CHALMERS

Investigating a Method to Measure Entrepreneurship Education and its Effect on Students.

Case Study: The Estonian Business School

ERICK OLIBO

Master of Science Thesis in
Management and Economics of Innovation

Department of Technology Management and Economics
Division of Innovation Engineering and Management
CHALMERS UNIVERSITY OF TECHNOLOGY
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"*Entrepreneurs are simply those who understand that there is little difference between obstacle and opportunity and are able to turn both to their advantage*."

Niccolò Machiavelli, 1532

EXECUTIVE SUMMARY

The overall aim of this study is to investigate a method to measure the level of entrepreneurship education effort of any institution, and the extent to which students perceive the entrepreneurship education to forge necessary entrepreneurial mindsets and skills.

Entrepreneurship education and individuals with entrepreneurial behaviors and mindsets are the focus of this research paper. Entrepreneurs are potential part of the national growth of a country. Moreover, educated entrepreneurs are likely to perform better, and they should sustain it long term (Driver et al., 2001; Foxcroft et al., 2002). Additionally, the society plays an important role in favoring the relationship between education and environment, as it is the stage where future entrepreneurship graduates and entrepreneurs will operate. Therefore, to understand the effect of entrepreneurship education on students, it is necessary to assess the level of entrepreneurship education effort of an institution and its effect on the students.

The two-pronged research method used is a case study. On the one hand, the method assesses the level of entrepreneurship education effort, using an analytical method developed with data from the 2008 SEHEE. On the other hand, the method assesses to which extent students perceive the entrepreneurship education to forge necessary entrepreneurial mindsets and skills using the SEE developed with the help of an extensive literature review.

The findings show that, the method to measure entrepreneurship education and its effect on students has shortcomings. Moreover, the analytical method (i.e., to find level of entrepreneurship education effort) requires further research and case studies to improve its reliability and validity. On the other hand, the SEE shows acceptable and reliable results. To sum up, the overall method to measure entrepreneurship education and its effect on students requires further cases studies to validate its reliability and usefulness.

Keywords: Entrepreneurship Education, Estonian Business School, Entrepreneurial Mindsets and skills, Student Perception, Effect of Entrepreneurship Education.

PREFACE

This report is written as a master's thesis project for the Management and Economics of Innovation program at Chalmers University of Technology in Göteborg, Sweden.

Performing this study and writing this thesis has been both exciting, challenging and a great learning experience. The final report is greatly different from the initial topic and structure that was presented. A number of actors contributed to the success of this important paper and I would like to take the opportunity to thank them.

My greatest debt of gratitude is to my supervisor, Jan Wickenberg, for accepting the supervision of an already ongoing work and allowing an extensive degree of freedom in the execution of the research.

I would like to thank the Chair of the Entrepreneurship Department at EBS, Professor Tiit Elenurm, for his kindness and his time as a respondent and an interviewee. I would like to thank as well the Estonian Business School Student Council, especially its vice-chairman Toomas Tuude, for its enthusiastic and valuable support during the course of this project.

Finally, I would like to thank Henrik Berglund and Julian Roach for their valuable inputs and contributions during the final phase of this master thesis.

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Erick OLIBO

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ACRONYMS

AEP	Academic Entrepreneurship Program
CIA	Central Intelligence Agency
DTI	Department of Trade and Industry
EBS	Estonian Business School
ECTS	European Credits Transfer System
ERASMUS	European Region Action Scheme for the Mobility of University Students
EMER	Estonian Ministry of Education and Research
EU	European Union
HEI	Higher Education Institutions
HEQCO	Higher Education Quality Council of Ontario
NATO	North Atlantic Treaty Organization
RQ	Research Question
SEE	Survey on Entrepreneurship Education
SEHEE	Survey of Entrepreneurship in Higher Education in Europe
TTO	Technology Transfer Office
USSR	Union of Soviet Socialist Republics

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1 INTRODUCTION

1.1 Background

It has long been established that education, in a general matter, is fuel to a sustainable economy, moreover it is central to the survival of a society. There has been a shift from an industrialized economy to a knowledge-based economy, therefore an apparent need to address this change with a reform of the education, at least certain facets of it. Entrepreneurs and entrepreneurial behaviors are presented as the potential solution to this new economic era. Higher Education Institutions (HEI) are battling to provide the right education, in respect to entrepreneurship, to their graduates, while research on the real impact of entrepreneurship education on the society is still lagging. Consequently it is argued that education acts upon graduates, in this case entrepreneurship graduates, and the society. Furthermore, entrepreneurs act upon the society, especially entrepreneurs with a higher education background (Rosa, 2003).

It is argued in the literature that a single definition of entrepreneur is premature. For instance, entrepreneurship behaviors and entrepreneurial mindsets are often listed to define entrepreneurs. Therefore, there is a tendency to concentrate on the entrepreneurial process rather than the entrepreneurs themselves. Some researchers defined it in terms of individual human attributes and traits (Burns, 2001; Lambing and Kuehl, 2003). Others explained it via the ecological and social surroundings in which the entrepreneur operates (Bridge et al., 2003; Kirby, 2003). Naturally, a combined concept of social-psychological perspective, i.e. a balance between the environment in which the individual is active and the personal characteristics of the entrepreneur, is argued to be more representative of the complexity inherent the entrepreneurial process (Carsrud and Johnson, 1989; Shepherd and Douglas, 1996; Kuratko, 2005). Furthermore, in a tentative attempt to summarize the characteristics of successful entrepreneurs, it is asserted that five concepts must be mastered: learning about oneself, learning about the business and field, learning about environment and entrepreneurial networks, learning about small business management,

and learning about the nature and management of relationships (Brennan et al., 2005). Fortunately, these concepts are tightly linked to education and entrepreneurship education.

Only in the last decades it has been widely acknowledged that entrepreneurship can be taught, and that it is a discipline (Drucker, 1985; Kuratko, 2003). Entrepreneurship education is still at the infancy stage, therefore it suffers from the lack of consistency in term of curricula, content, syllabus, depth, quality, and teaching method, across institutions (Matlay, 2005). Moreover, it suffers from the lack of academic credibility, resulting in various ways of setting within the institutions, spanning from; add-on courses in business schools, entrepreneurship modules, to complete degree programs (Jones and English, 2004; Tan and Ng, 2006; Kuratko, 2005). Additionally, like any discipline there are different schools of thought concerning the outcome of such education, or its overall objectives and goals. Some researchers argued that the outcome product of such program should be a future entrepreneur and innovative employees (Jones and English, 2004), whilst others argued, with a less liberal viewpoint, that such education should aim to create and produce "job creators and not job seekers" (Dhliwayo, 2008). Entrepreneurship education is said to positively impact the society and universities and HEI in general are believed to contribute to national prosperity (Rosa, 2003; Gibb, 2002), and entrepreneurship, in term of small businesses, is an engine of economic growth and the creator of jobs (Reynolds et al., 2000; Ibrahim and Soufani, 2002). Nevertheless, the educational system and organizations are notoriously slow to change (White and Weatherby, 2005), and in a rapidly changing economy it may be seen as a significant obstacle. Finally, the best environment for an entrepreneur to learn is in an environment as close to his real life as possible (Shepherd and Douglas, 1996). Furthermore, entrepreneurs, and entrepreneurship behaviors and traits are different and diverse across countries, societies, cultures, and governments; therefore entrepreneurship education should address these issues (Gibb, 2002).

To sum up, entrepreneurship education and individuals with entrepreneurial behaviors and mindsets are the focus of this research paper. As previously shown, entrepreneurs are potential part of the national growth of a country. Moreover, educated entrepreneurs are likely to perform better, and they should sustain it long term (Driver et al., 2001; Foxcroft

et al., 2002). Additionally, the society plays an important role in favoring the relationship between education and environment, as it is the stage where future entrepreneurship graduates and entrepreneurs will operate. The 2008 Survey of Entrepreneurship in Higher Education in Europe (SEHEE) assessed the state of entrepreneurship education at a macro level. By investigating the processes and systems in place in higher education institutions in Europe, the SEHEE only assessed one side of the entrepreneurship education of an institution. The output product of this education is the main shortcoming of the SEHEE study. Therefore, to understand the effect of entrepreneurship education on students, it is necessary to assess the level of entrepreneurship education effort of an institution and its effect on the students. Moreover, an analytical method to measure entrepreneurship education and a complimentary method to measure its effect on students are necessary.

1.2 Purpose

The overall aim of this study is to investigate a method to measure the level of entrepreneurship education effort of any institution, and the extent to which students perceive the entrepreneurship education to forge necessary entrepreneurial mindsets and skills. Therefore, there is a need for a two-pronged approach. This method, its reliability and validity are described in the methodology section.

The purpose of this study is, on the one hand; to assess the level of entrepreneurship education effort, in producing students with entrepreneurial mindsets and skills, using an analytical method developed with data from the 2008 SEHEE. The SEHEE is a study requested by the European Commission, Directorate-General for Enterprise and Industry, and "carried out by a Scandinavian consortium consisting of three partners" (SEHEE, 2008a p.16). The Scandinavian consortium has a framework model that inputs six necessary dimensions of entrepreneurship education for Higher Education Institutions (HEI) to produce entrepreneurial graduates or students with entrepreneurial mindsets and skills (SEHEE, 2008a p.44). The SEHEE main report, the annexes, the questionnaire and additional interviews are used to answer the first part of this study.

Additionally, on the other hand, the aim of this study is to assess to which extent students perceive the entrepreneurship education to forge necessary entrepreneurial mindsets and skills. Moreover, the study aims to find similarities and disparities in respect to the type of degree program, the number of years within the degree program, the mode of study (i.e., daytime or evening), and the language of instruction. A survey questionnaire, developed with the help of the literature review, is used to answer this part of the study.

To investigate the method to measure entrepreneurship education and its effect on students, a case study was selected. The Estonian Business School (EBS) is a test case, and this institution serves as starting point in the elaboration of a valid and reliable measuring method.

The purpose of this study draws several questions to be answered. The next section shows these questions.

1.3 Research Questions

RQ1: HOW ENTREPRENEURIAL IS THE EDUCATION AT EBS?

- RQ1.1: How is the level of entrepreneurship education effort, in producing students with entrepreneurial mindsets and skills, using an analytical method developed with data from the Survey of Entrepreneurship in Higher Education in Europe (SEHEE)?

RQ2: HOW ENTREPRENEURIAL ARE THE EBS STUDENTS?

- RQ2.1: To which extent first year and second year undergraduate students perceive the entrepreneurship education to forge necessary entrepreneurial mindsets and skills.
- RQ2.2: What are the similarities and differences between; degree programs, classes, language of instruction, and mode of study.

1.4 Delimitations

EBS is the test case of this study. Therefore the investigation was slightly modeled to suit this case study. EBS provides degrees at bachelor, master and doctoral level. Assessing the entrepreneurship mindset and skills of students at all level of education is a sizable task that this current work is not set to produce. EBS provides different modes of study and languages of instructions. Therefore, this research paper's scope is reduced to the undergraduate's students studying during the daytime or evening and which language of instruction is English or Estonian. During the course of the research, several obstacles and limitations occurred.

The Survey on Entrepreneurship Education (SEE) was conducted during the first two weeks of March 2010 at the institution. Moreover, this period is marked by the major absence of third year undergraduate's students within the walls of the institution. The main reasons are the lack of remaining courses, and the fact that this period is reserved for final-paper work. Furthermore, distance learning and degree programs in which the language of institution is Russian are outside of the scope of this research. Due to the mode of administration of the survey, assessing students following distance-learning programs would require a different methodology.

