attract funding. The learning outcomes of this module seem to be responding to students' needs. The key learning outcomes include: "Competence to 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".

In contrast to the Entrepreneurship module, most students (74 out of 139) want to see this module delivered as "practical module within the start-up centre", and surprisingly, a great proportion, (56 out of 139) as "Optional module within a Master's programme" and only 9 as "Learning while running a business". Apostol and Jatuliaviciene, (2011, p.35) explain that "The access to finance remains the most important problem that the entrepreneurs face while starting their entrepreneurial activity." In future, the organisers of the module must take into account students' suggestion to learn by following a module within the start-up centre and in so doing to learn how to access funding.

## 5. Conclusions

This research aimed to identify students' opinions regarding the relevance of five modules included within an Entrepreneurship Education Programme in seven universities in Belarus, Moldova and Ukraine. The reason for conducting this research was to improve the EE programme by taking into account students' opinions and preferences.

The study concluded that Entrepreneurship was perceived as essential and the preferred method of learning about entrepreneurship was by conducting practical activities within a start-up centre.

Business Planning was perceived as essential by a good proportion of respondents (69 out of 139) and the preferred method of learning about entrepreneurship was by conducting practical activities within a start-up centre (74 out of 139 respondents).

Leadership and Management was perceived as relevant (67 out of 139) and the preferred method of learning about entrepreneurship was by actually running a business.

Innovation management was perceived as relevant (61 out of 139) and the preferred method of learning about innovation management was by actually running a business.

Intellectual Property Law was perceived as of little relevance and the preferred method of delivery for such a module was by including the module in the optional part of a Master's programme.

Students' opinions presented above could be used to further develop and fine tune an entrepreneurship education programme designed for students in Eastern European neighbourhood countries. It could also be used as an example on how to collect data in order to gauge students' opinions regarding the content and the structure of future entrepreneurship education programmes.

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### Appendix 1. Questionnaire used to collect the data (English version)

#### Relevance of Entrepreneurial Education programme in Higher Education

This questionnaire aims to identify your opinion regarding the relevance of the modules delivered within the Entrepreneurship Education programme.

Please base your responses on the whole experience you have recently had. Your honest response will assist us in improving the programme

Participation to this survey is anonymous and you can withdraw at any moment or not answer a question if you wish so.

Please select *only one* of the options provided in the multiple choice questionnaire.

**Q1 How relevant was the Entrepreneurship module?**

- Not relevant
- Little relevance
- Relevant
- Very relevant
- Essential

**Q2 How would you like to learn about entrepreneurship?**

- Module included in a Master's programme
- Practical module in the start-up
- While running a real business

**Q3 How relevant was the Innovation Management module?**

- Not relevant
- Little relevance
- Relevant
- Very relevant
- Essential

**Q4 How would you like to learn about Innovation Management?**

- Module included in a Master's programme
- Practical module in the start-up
- While running a real business

**Q5 How relevant was the Business Planning module?**

- Not relevant
- Little relevance
- Relevant
- Very relevant
- Essential

**Q6 How would you like to learn about Business Planning?**

- Module included in a Master's programme
- Practical module in the start-up
- While running a real business

**Q7 How relevant was the Leadership and Project Management module?**

- Not relevant
- Little relevance
- Relevant
- Very relevant
- Essential

**Q8 How would you like to learn about the Leadership and Project Management?**

- Module included in a Master's programme
- Practical module in the start-up
- While running a real business

**Q9 How relevant was the Intellectual Property Law module?**

- Not relevant
- Little relevance
- Relevant
- Very relevant
- Essential

**Q10 How would you like to learn about the Intellectual Property Law?**

- Module included in a Master's programme
- Practical module in the start-up
- While running a real business

Thank you for taking the time to complete the questionnaire!