Having only a single case study is a major limitation of this current study. A greater number of cases, and some comparative studies are necessary to increase the validity and reliability of this method to measure entrepreneurship education and its effect. Therefore, the findings and conclusion must be interpreted with caution.

1.5 Disposition

This section depicts the structure of this research paper.

Chapter 2 shows the national environment of the case study, and the characteristics of EBS institution itself. The following section overviews the literature centred on entrepreneurship education and the higher education assessment methods. The

methodology chapter shows the methods used to collect primary and secondary data, and the reliability and validity of these methods. Chapter 5 depicts the SEHEE questionnaire, the empirical results, the analysis and the discussions related to RQ1. Furthermore, chapter 6 depicts the SEE questionnaire, the findings, the analysis and the discussions related to RQ2. Finally, the last chapter expresses the overall conclusion and proposes additional researches to be conducted in order to support this current study.

2 THE ESTONIAN BUSINESS SCHOOL CASE

The Estonian Business School was selected as case study for several reasons. Firstly, the researcher had started a company in Estonia in 2008, and currently resides in Tallinn. Secondly, EBS is among the few institutions in Estonia providing entrepreneurship education. Thirdly, it was not possible to surely assess that EBS had taken part to the SEHEE, making it a valid candidate as a case study. Finally, the future career choice of the researcher (i.e., doctoral studies in entrepreneurship at EBS) was one of the reasons.

This section depicts; a brief background history, some statistics measures, the layout of the educational system, general information concerning EBS, EBS institutes and departments.

2.1 Estonia

2.1.1 General Information

Estonia had been under foreign rule for centuries by countries such as: Denmark, Sweden, Germany, and Russia until 1991 (CIA, 2009). Estonia was first independent in 1918, but forcibly annexed and occupied by the USSR in 1940. The last Russian troops finally left during the year 1994. Thereafter, the country was able to self-administrate to a greater extent and to establish stronger links with western countries (CIA, 2009). As of spring 2004, Estonia became part of the European Union (EU) and the North Atlantic Treaty Organization (NATO).

Estonia is bordered by: the Gulf of Finland in the north, the Baltic Sea and the Gulf of Riga in the west, Latvia in the south, and Russia in the east. The country has a total area of 45 228 km^2 and a population of 1.3 millions inhabitants. There are several ethnic groups, with Estonian (67.9%) and Russian (25.6%) being the main ones. The official language is Estonian (67.3%) and the second most spoken language is naturally Russian

(29.7%). The government is a parliamentary republic system and the Capital is Tallinn (CIA, 2009).

Estonia's economy is a "modern market-based economy and one of the highest per capita income levels in Central Europe" (CIA, 2009). Furthermore its economy takes advantage of strong electronics and telecommunications sectors. It has a strong economy, trading ties with Finland, Sweden and Germany. Between 2003 & 2007 the country, especially Tallinn, has sustained a high growth rate of 8% resulting in a balanced budget and low public debt. Moreover "Estonia's economy slowed down markedly and fell sharply into recession in mid-2008, primarily as a result of an investment and consumption slump following the bursting of the real estate market bubble" (CIA, 2009)

2.1.2 Higher Education

The Estonian Education system is divided in three main parts: basic education, secondary education, and higher education (EMER, 2009). Higher education is divided into three streams, such as; vocational or professional education (0.5 to 3 years), professional institutes or colleges (3 to 4.5 years) and university academic education (Bachelor's degree in 3 years, Master's degree in 2 years, then Doctoral degree in 3 to 4 years). As of March 2008, some professional institutes or colleges have been granted the right to conduct studies at master level. In April 2009, the EMER accounted the number of higher education institution to 34 with; 10 universities (4 public, 6 private), 21 professional higher education institutions (10 public, 11 private), and 3 vocational educational institutions (2 public, 1 private) (EMER, 2009).

2.2 Estonia Business School (EBS)

2.2.1 General Information

"Estonian Business School (EBS) was founded in 1988 as the first private university in Estonia" (EBS Student Guide, 2008/2009, p.5). Additionally, in 1995, EBS was the first private university in Estonia teaching entrepreneurship (Kolbre et al., 2006). EBS is accredited to award Bachelor's, Master's and Doctorate degree in the fields of business

and management (EBS website, 2010). The mission statement of the institution is as follows: "Our mission is to provide the best possible applied research and practical, experience-based education in management and related fields in Central and Eastern Europe, to the benefit of every single one of our students, their local and international employers and the Estonian society" (EBS-ECTS handbook, 2004/2005). Depending on the program followed, the department and the degree level, there is a possibility to study in Estonian, Russian or English. Part-time, Full-time, evening courses, daytime courses, and distance learning are the different study mode alternatives offered to students. The estimated number of students enrolled was 1500, there are approximately 3000 EBS alumni (EBS student guide, 2008/2009).

2.2.2 EBS Institutes and Departments

The educational part of the Estonian Business School is divided into three institutes. The following table is extracted from the EBS Student Guide (2008/2009, p.10).

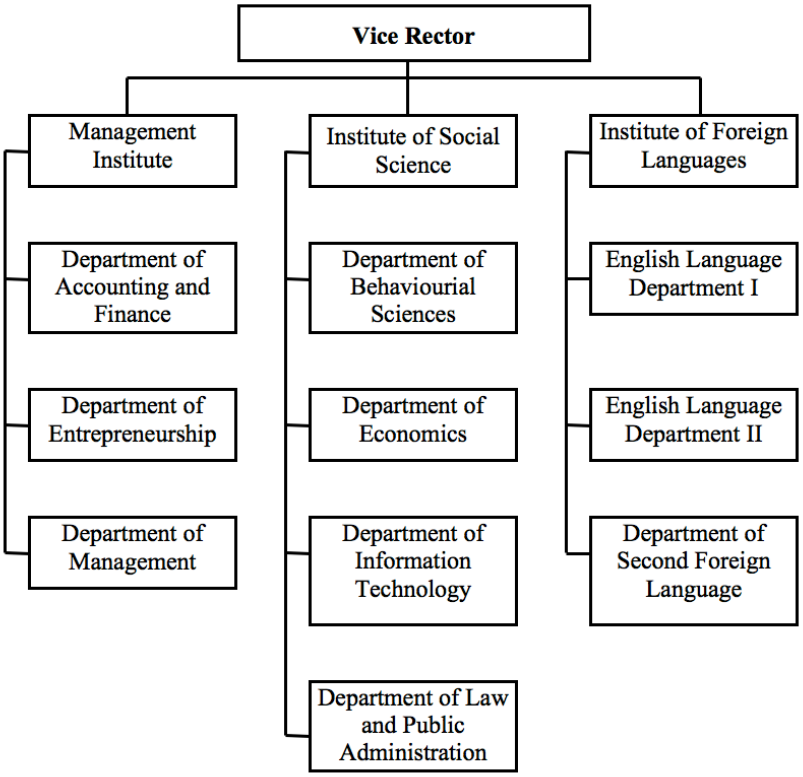

Figure 1 – EBS Vice rector's management structure

2.2.3 EBS Undergraduate Students

EBS undergraduate students are the focus of this research study. With the exception of the distance-learning students, ERASMUS students, students whose language of instruction is Russian, and the third year students, all undergraduate students: regardless of their class (i.e. first year or second year); regardless of their language of instruction (i.e. English or Estonian); and regardless of the mode of study (i.e. daytime or evening-time) are the focus of this research. EBS departments are not designed the same way as in traditional institutions. Departments provide bundles of courses or modules to specific degree programs. For example, the Department of Entrepreneurship provides courses and modules for all 10 different variations of the 3 bachelor degree programs. Moreover, whilst the values in ECTS remain the same, the type of courses within the degree program varies (i.e. core courses, compulsory, or elective). The following table shows the ten different variations.

Table 1: Bachelor degree programs variations

CODE	NAME	MODE	LANGUAGE
BBAi	International Business Administration	Daytime	English
BBAs	International Business Administration	Daytime	Estonian
BBAõ	International Business Administration	Evening	Estonian
BBLs	Business Administration and Languages	Daytime	Estonian
BBLõ	Business Administration and Languages	Evening	Estonian
BEBs	Entrepreneurship and Business Administration	Daytime	Estonian
BEBsv	Entrepreneurship and Business Administration	Daytime	Russian
BEBõ	Entrepreneurship and Business Administration	Evening	Estonian
BEBõv	Entrepreneurship and Business Administration	Evening	Russian
BEBk	Entrepreneurship and Business Administration	Distance	Estonian

While the interviews and online/syllabi researches, at the institution level, provide data to be compared with the SEHEE performance indicators, the SEE, at the undergraduate

students level, gathers data necessary to assess students' perception level in entrepreneurial mindsets and skills. The framework models are explained in the methodology section.

2.2.4 Head and Chair of the Department of Entrepreneurship at EBS

Professor Tiit Elenurm is the current Chair and Head of the department of entrepreneurship. Moreover, he is, undoubtedly, an expert on entrepreneurship education at the institution level, national level, and an active researcher at European level. He is an active member of a task force at the Estonian Ministry of Economy for entrepreneurship education. He kindly accepted to be the respondent, and share his knowledge on the entrepreneurship education at EBS. A short biographical note in an article stated that "[He] holds the professorship in entrepreneurship at the Estonian Business School. He obtained his Ph.D in 1980. He is the author of 112 research publications. His vision is to develop synergy between cross-border human resource development and training, consulting and research activities. His research interests include entrepreneurship, knowledge management, change management and cross-cultural management, internationalization strategies and international transfer of management knowledge. He has experience of human resource development and action research within the EU framework programs for innovative entrepreneurs" (Elenurm and Moisala, 2008 p.454).

3 LITERATURE REVIEW

"[I]t is becoming clear that entrepreneurship, or certain facets of it, can be taught… business educators and professionals have evolved beyond the myth that entrepreneurs are born, not made" (Kuratko, 2003 p.11). This section reviews; the role of the Academic Entrepreneurship Education (AEP) in forging students with entrepreneurial mindset and skills, and the literature findings centered on benchmark and few selected methods of assessment of educational learning outcomes. More after, a review of the Survey of Entrepreneurship in Higher Education in Europe shows the process in which the SEHEE has been conducted, and the portions that have been extracted to develop the analytical method used to investigate the first research question (RQ1).

3.1 Academic Entrepreneurship Programs

On the one hand, many research studies argued on the fact that academic entrepreneurship is still at the beginning stage and therefore has several weak points such as the depth of the programs (Brazeal and Hebert, 1999; Kuratko, 2005), and the teaching methods (Dhliwayo, 2008). Additionally, some researchers questioned and doubted the entrepreneurial educators capability of teaching a field that until recently was considered un-teachable (Jones and English, 2004). On the other hand, entrepreneurship education has a proven successful track within the American history, and it has reached a stage of maturity that brings validity to its necessity (Katz, 2003). Therefore entrepreneruship education in Europe has turned towards the American model in order to answer some of its current dilemmas.

One of the main dilemmas is how to promote and facilitate its implementation within an institutional context while obtaining the university financial and infrastructural support (Brennan et al., 2005). Additionally, academic credibility is another major dilemma that must be addressed and overcome if entrepreneruship education is to establish a solid ground in higher education (Pittaway and Hannon, 2008). The immaturity of the

entrepreneurship education and these dilemmas are inherent causes of its integration as a side topic in some HEI's.

Nevertheless, a general consensus is that academic entrepreneurship study should provide tools to favor learning through productive work experience in field aligned with the topic, and these tools should be a complete part of the study, and not a side activity (Groenewald, 2003; Dhliwayo, 2008). Moreover, many researchers in the academic entrepreneurship field caution the institutions against teaching entrepreneurship as a secondary area in business schools (Gibb, 2002; Matlay and Mitra, 2002; Adcroft et al., 2004), pointing out that teaching methods in conventional business schools tend to deliver concepts in a way that favor the production of "middle managers for large organization" rather than the production of "leader, creator and risk taker" that qualify an entrepreneur (Chia, 1996; Porter, 1994; Ronstadt, 1985; Tan and Ng, 2006).

Academic entrepreneurship education is a discipline that, during the twenty first century, "will become a worldwide product with multiple national and niche competitors competing for intellectual mindshare, students and trainees" (Katz, 2003 p.297). Moreover, an entrepreneurship "triple helix model" or, the linkage between industry, academic and government will be crucial for the nurture of entrepreneurship education as it has been the case for any other academic discipline (Tan and Ng, 2006).

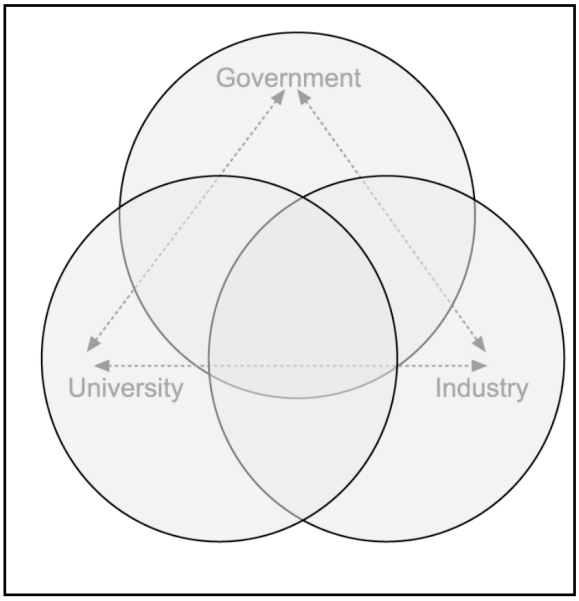

Figure 2 – The triple helix model (Dooley & Kirk, 2007 p.317)

To sum up, a successful AEP should secure: competent and competitive program contents; strong collaboration with local actors, viable links with regional and national small-medium businesses; real-life entrepreneur as mentor for the students; strong understanding of the communities and the environment in which the graduate students will operate; links with the private sector such as big firms; and link with the government (Dhilwayo, 2008).

3.2 AEP intake, Outcome and Start-ups

Entrepreneurs and small businesses are fuel to the economy of a country as commented earlier. Naturally certain researchers are questioning the outcome of the AEP, while others questioned the intake process and the education process of these AEP.

Some researchers argued that a proper recruitment and selection process of future students attending an AEP will likely increase the creation of start-ups, rather during the course of the study or in a short period after graduation (Fletcher, 1999; Cope, 2005). Additionally to this, research showed that people who believed to have the ability to start a business are five times more likely to actually start a business (Orford et al., 2003). Therefore, one of the core elements of the intake procedure of an AEP could be to question students' intentions. On the other hand, it has been shown that entrepreneurship education may have no effect on students' intentions to start a business, or a negative effect (Oosterbeek et al., 2010). The underlying reasons may be that students, during the course of the program, are exposed to the difficulties of being an entrepreneur and learn more about themselves (Oosterbeek et al., 2010).

Nevertheless, whether or not the effect of entrepreneurship education has an effect on students' intentions, research showed a positive correlation between the level of education of a person and the desire to pursue entrepreneurial activities, and the ability to start and sustain a business past the start up phase (Driver et al., 2001; Foxcroft et al., 2002).

Owing to this, start-ups may be regarded as valid measuring tool for the quality of an AEP. Nevertheless, the number of start-ups generated by students or graduates does not

represent the level of quality of an AEP, and numerous universities with no AEP had a consistent number of graduates that had started businesses (Galloway and Brown, 2002).

3.3 Entrepreneurial Mindsets / Traits

It is generally argued that personality traits do not change over time and are not affected by the program one might attend (Oosterbeek et al., 2010). However, self-assessment results of these traits are said; to only be constant once the person reaches 30 years old, and to develop considerably during the adolescence and young adulthood period of a person (Roberts et al., 2001; Robins et al., 2001). One might argue that entrepreneurial traits are forgeable and teachable to some extent, and directly influenced and developed by the AEP a student is following.

Owing to this, starting up or attempting to start a business after graduation is a distinctive career choice for an AEP graduate student (Nabi et al., 2006). Moreover, it does represent certain facets of entrepreneurship behavior (European commission, 2003; Henry et al., 2003; Reynolds et al., 2004). Furthermore, entrepreneurship behaviors are depicted in literature as guided by entrepreneurial traits (e.g. risk-taking, innovativeness, need for independence, confidence and self-efficacy), demographics incentives (e.g. family background and childhood experiences, family involvement in business start-up activities, work experience) and skills (e.g. competencies in seeking opportunities, analyzing ideas, problem-solving) (Henry et al., 2003; Nabi et al., 2006). Finally, research studies associated entrepreneurial behaviors such as; high need for achievement, independence, moderate risk-taking propensity, tolerance to ambiguity and innovation to characterize successful entrepreneurs (McClelland, 1985; Hornaday and Aboud, 1978; Ibrahim and Goodwin, 1986; Ibrahim and Soufani, 2002).

Naturally, the list of entrepreneurial traits and mindsets has the tendency of being almost limitless (Powell and Bimmerle, 1980). However, the entrepreneurial descriptors block (i.e. individual traits, individual personal health and fitness, and knowledge and experience) of the following figure shows a non-exhaustive list. This current study uses only on the entrepreneurial descriptor block.

This figure is extracted from Powell and Bimmerle (1980, p.35) article.

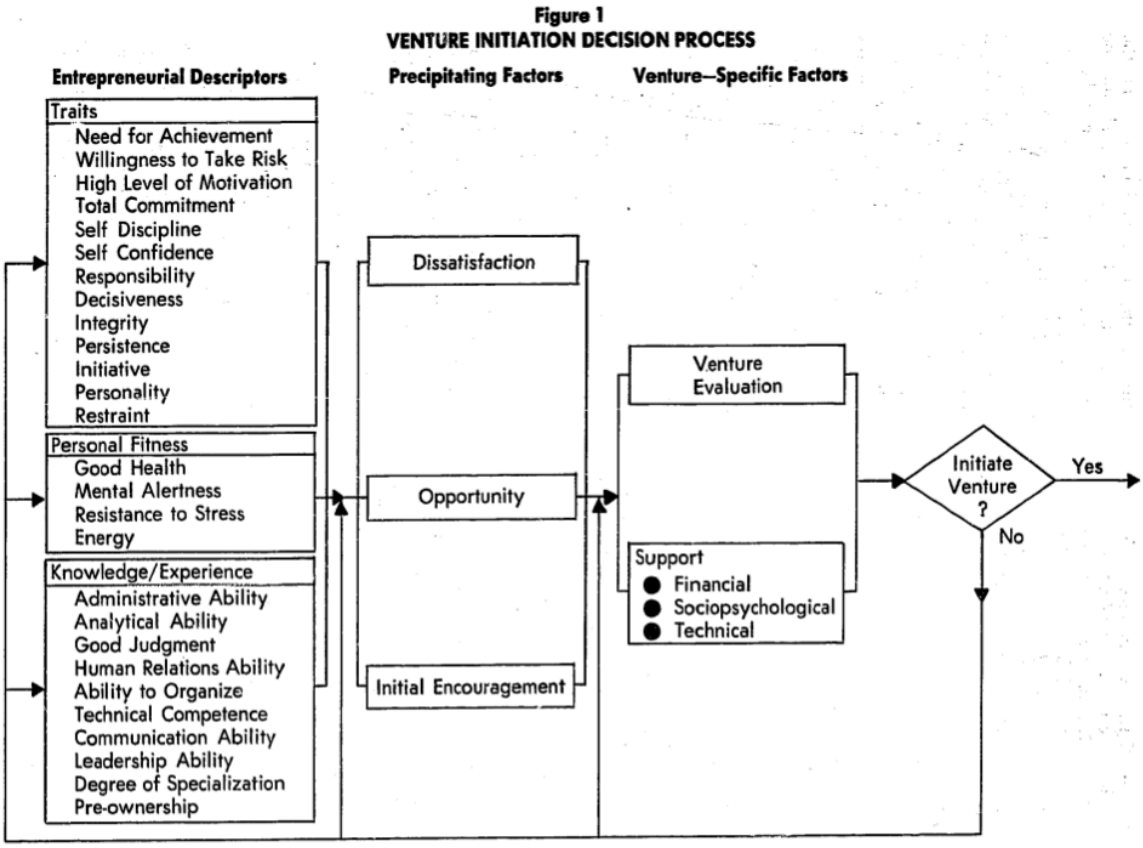

Figure 3 – Entrepreneurial descriptors block

3.4 Entrepreneurial Skills

"[A]n entrepreneur is someone who possesses a bundle of certain qualities and thinks and behaves in an innovative and creative way" (Dhliwayo, 2008 p.332). For example, a Canadian study pointed out that an estimated 90% of the small businesses failure is accredited to lack of managerial skills (Ibrahim and Soufani, 2002). Furthermore several studies link small businesses failure with the entrepreneur reluctant to delegate tasks that are manageable by their staff (Ibrahim and Ellis, 1986).

Successful entrepreneurs need the ability to qualitatively maximize knowledge from learning experiences (Brennan et al., 2005). Entrepreneurs learn: by doing, from everything, from everyone, customers, suppliers, competitors (Raffo et al., 2000).

Moreover, entrepreneurs learn: by copying, by experiment, by problem solving, and by opportunity taking (Gibb, 1997). Learning from what works, and essentially from what does not work, is part of the personal development of an entrepreneur (Smilor, 1997). Furthermore, mistakes are important "tools for learning", fortunately individuals are reluctant in making them, therefore the process of learning from and analyzing the causality is part of the experience, and it is necessary in order to prevent its repetition (Marsick and Watkins, 1990, p.13).

A non-exhaustive list of managerial skills that an AEP should develop in the future entrepreneurs are; general reasoning, analytical skills, being critical about the status quo of things and seeking for new and better solutions or practices, learning how to seek and find information efficiently and rapidly, use of latest technology for organizing and finding information, networking, the professional language of communication, credibility when seeking for resources, and teamwork (Rosa, 2003). Moreover, several pieces of research supported the idea that entrepreneurs should develop skills and competencies in areas such as; strategy, cash flow management, financial planning, delegation skills, marketing, human resources, and networking, for sustaining and the potential growth of small businesses (Ibrahim and Goddwin, 1986; Hofer and Sandberg, 1987; Birley, 1985; Ibrahim and Soufani, 2002). The following table depicts the list of entrepreneurial traits and mindsets and the managerial skills found in the literature.

Table 2: Non-exhaustive list of managerial skills & entrepreneurial traits

Entrepreneurial Traits	Knowledge / experience (Managerial Skills)
Audacity	Ability to organize
Being in control of one's own life	About oneself
Commitment	Administrative ability
Creativity	Analytical ability
Decisiveness	Cash flow management
Determination	Communication ability
Emotional intelligence	Communication language of business
Enthusiasm	Credibility
Freedom	Degree of specialization
Fun	Delegation skills
High level of motivation	Financial planning

High stress level propensity Independence Initiative Innovativeness Integrity Intuition and "Gut" instinct Long working hours Need for achievement Persistence Personality Pride Reflection Responsibility Restraint Risk-taking Self discipline Self-confidence Self-efficacy Self-esteem Simple and double loop learning Tolerance to ambiguity	General reasoning Good judgment Human relations ability Human resources Latest technology to find information Leadership ability Marketing Networking Pre-ownership Problem-solving Seeking new & better solutions Strategy Teamwork Technical competence Work experience

In conclusion, the entrepreneurial traits and managerial skills of a successful entrepreneur are defined as a learning process about; one-self, the business, the environment and entrepreneurial networks, small business management, and the nature and management of relationships (Cope, 2005).

3.5 Benchmarking & Evaluation Methods

The term "benchmarking" was introduced and first used by Rank Xerox in the effort of explaining a process of self-evaluation with respect to competitors, in order to identify strengths and weaknesses and identify best and optimal solutions (Camp, 1989). Moreover, benchmarking was adapted to higher education in the United States during the 1990s and more recently, during the mid-1990s, by the United Kingdom and Europe (Jackson, 2001). Benchmarking and evaluation in the literature are defined by their purpose and objectives (Kailer, 2005). Furthermore, the purpose of evaluation and benchmarking in education is to restructure programs in a new and innovative way, to

monitor and optimize programs, to better clarify learning outcomes, and to support decision-making policy at institution level and at program level (Kailer, 2005). Benchmarking and evaluation methods are crucial in today's global market of higher education. Students are striving for recognized education to acquire a competitive advantage at graduation, therefore universities and HEI must provide high academic standards and proven learning outcomes (Jackson, 2001).

Benchmarking and evaluation methods are subject to validity argumentation and undoubtedly incorporate a certain level of "bias" (Ewell, 2005). Moreover, transparency on the meaning of results will not eliminate "bias", but it will educate the readers. Additionally, when communicating results of a benchmark or evaluation, in the form of statistical results, each denominator must be clearly defined and exposed (Ewell, 2005). Furthermore, acknowledging the "bias" of evaluation settings; clearly exposing the assumptions; premises; and transparency on how results are measured and obtained; will indeed create reliable tools for assessing quality and extract viable measures (Ewell, 2005). In other words, Benchmarking and evaluation quality are critical to the process they attempt to compare and the rankings they determine. There is a need to carefully select the method used in assessing education, institution quality or learning outcome.

3.6 Survey of Entrepreneurship in Higher Education in Europe (SEHEE)

The Scandinavian consortium adopted a broad definition of entrepreneurship education as having the "potential to encourage entrepreneurship, fostering the right mindset among students as well as impact on future economic growth, job creation, innovation and wealth generation. Moreover, entrepreneurial skills and attitudes also provide benefits to society beyond their application to business activity" (SEHEE, 2008a). The SEHEE covers a total of 31 countries, including the 27 EU member states, Iceland, Liechtenstein, Norway and Turkey. The net response rate is around 17 percent, therefore the consortium pointed out that results must be regarded with extreme caution (SEHEE, 2008a). The purpose of the SEHEE was to: provide factual information on the current status of

entrepreneurship education in Europe, provide good practices, and establish policy recommendations.

4 METHODOLOGY

The purpose of this chapter is to inform readers on how primary and secondary data were collected, and how the analysis was conducted. This section presents; the workflow and framework models used to answer the research questions, the research strategy and design selected to perform the study, and finally the quality of the methodology (i.e. validity, reliability).

4.1 Workflow & Framework

As pointed out in the first chapter, the research questions are labeled as follow:

RQ1: HOW ENTREPRENEURIAL IS THE EDUCATION AT EBS?

- RQ1.1: How is the level of entrepreneurship education effort, in producing students with entrepreneurial mindsets and skills, using the analytical method developed with data from the Survey of Entrepreneurship in Higher Education in Europe (SEHEE)?

RQ2: HOW ENTREPRENEURIAL ARE THE EBS STUDENTS?

- RQ2.1: To which extent first year and second year undergraduate students perceive the entrepreneurship education to forge necessary entrepreneurial mindsets and skills.
- RQ2.2: What are the similarities and differences between; degree programs, classes, language of instruction, and mode of study.

This study is based on certain underlying assumptions. The research purpose is not to confirm or refute theses assumptions, but to build upon them. Such assumptions are:

- By keeping the SEHEE questionnaire in its original form, content, formulation and disposition, the researcher avoids additional “noise” or “bias” to its reliability and validity.

- The 2008 SEHEE was a quantitative study administrated using an online survey. In the current study, the answers are collected qualitatively from reliable sources. The method for collecting data in this study increases the reliability and validity of the answers to the questionnaire.
- Entrepreneurship education and entrepreneurial mindset do provide students and graduate students with useful tools applicable at; international, national, regional, local and even personal level.

This section shows the methods used to answer the first research question RQ1 (administration level) and the second research question RQ2 (student level).

4.1.1 Administration Level Workflow and Framework Model

The following figure "Administration Level Workflow" shows the analytical framework used to answer the first research question (RQ1).

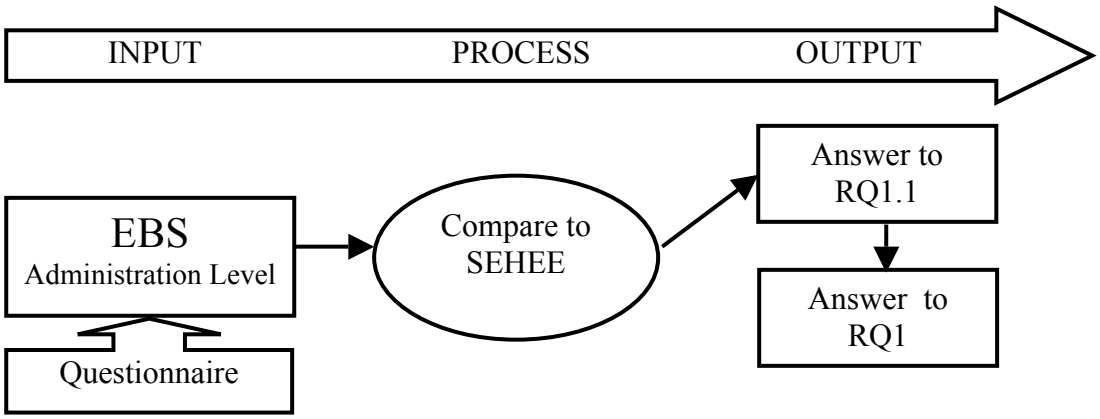

Figure 4 – Administration level workflow

The SEHEE response rate was 24.5%, with 2899 HEI invited to take part of the survey and 664 institutions responded to the survey (SEHEE, 2008a). Furthermore, the net response rate was 17% with 2709 institutions that were successfully contacted and 448 institutions that returned usable answers to the questionnaire. The questions were posed,

for example, as: what is the highest study level at your institution, how many years has your institution offered entrepreneurship education, how many in-curricula entrepreneurship courses did your entire institution offer to undergraduate students. 13 HEI were identified in Estonia, and 3 were part of 448 institutions (i.e., the net sample size). Two of the 3 institutions were providing sufficient entrepreneurship education and one of them was Mainor Business School. Even though Professor Tiit Elenurm mentioned the fact that he had filled out or received the questionnaire for the SEHEE, it was impossible for the researcher to establish that EBS was the other institution.

This current study is using the same questionnaire as in the SEHEE, and the researcher is collecting the answers from different sources such as: the study department, the department of entrepreneurship, the student council, courses syllabus, and online sources. The 77 questions are rather closed ones for the majority of them, with a few semi-opened alternatives. There are a total of 53 questions that are included into the design of the framework model (SEHEE, 2008a). From these questions, 6 are dismissed for not having an impact on the outcome. For example, questions such as; what is the total number of students, what is the ratio males vs. females, and what is the total budget allocated to entrepreneurship education, were not considered. It is clear that these types of questions tell more about the size and type of institution than the level of entrepreneurship education effort. In fact, other questions, included in the framework model, make use of the answers from the 6 dismissed questions. Professor Tiit Elenurm, Chair and Head of the entrepreneurship department, kindly provided answers to 20 of the remaining 47 questions. During the interview, Professor Tiit Elenurm pointed out the necessity to triangulate his answers with other EBS academicians. However, the researcher voluntarily omitted this procedure for several reasons such as; availability of EBS teachers and lecturers, the potential lack in interest of professors not directly involved in entrepreneurship and the hierarchical status of the respondent as head of the entrepreneurship department. Additionally, the department of study provided answers to 5 of them, and Toomas Tuude, the student council Vice-Chairman, provided guidance throughout about the online sources and syllabi to answer 12 of the remaining questions. A total of 10 questions are un-answered. Some of the reasons were the limited duration of the interview, and/or the unavailability of the information. The issue of these 10 un-

answered questions is addressed further down this section. The answers to these 47 questions, the framework model, and the analytical method are used to determine the level of entrepreneurship education effort.

The framework model is hierarchically divided into four levels: the output, the dimensions, the categories, and the questions. Moreover, there are 47 questions, 21 categories, 6 dimensions, and one output level. The framework model processes the answers to the questions (input) and gives an output that is the level of entrepreneurship education effort in producing entrepreneurial graduates (i.e. students with entrepreneurial mindsets and skills). The following figure is an extract from the SEHEE report (2008a, p.44) that shows the approach adopted.

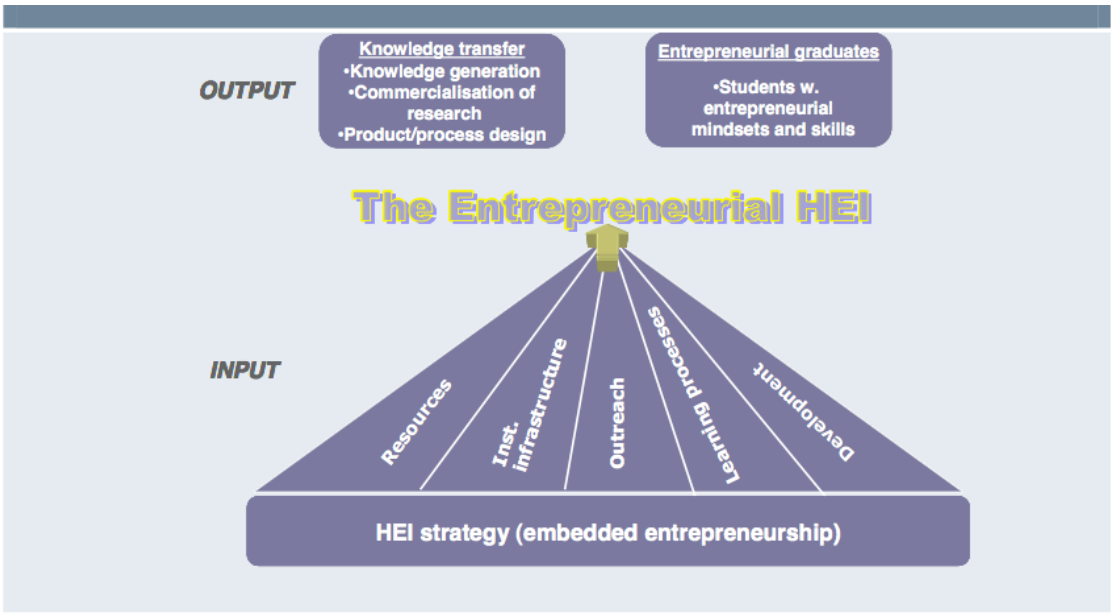

Figure 5 – An integrated approach to entrepreneurship education

The next figure, extracted from the SEHEE report (2008a, p.46), shows the six dimensions and their respective categories. Each category has a specific number of questions (appendix E).

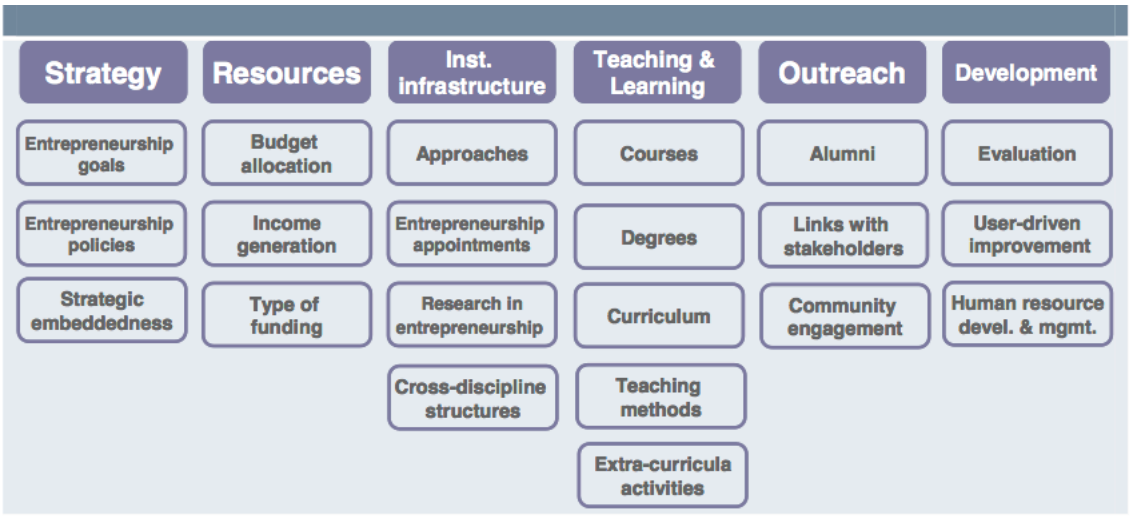

Figure 6 – Six dimensions of entrepreneurship education

The framework model and the analytical method are based on the assumption that each question within a category has the same degree of influence on the category. Additionally, each category within a dimension has the same degree of influence on the dimension. Moreover, each dimension has the same degree of influence on the output level (SEHEE, 2008a). Due to the novel character of the SEHEE research and the infancy state of entrepreneurship education, there are no complete data on the actual influence of each dimension or each category in respect to the output (SEHEE, 2008a). Consequently, the answer to a question is rather set to full or null influence. This influence (full or null) is determined using the data from the SEHEE main report (2008a) and the annexes (2008b; 2008c). Owing to this, using the analytical method with the output level ranging from 0 to 1 (or 0% to 100%), each dimension equally influences the output level with a coefficient of 1/6.

- (Output) = 1/6 (Strategy) + 1/6 (Resources) + 1/6 (Inst. Infrastructure) + 1/6 (Teaching & Learning) + 1/6 (Outreach) + 1/6 (Development)

Consequently, in the case of Strategy and Teaching & Learning dimensions, respectively with 3 and 5 categories each, the equations and the coefficients are:

- 1/6 (Strategy) = 1/18 (Entrepreneurship goals) + 1/18 (Entrepreneurship policies) + 1/18 (Strategic embeddedness)

- 1/6 (Teaching & Learning) = 1/30 (Courses) + 1/30 (Degrees) + 1/30 (Curriculum) + 1/30 (Teaching methods) + 1/30 (Extra-curricula activities)

The same logic is applied to determine the equations for the other dimensions. Moreover, in the case of Courses and Degrees categories, respectively with 4 and 3 questions each, the equations and coefficients are:

- 1/30 (Courses) = 1/120 (Q11) + 1/120 (Q14) + 1/120 (Q25) + 1/120 (Q26)
- 1/30 (Degrees) = 1/90 (Q27) + 1/90 (Q29) + 1/90 (Q30)

Evidently, the same logic is applied to determine the equations for the other categories. Finally, the table in appendix G shows the coefficients of each question, each category, and each dimension. It is important to remind that each answer to question is set to 1 or 0 (full or null) in the equations. The only exception to this rule is regarding the 10 un-answered questions.

The 10 un-answered questions required special attention. A three-case scenarios approach is used to tackle this issue. The three scenarios are:

- *The Best Case Scenario* – where the influence of each of the 10 un-answered questions is set to full, and the output level is at its maximum value
- *The Average Case Scenario* – where the influence of each of the 10 un-answered questions is set to half, and the output level is at its average value.
- *The Worst Case Scenario* – where the influence of each of the 10 un-answered questions are set to zero, and the output level is at its minimum value

These case scenarios determine the boundaries and average in which EBS' level of entrepreneurship education effort should fall.

The following chapter shows the empirical results. Furthermore, the analyses and discussion sections provide a closer look at the findings.

4.1.2 Student Level Workflow and Framework

The following figure "Student Level Workflow" shows the analytical framework used to answer the second research question (RQ2). The Survey on Entrepreneurship Education (SEE) questionnaire was developed following the information on entrepreneurial mindsets and skills find in the literature review.

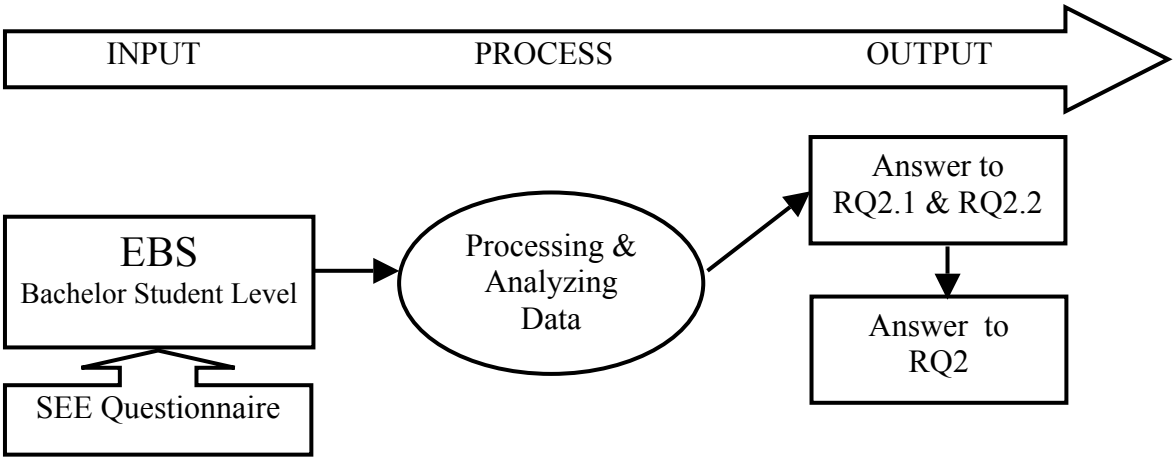

Figure 7 – Undergraduate student level workflow

The sample range of this study was first year and second year undergraduate students, whose language of instruction is English or Estonian, and who were following daytime or evening courses. According to the student department and the student council, 312 students fell within this sample range. During the first two weeks of March 2010 (Tuesday and Wednesday of the first week, and Thursday of the second week), 150 questionnaires were distributed. 99 questionnaires were filled out and only 85 were useable. Therefore, the SEE net response rate was 27%.

The SEE questions were written, for example, as: please indicate your current class, indicate your bachelor degree program, indicate your future career goal, and etc… The complete SEE questionnaire is located at the appendix C. The SEE questionnaire was tested by a group of 3 EBS undergraduate students, and reviewed by 2 university professors and a member of the EBS student council in order to control whether the questions were understood as the author intended it. Moreover, the final questionnaire was composed of 14 questions sectioned into 3 categories: basic information;

entrepreneurial traits and skills; and courses, majors, and specializations. The questionnaire was distributed during certain lectures, in between courses and during lunch breaks. The completion of the questionnaire was timed at 5 to 7 minutes during the group test session. Students had the alternative to complete the survey as they received it or to complete the questionnaire at a more suitable time and return it to the student council's office.

From the SEE questionnaire, responses to questions; Q9 (definition of Entrepreneur), Q11 (personal effectiveness), and Q12 (business and organizational effectiveness) are used to answer the research question (RQ2.1). These questions have a five-level Likert scale and the five response levels available are: not at all, very little, little, much, and very much. The extent to which first year and second year undergraduate students perceive entrepreneurship education at EBS is aggregated to a two-level scale with; little extent level (i.e. response levels – not at all, very little, and little – are combined) and good extent level (i.e. response levels – much, and very much – are combined). The researcher believes that the choice gap between "little" and "much", in the five-level Likert scale, is significant enough to separate students' perception into two distinct groups:

- *Little-Extent Group* – where students perceive the entrepreneurship education at EBS to for, to a little extent, necessary entrepreneurial mindsets and skills.
- *Good-Extent Group* – where students' perceive the entrepreneurship education at EBS to forge, to a good extent, necessary entrepreneurial mindsets and skills.

Chapter 6 shows the empirical results, and the analysis and discussion on the research question (RQ2.1).

Consequently, responses to questions Q9, Q11, Q12 on one hand, and on the other hand responses to questions Q1 (year of birth), Q2 (sex), Q7 (working situation), Q8 (workers type), and Q10 (future career goal) are aggregated to show the similarities and differences between degree programs, classes, language of instruction, and mode of study. The two-level scale, previously shown, is used to show the extent to which specific groups of students perceive the entrepreneurship education at EBS to forge entrepreneurial mindsets and skills, therefore answering the research question (RQ2.2). The two-level

scale separate students that perceive the entrepreneurship education at EBS to forge entrepreneurial mindsets and skills to a good extent from those that perceive it to a little extent. Chapter 6 shows the analysis and discussion on the research question (RQ2.2).

4.2 Research Strategy & Research Design

The research method used to answer the aim of this paper is a case study. Case studies are research method performed to provide description, test theories or generate theories (Eisenhardt, 1989). Additionally, case study is relevant when particular questions such as; how, why, and /or who, are been asked (Remenyi et al., 1998). Moreover, there are five different types of cases; the critical case, the unique case, the revelatory case, the representative or typical case, and the longitudinal case (Yin, 2003), and the current study is a typical case study of a single organization: the Estonian Business School. Even though case study method shows relevant quality in the results, it has been criticized for being biased and having a tendency to use incomplete evidence, nevertheless it would be simple to claim that some form of research or research method is without bias (Remenyi et al., 1998). Consequently, the researcher should assess the possible bias and take them into consideration during the elaboration of the study (Remenyi et al., 1998).

4.2.1 Research Strategy & Design at the Administration Level

The administration level required a single set of entries (inputs) to produce an outcome. The answers to the 47 questions, primary data, are collected through; interview, student office personal, online sources, syllabi, and the student office vice-chairman. These answers constitute the single set of entries characteristics of EBS institution. Secondary data were used to develop a analytical method capable of showing the level of entrepreneurship education effort of any institution. Finally, the research strategy and design use to answer the first research question (RQ1) is a qualitative case study.

4.2.2 Research Strategy & Design at the Student Level

Although the overall research design is a case study, the student level required a different approach. The quantitative research method is a survey with a 5-page self-completion questionnaire. A comparative design is employed to answer the second research question (RQ2.2). A comparative study design occurs when particular issues or phenomena are examined in different settings (i.e. countries, institutions, culture, etc…) with the intent of comparing similarities or disparities while using the same measuring or research instruments (Bryman and Bell, 2007). Furthermore, comparative studies favor "greater awareness and deeper understanding of social reality in different contexts" (p.66).

4.3 Quality of the Methodology

In this section, the credibility (i.e. validity and reliability) of the research methods and designs are discussed.

4.3.1 Validity – Reliability

The validity refers to the extent to which a study reflects the concept the research is measuring, and there are three different concepts of validity: construct validity, internal validity, and external validity (Yin, 1994).

Construct Validity is achieved by conducting correct measures for the concept that is investigated (Wigdor and Garner, 1986). Moreover, construct validity is acquired by accessing multiple sources of evidence during the data collection process and argue that all methods drive to the same conclusion. Triangulation as a data collection approach is a research method that converges several sources to the same conclusion (Mangan et al., 2004). Therefore it increases the overall credibility of the findings.

Internal validity shows to what extent the results reflect the reality (Merriam, 1994). Additionally, internal validity is essential when aiming at establishing explanations and causal relations (Yin, 1994).

External validity is established if the study findings can be generalized (Yin, 1994), and it closes the gap between theoretical conclusions and empirical data (Grönfors, 1982).

Reliability is established if the research findings can be replicable, and the methods used are independent from random influences (Hair et al., 2003). Reliability demonstrates to what extent the results and conclusions are replicable with minimum variation (Yin, 1994).

4.3.2 Administration Level – Quality of the Method

The 2008 SEHEE was an online quantitative research. The current study is a qualitative case study. Therefore the internal validity is above satisfactory. Moreover the researcher has minimized variations, bias and "noise" by conserving the questionnaire as close as possible to the original study. The data collection methods used in this current study increases the internal validity. It is rarely possible to obtain external validity in relation to a case study, especially in a unique case study. The purpose of the paper is not to generalize the findings to other institutions, but to investigate a method to measure entrepreneurship education and its effect. Therefore, external validity is not a requirement. The construct validity of this study rests on the construct validity of the original study. The SEHEE main report (2008) pointed out the novelty of the research and the satisfactory level of performance indicators to assess entrepreneurial activities. The researcher acknowledges the direct correlation between this study and SEHEE methodology's construct validity. The reliability of the findings can be replicable. The data was collected from an expert source, Professor Tiit Elenur, reliable persons within the institution's education system, and official sources. Therefore, the reliability is above satisfactory.

4.3.3 Student Level – Quality of the Method

The quantitative survey research, use to answer RQ2, is tested with respect to reliability and validity. The construct validity of the method is acceptable. Moreover, Framework,

workflow and entrepreneurship mindsets and skills are derived from an extensive literature review. Surveying quality of programs or courses in respect to the content and method of teaching is not a novel topic. Surveys are a valid method for assessing the extent to which a person values the topic in question.

Internal validity of this method is adequately acceptable. Moreover, the survey net response rate is 27%. The ratios in respect to daytime / evening, female / male, English / Estonian, and different undergraduate programs are consistent with the overall students ratios in respective categories. To sum up, the response rate is acceptable, and the different ratios are consistent. Therefore, the results represent to a great extent the reality of the case study environment.

External validity is hardly obtained during a case study. This research does not pursue generalization of the results. Therefore, external validity is not a requirement for this case study.

Reliability is acceptable to some extent. The survey questionnaire was administrated during courses and breaks; therefore random entities can be identified. The days selected for conducting the survey may have influenced the quantity of students present. The spring season is characterized by an excessive use of survey within future graduates and their respective final paper work. There is a possibility of saturation from undergraduate students in respect to surveys, which indeed may affect the response rate and the quality of the answers. Regardless of these issues, the reliability of the results is fairly acceptable.

5 HOW ENTREPRENEURIAL IS THE EDUCATION?

This chapter shows the SEHEE questionnaire, the six dimensions and categories necessary to entrepreneurship education, and the grouping of questions under their respective dimensions. Additionally, the empirical results section shows the findings from the interview, the online research, and the syllabi examination. Furthermore, the analysis section compares the SEHEE report data with the findings of this current case study. Finally, the discussion section brings light to the first research question (RQ1).

5.1 SEHEE Questionnaire

The SEHEE questionnaire was sent to 2899 HEI and the net response rate was 17% (SEHEE, 2008a). Moreover, as pointed out in chapter 3, the purpose of the SEHEE study was to; provide factual information on the current status of entrepreneurship education in Europe, provide good practices, and establish policy recommendations.

5.1.1 Six Dimensions / Categories

The six dimensions characterizing the level of entrepreneurship education effort of an institution are: teaching and learning, strategy, institution infrastructure, outreach, development, and resources.

Teaching and learning – what are the opportunities offered to student for learning entrepreneurship. The five categories to consider are: courses, degrees, curriculum, teaching methods, and extra-curricular activities.

Strategy – to what extent entrepreneurship education goals and polices are embedded in the overall strategy of the institution. The three categories are: entrepreneurship goals, entrepreneurship policies, and strategic embeddedness.

Institutional infrastructures – what are the structures and settings in place that support entrepreneurship education. There are four categories to consider such as: the approaches, entrepreneurship appointments, research in entrepreneurship, and the cross-discipline structures.

Outreach – to what extent the institution is linked to the community, in a broader sense. The three categories are: alumni, links with stakeholders, and community engagement are been assessed.

Development – how does the institution assess the quality of their entrepreneurship education and ensure the educational development of the staff engaged in their entrepreneurship education. The three categories are: evaluation, user-driven improvement, and human resource development and management.

Resources – what type of financial support does the institution has to sustain their entrepreneurship education. Tuition fees are not considered, in the SEHEE study, as resources per se. The three categories are: budget allocation, income generation, and type of funding.

5.1.2 Grouping of Questions

The SEHEE questionnaire is composed of 77 questions. The first 9 questions, the general survey, were answered by all institutions regardless of their degree of involvement in entrepreneurship education and the remaining 68 questions, the specific survey, were answered only by HEI that noted having courses where entrepreneurship accounted for at least 25% of the content. EBS provides courses, modules and programs focusing partially or entirely around entrepreneurship.

The specific survey questionnaire part has 68 questions. A total of seven questions served as a bridge to different parts of the survey, or additional information to certain block of questions. The tables in appendix D show the SEHEE questions in details. Moreover, the tables in appendix E show the six main dimensions with the categories and the person or the sources that provided the answers. Several questions are labeled “not answered” or

"not focus", mainly due to restriction on time with each respondent, questions that are not directly focused on the current study research, and the unavailability of the information.

5.2 Empirical Results

This section shows the findings. The question number, the categories, the respondent, the question and the answers are compiled in the following six tables. Moreover each table is representative of one of the dimension. The labels employed in the respondent/sources (RESP.) column are defined as follow:

- CS – Courses Syllabi
- OS – Online Sources
- SD – Study Department
- TE – Professor Tiit Elenurm

Table 3: Results – Teaching and Learning

Q	CATEGORIES	RESP.	QUESTIONS	ANSWERS
Q11	Courses	CS	Q11: Approximately how many in-curricula entrepreneurship courses did your entire institution offer to undergraduate students in the previous academic year?	10 courses
Q25	Courses	OS & CS	Q25: Is entrepreneurship primarily integrated across curriculum or taught only in specialized courses/modules at your institution (on average across all study levels)?	Mixed of exiting curriculum and specialised courses
Q26	Courses	CS	Q26: Entrepreneurship courses can have different focal points with respect to the entrepreneurial process. Here we distinguish between:	The courses are evenly distributed according to pre start-up, start-up, growth phases.
Q38	Curriculum	TE	Q38: Does your institution at the present time.	In-house development of ent. Teaching - Formalized national and International exchange of good practice - Include entreprenerus/practitioners in the development of Ent. Teaching.
Q39	Curriculum	TE	Q39: Does your institution at the present time have cross-faculty/ interdisciplinary formalized collaborations in developing new entrepreneur- ship education?	Yes
Q27	Degrees	CS	Q27: Did your institution offer one or more degree programs in entrepreneurship (irrespective of study level) in the previous academic year?	Yes / at Bachelor level
Q29	Degrees	SD	Q29: Please estimate the number of students at each study level enrolled in the degree program(s) in the previous academic year?	243 students
Q30	Degrees	OS & CS	Q30: Please indicate which overall subjects at your institution did offer in-curricula entrepreneurship courses and/or entrepreneurship degree(s) (no matter study level) in the previous academic year.	Both
Q41	Extra. actv.	TE	Q41: Did your institution offer extra-curricula activities focusing on entrepreneurship in the previous academic year?	Yes, such as: seminars/workshops - business plan/venture capital competitions - company visits - matching events between students and external stakeholders.
Q40	Teach Meth	TE	Q40: How often does your institution make use of the following main teaching methods in the entrepreneurship education?	Lecturing (often) - case studies (sometimes) - entrepreneurs (often) - project teams (sometimes) - company visits (sometimes) - venture simulation (often)

Table 4: Results – Strategy

Q	*CATEGORIES*	*RESP.*	*QUESTIONS*	*ANSWERS*
Q31	Ent. Goals	OS	Q31: Is entrepreneurship embedded in your institutions written over all mission statement?	No
Q32	Ent. Goals	TE	Q32: What are the overarching entrepreneurship goal(s) for your institution?	Doesn't have entrepreneurship goals - provide access to entrepreneruship opportunities for all students - inspire student toward entrepreneurial career - foster entrepreneurial mindset & skills - conduct state-of-the-art research on entrepreneruship - increase number of graduate start-ups - seek opportunity for commercially exploit knowledge present a the institution - entrepreneurship education as a whole should generate income for the institution
Q33	Ent. Policies	TE	Q33: Does your organization have institution-wide policies/action plans (in writing) for undertaking entrepreneurship education?	Yes
Q36	Strategic embeddedness	OS	Q36: Which person has the primary responsibility for the entrepreneurship education at the strategic level at your institution?	Professor

Table 5: Results – Institutional Infrastructures

Q	*CATEGORIES*	*RESP.*	*QUESTIONS*	*ANSWERS*
Q50	Approaches	TE	Q50: Does your institution have an entrepreneurship department?	Yes, with less than 5 full-time academic stuff
Q51	Approaches	OS	Q51: Does your institution have a dedicated entrepreneurship centre or similar formalized entity?	Yes, and the center employs at east one full-time employee
Q52	Approaches	OS	Q52: Does your institution provide incubator facilities?	No, my institution does not have incubator facilities
Q53	Approaches	OS	Q53: Does your institution have a technology transfer office (TTO)?	No, my institution does not have a TTO
Q47	Cross-Discipline Struc.	OS & CS	Q47: Can all students at your institution take entrepreneurship courses and have them credited to their degree regardless of to which faculty/discipline they are connected?	Yes
Q48	Cross-Discipline Struc.	OS	Q48: Did your institution offer cross-faculty/multidisciplinary entrepreneurship activities (both in-curricula and extracurricular) in the previous academic year?	Yes
Q49	Cross-Discipline Struc.	OS	Q49: Does your institution provide opportunities for entrepreneur- ship students from different faculties/disciplines to mix in the classroom?	Yes
Q44	Research in Ent.	TE	Q44: Does your institution conduct research on entrepreneurship?	Yes
Q45	Research in Ent.	TE	Q45: Does your institution conduct research on entrepreneurship education?	Yes

Table 6: Results – Outreach

Q	*CATEGORIES*	*RESP.*	*QUESTIONS*	*ANSWERS*
Q54	Alumni	TE	Q54: Does your institution track the individual alumni?	Yes, to keep in contact with the alumni
Q55	Alumni	TE	Q55: Does your institution involve the alumni in its entrepreneur- ship activities?	Yes
Q58	Community Engagement	TE	Q58: Please estimate what approximate percentage of all students graduated with actual practical entrepreneurial experience from activities offered by your institution in the previous academic year?	Between 20 to 50%
Q59	Community Engagement	TE	Q59: Did your institution in the previous academic year transfer knowledge to society?	Yes, through academic spin-offs

Table 7: Results – Development

Q	CATEGORIES	RESP.	QUESTIONS	ANSWERS
Q61	H.R. Dev. & Mngt.	TE	Q61: Please estimate the number of academic staff involved in your institution's entrepreneurship activities (in-curricular as well as extracurricular).	3 full time + 10 part time
Q62	H.R. Dev. & Mngt.	TE	Q62: Please estimate the percentage of the academic staff involved in providing your institution's entrepreneurship activities that have their own experience as entrepreneurs.	66% (2 out of 3 full time) and 50% (5 out of 10 part time)
Q63	H.R. Dev. & Mngt.	TE	Q63: Are guest lecturers/practitioners with practical experience as entrepreneurs used in the entrepreneurship education?	To a great extent
Q65	H.R. Dev. & Mngt.	TE	Q65: At your institution, is it compulsory for academic staff members who (want to) teach entrepreneurship to engage in training/coaching aimed at developing/improving their entrepreneurship teaching skills?	Yes
Q66	H.R. Dev. & Mngt.	TE	Q66: Does your institution require that academic staff members have actual entrepreneurial experience before they are allowed to teach entrepreneurship?	No
Q67	User-driven improv.	TE	Q67: Did students at your institution evaluate the entrepreneurship courses in the previous academic year?	Yes

Table 8: Results – Resources

Q	CATEGORIES	RESP.	QUESTIONS	ANSWERS
Q70	Income Generation	TE	Q70: What types of income generating activities related to entrepreneurship (excluding the actual in-curricular education for students) does your institution have?	The institution does not have any income generating activities

5.3 Analysis

This section shows the analysis of the data collected at EBS with the SEHEE (2008a, 2008b, 2008c) data. The section is divided into 6 sub-sections representative of each dimension and an additional sub-section compiling the six dimension findings. Each sub-section shows the level of entrepreneurship education effort from the dimension perspective. Questions and each category within a dimension are pointed out, and the question value level (full or null, 1 or 0) is assessed with the support of the SEHEE main report (2008a) and the annexes (2008b; 2008c).

The following table shows each question with the type of answer that was required.

Table 9: Type of answers to specific questions

Questions	Answer's Types		Questions	Answer's Types
Q11	Number		Q50	Yes/No
Q14	Multiple choice		Q51	Yes/No
Q25	Multiple choice		Q52	Yes/No
Q26	Multiple choice		Q53	Yes/No
Q27	Yes/No		Q47	Yes/No
Q29	Number		Q48	Yes/No
Q30	Multiple choice		Q49	Yes/No
Q38	Multiple choice		Q43	Number
Q39	Yes/No		Q44	Yes/No
Q41	Yes/No (7yes - 1no)		Q45	Yes/No
Q40	Multiple choice			
			Q69	Yes/No
Q54	Yes/No		Q62	Percentage
Q55	Yes/No		Q63	Yes/No (3 level of yes)
Q57	Yes/No (2 level of yes) (7 items)		**Q64**	Yes/No
Q58	Percentage		Q65	Yes/No
Q59	Yes/No		Q66	Yes/No
Q60	Yes/No (3 items)		Q67	Yes/No
Q56	Yes/No (2 level of yes) (9 items)		**Q68**	Yes/No
Q73	Yes/No (2 level of No)		Q31	Yes/No
Q75	Percentage		Q32	Multiple choices
Q70	Multiple choices		Q33	Yes/No
Q71	Multiple choices		**Q34**	Yes/No (4 level of Yes)
Q72	Multiple choices		Q36	Multiple choices
			Q37	Multiple choices

The type of answer characterizes how the response can be interpreted as supporting or not supporting the level of entrepreneurship. Most of the questions required a yes/no answer, therefore the level of influence was easy to determine. Other questions required a yes/no answer with some nuances in the choice of yes, in some cases, or in the choice of no in other cases. Some questions had multiple choices answers, with the possibility to select more than one answer for some of them, or the possibility to select at most one. Furthermore, few questions had answers that were numbers or percentage. Regardless of the answer' type, the SEHEE main report and annexes are used to determine the influence level of each answer, category and dimensions.

There is a notion to keep in mind during the analysis:

- For the sake of argument, the worst-case scenario is used to analyze the findings. The reason is simple and straightforward. Assessing the lower level of entrepreneurship effort at EBS gives more room for discussion and improvement.

The worst-case scenario implies that the influence of the 10 un-answered questions be set to null. The tables within the next 6 sub-sections show the 10 un-answered questions (in bold) at their minimum value. In the column labeled "questions" each answer can either be zero or one. In the column labeled "categories" the level is a percentage of the maximum value of the particular category, which is still a fraction of the dimension (i.e. see the coefficient table in appendix G). Finally, in the column labeled "dimensions" the level is a percentage of the maximum value of the particular dimension, which is a fraction of the output (i.e. appendix G).

5.3.1 Analysis – Teaching & Learning

The following table shows the influence level of each question and each category that compose the Teaching and Learning dimension.

Table 10: Analysis – Teaching and Learning

DIMENSIONS	CATEGORIES	QUESTIONS	WORST CASE	QUESTIONS	CATEGORIES	DIMENSIONS
TEACHING and LEARNING						95.0%
	COURSE	Q11		1	75.0%	
		Q14		**0**		
		Q25		1		
		Q26		1		
	DEGREE	Q27		1	100.0%	
		Q29		1		
		Q30		1		
	CURRICULUM	Q38		1	100.0%	
		Q39		1		
	EXTRA. ACTIV.	Q41		1	100.0%	
	TEACH. METH.	Q40		1	100.0%	

5.3.2 Analysis – Strategy

The following table shows the influence level of each question and each category that compose the Strategy dimension.

Table 11: Analysis – Strategy

DIMENSIONS	CATEGORIES	QUESTIONS	WORST CASE	QUESTIONS	CATEGORIES	DIMENSIONS
STRATEGY						50.0%
	ENT. GOALS	Q31		0	50.0%	
		Q32		1		
	ENT. POLICIES	Q33		1	50.0%	
		Q34		**0**		
	STRAT. EMB.	Q36		1	50.0%	
		Q37		**0**		

5.3.3 Analysis – Institutional Infrastructures

The following table shows the influence level of each question and each category that compose the Institution Infrastructures dimension.

Table 12: Analysis – Institutional infrastructure

DIMENSIONS	CATEGORIES	QUESTIONS	WORST CASE	QUESTIONS	CATEGORIES	DIMENSIONS
INSTITUTION INFRA - STRUCTURES						87.5%
	APPROACHES	Q50		1	50.0%	
		Q51		1		
		Q52		0		
		Q53		0		
	CROSS-DISP.	Q47		1	100.0%	
		Q48		1		
		Q49		1		
	ENT. APPOINT.	Q43		1	100.0%	
	RESEARCH ENT.	Q44		1	100.0%	
		Q45		1		

5.3.4 Analysis – Outreach

The following table shows the influence level of each question and each category that compose the Outreach dimension.

Table 13: Analysis – Outreach

DIMENSIONS	CATEGORIES	QUESTIONS	WORST CASE	QUESTIONS	CATEGORIES	DIMENSIONS
OUTREACH	ALUMNI	Q54		1	100.0%	58.3%
		Q55		1		
	COMMUNITY ENGAGEMENT	Q57		1	75.0%	
		Q58		1		
		Q59		1		
		Q60		**0**		
	LINK STAKE.	**Q56**		**0**	0.0%	

5.3.5 Analysis – Development

The following table shows the influence level of each question and each category that compose the Development dimension.

Table 14: Analysis – Development

DIMENSIONS	CATEGORIES	QUESTIONS	WORST CASE	QUESTIONS	CATEGORIES	DIMENSIONS
DEVELOPMENT	EVALUATION	**Q69**		**0**	0.0%	36.7%
	H.R. DEVELOPMENT & MANAGEMENT	Q62		1	60.0%	
		Q63		1		
		Q64		**0**		
		Q65		1		
		Q66		0		
	USER DRIVEN	Q67		1	50.0%	
		Q68		**0**		

5.3.6 Analysis – Resources

The following table shows the influence level of each question and each category that compose the Resources dimension.

Table 15: Analysis – Resources

DIMENSIONS	CATEGORIES	QUESTIONS	WORST CASE	QUESTIONS	CATEGORIES	DIMENSIONS
RESOURCES	BUDGET ALLOCATION	**Q73**		**0**	0.0%	0.0%
		Q75		**0**		
	INCOME GENE.	Q70		0	0.0%	
	TYPE OF FUNDING	Q71		0	0.0%	
		Q72		0		

5.3.7 Analysis – Case Scenarios (Compilation)

In the appendix H, there are three tables, one for each case scenario, that show the influence level of each question, each category, each dimension, and the output. The following table compiles the dimensions and output level of the three case scenarios.

Table 16: Analysis – Three case scenarios

	Teaching & Learning	Strategy	Institution Infra-Structures	Outreach	Development	Resources	OUTPUT
Best case Scenario	100.0%	83.3%	87.5%	100.0%	93.3%	33.3%	**82.9%**
Avg. Case Scenario	97.5%	66.7%	87.5%	79.2%	65.0%	16.7%	**68.8%**
Worst Case Scenario	95.0%	50.0%	87.5%	58.3%	36.7%	0.0%	**54.6%**

5.4 Discussion / Conclusion

In this section, discussions about the first research question (RQ1) are shown.

RQ1: HOW ENTREPRENEURIAL IS THE EDUCATION AT EBS?

- RQ1.1: How is the level of entrepreneurship education effort, in producing students with entrepreneurial mindsets and skills, using the analytical method developed with data from the Survey of Entrepreneurship in Higher Education in Europe (SEHEE)?

The responses provided by the interviewee, obtained through the online research, and given by EBS study department helped, to some extent, understand the level of

entrepreneurship education effort at EBS. It was not possible to fully assess the different categories of each of the six entrepreneurship dimensions. Nevertheless, the researcher is confident that the outcomes express, to a good extent, the level of entrepreneurship education effort at EBS.

General Information – EBS is a small business institution entirely financed by the students' tuition fees. Nevertheless, with twelve years of experience in entrepreneurship education, the department understands the strengths and weaknesses of the institution in respect to the market, the environment, and the governmental policies. Moreover, entrepreneurship courses and modules are available to all students. The department strives to provide students with entrepreneurial mindsets and skills that are in relation to the student core study field. The entrepreneurship department team is, to a large extent, composed of highly qualified entrepreneurs themselves, a component not always present in other major institutions. EBS is highly turned towards western countries via the exchange programs it houses. The entrepreneurship department and the institution are looking for international partners to affirm the cross-cultural objective of the school. To sum up, EBS entrepreneurship education, in a general term, has the main incentives defined by the European commission. Moreover, EBS is keen on responding to the student demand, as well as the market demand. However, the lack of real courses or initiatives related to creative thinking, and innovation can be a handicap to further development. On the other hand, EBS is a business school, and one interviewee pointed out, the lack of academic credibility is a barrier; therefore implementing courses that promotes incentives to take more risks might go against the overall polices of traditional business schools.

Teaching & Learning – This dimension of entrepreneurship education was well covered at EBS (95% of the dimension level in the worst case scenario). The Department of Entrepreneurship has courses that enhance entrepreneurial mindsets and skills, in respect to start-up businesses as well as leadership and management. However, there is a noticeable lack in mentoring and personal coaching, for entrepreneurship students, from

real life entrepreneurs and/or business leaders. An inherent reason is the reluctance from most of the practitioners and entrepreneurs to carry out this task beyond the time scheduled for their lecture. Another possible explanation may lay within the economic crisis that disturbed the Estonian market since 2008; the scarcity of jobs and the restructuring of resources within companies that reduced the time spent on external activities such as guest lecturing, mentoring, etc…

Strategy – EBS is lagging in the embededness of the entrepreneurial strategy. The institutions scored low in sections that characterized the clear vision and goals in respect to entrepreneurship education (50% of the dimension level in the worst case scenario). One of the obvious reasons is the lack of academic credibility of entrepreneurship education. The entrepreneurship department has a convincing set of entrepreneurship goals. However, theses goals are not written in the mission statement, and are only expressed in the institution policies. The entrepreneurship education may need a user-driven approach, maybe from the students, to create synergy and address these issues.

Institution Infrastructures – EBS is a small business institution and naturally there are no extensive infrastructures commonly present in larger multi-disciplinary universities. EBS is comparable with other institutions with similar disciplines and specializations. Therefore, EBS has to some extent the infrastructures present at this type of institution (87.5% of the dimension level in the worst case scenario).

Outreach – EBS has a rather moderate outreach activity (58.3% of the dimension level in the worst case scenario). Even though alumni are tracked for diverse reasons, there are possibilities that are left unused. Moreover, the department of entrepreneurship does not validate the outcome of the education they are providing. Additionally, alumni are the voice and the quality assessment indicator of a school, a program, a module or bundle of courses. Linkage to community seems weak or none existent. Practitioners, entrepreneurs and alumni are to some extent used to provide lectures or design case studies, but the link

is rather unilateral. EBS is pushing a more bi-lateral involvement from the alumni, the stakeholders, the entrepreneurs and company leaders, and the community.

Development – EBS has moderate development activity. Even though the level of entrepreneurship education for this dimension is only 36.7% (worst case scenario), it is slightly affected by the fact that 3 out of 8 of the questions were un-answered. The department of entrepreneurship is limited in human resources, but the majority of the staff has entrepreneurial experience. A small department has positive and negative consequences. On the one hand, the team is more engaged and more committed to the entrepreneurship education, their personal entrepreneurial development, and usually the department is person-driven. On the other hand, there is a shortage of resources for further development of education, and scarcity of time for personal development and education. Finally, EBS students are regularly evaluating entrepreneurship courses, but the extent to which this evaluation is performed was not assessed in this study.

Resources – EBS is a private institution, and resources are entirely derived from tuition fees (0% of the dimension level in the worst case scenario). American entrepreneurship educations are often cited as good example to copy from for European institutions. Alumni in the USA have the motivation to give back, in the form of donations or investments, to the institution they graduated from, an attitude yet to be developed in Europe. The department of entrepreneurship must derive its own income from activities they administrate. These activities should increase the institution's global income and enhance the academic credibility of entrepreneurship education at EBS.

Output – EBS's level of entrepreneurship education effort in producing students with entrepreneurial mindsets and skills is slightly about medium (54.6% of the output level in the worst case scenario). This result is not as negative as it appears. For instance, it is worth noting that 10 questions out of the 47 necessary to assess the level of entrepreneurship education effort were un-answered. Moreover, EBS is not an

entrepreneurship institution, but a business school focused merely on business studies. Additionally, it is important to point out that the framework model and the analytical method used to determine the level of entrepreneurship education effort was developed to be applicable to any institution. Furthermore, additional case studies are needed to investigate deeply this method to measure entrepreneurship education and its effect on students and establish a comparative table of levels. For sake of argument, if 100% level of entrepreneurship education effort is regarded as the "perfect institution", Private institutions entirely financed by students' tuition fees are unlikely to score above 83.3%. Moreover, with the institutional infrastructures that are slightly linked to the size of the institution (i.e., number of students, size of facilities, location, etc…), the level of entrepreneurship education effort is slightly linked to the size of the institution. Therefore, with 54.6%, 68.8%, and 82.9%, respectively in the worst, the average, and the best-case scenario, EBS is providing, to a good extent, entrepreneurship education effort to foster entrepreneurial mindsets and skills in their students across disciplines. An evident shortcoming of this framework model, and the analytical method is to assume that all questions with in a category, all categories with in a dimension, and all dimensions with in the output account for the same influence.

6 HOW ENTREPRENEURIAL ARE THE STUDENTS?

This chapter examines the SEE questionnaire. Additionally, the empirical results section shows the findings of the survey on entrepreneurship education at EBS. Finally, the discussion section brings light to the second research question (RQ2).

6.1 SEE Questionnaire

The SEE questionnaire was made available to students during course breaks and lunch breaks. The survey questionnaire was divided into 3 sections (i.e. basic information, entrepreneurial traits and skills, and courses and specializations) but addresses 4 segments: general information (question 1 to question 10), personal effectiveness (question 11), business and organizational effectiveness (question 12), and courses and specialization (question 13 and question 14).

6.1.1 Four Segments

Each segment addresses particular characteristics of the students. The SEE questionnaire sample (appendix C) shows the questions. The four segments are:

General Information – questions such as; age, gender, degree program, current year of study, daytime or evening courses, working student or not, full time or part time, entrepreneur or employee, overall perceived impact of entrepreneurship education at EBS, and future career plan, were asked.

Personal Effectiveness – is composed of 10 sub-questions directly focused on the personal development of the student in relation to traits and skills necessary for entrepreneurial activities. The questionnaire is assessing to what extent studies at EBS had an influence in developing traits and skills such as; initiative, reflection, responsibility, high level of motivation, ability to recognize and act on opportunity,

tolerance for uncertainty and ambiguity, ability to define problems, persistence, ability to take and manage risks, and commitment.

Business and Organizational Effectiveness – is composed of 12 sub-questions directly oriented to the awareness of business management skills in respect to entrepreneurial activities. The questionnaire is assessing the perception of student in regard to development acquired during EBS courses on skills such as; ability to think outside the box, analytical ability, communication ability, financial planning and cash flow management, human relations ability, leadership, marketing, networking, ability to solve problems, teamwork, and strategy.

Courses and specialization – is composed of 2 questions related to courses the student had completed at the time of the survey. Moreover, this segment shows the type of specialization the student is following.

6.1.2 Four comparisons

The second research sub-question (RQ2.2) shows differences and similarities within the groups. The four comparisons are between: daytime and evening courses; English and Estonian language of instruction; BBA, BBL and BEB programs; and the first year and second year undergraduate students.

6.2 Empirical Results

This section shows the SEE findings. Moreover, results are first grouped by question and are then grouped under their respective segments.

6.2.1 Results – General Information

Question 1 – Please write your year of birth.

Table 17: Results – General information (age)

YEAR	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Number	1	1	2	3	1	1	2	0	1	1	2	10	20	21	16	2
% (N=84)	1.2%	1.2%	2.4%	3.6%	1.2%	1.2%	2.4%	0.0%	1.2%	1.2%	2.4%	11.9%	23.8%	25.0%	19.0%	2.4%

Question 2 – Please indicate your sex.

A total of 85 students (N=85) responded to this question, and 44% were males and 56% were females.

Question 3 – Please indicate your bachelor degree program.

Table 18: Results – General information (bachelor degree program)

PROGRAM	BBA (Eng)	BBA (Est)	BBL (Est)	BEB (Est)
Number	16	34	17	18
% (N=85)	19%	40%	20%	21%

Question 4 – Please indicate your current class.

A total of 85 students (N=85) responded to this question, and 56% were first year students and 44% were second year students.

Question 5 – Please indicate your mode of study.

85 students (N=85) responded to this question, and 78% were enrolled in the daytime study mode and 22% were studying in the evening.

Question 6 – Are you an exchange student?

100% of the respondents are not exchange student.

Question 7 – You are currently:

A total of 85 students (N=85) responded to this question, and 19% are working full-time, 23% are working part-time, and 58 % are not currently working.

Question 8 – You are currently working as:

A total of 36 students (N=36) responded to this question, and 75% are working as employee and the other 25% are entrepreneurs.

Question 9 – Definition of Entrepreneur: One simple definition of an Entrepreneur or Intrapreneur (within an organization) is "identifying opportunities when others see chaos, contradictions and confusion, and providing solutions to unmet needs". Please indicate how your studies at EBS have developed this ability.

Table 19: Results – General information (definition of entrepreneur)

Q9	Not at all	Very Little	Little	Much	Very much
Number	2	7	31	34	7
% (N=81)	2%	9%	38%	42%	9%

Question 10 – Please indicate your future career goal:

Table 20: Results – General information (future career goal)

CAREER GOALS	Large Company	Medium Company	Small Company	Own Company	Family Business	Other
Number	17	11	3	39	8	6
% (N=84)	20%	13%	4%	46%	10%	7%

6.2.2 Results – Personal Effectiveness

Question 11 – The following characteristics are important to personal entrepreneurial effectiveness. Without taking into account your prior experiences, please indicate how your studies at EBS, so far, have helped developed each of them.

Table 21: Results – Personal effectiveness

Q11	Not at all	Very Little	Little	Much	Very Much
Initiative (N=84)	1%	7%	28%	50%	14%
Reflection (N=80)	2%	10%	50%	34%	4%
Responsibility (N=84)	2%	7%	30%	43%	18%
High level of motivation (N=85)	1%	1%	26%	52%	20%
Abiility to recognize and act on opportunity (N=85)	0%	7%	28%	58%	7%
Tolerance for uncertainty and ambiguity (N=84)	1%	4%	44%	43%	8%
Ability to define problems (N=85)	5%	5%	24%	52%	14%
Persistence (N=81)	3%	6%	54%	30%	7%
Ability to take and manage risks (N=84)	1%	5%	39%	42%	13%
Commitment (N=83)	2%	4%	30%	52%	12%

6.2.3 Results – Business and Organizational Effectiveness

Question 12 – The following skills are important to managerial entrepreneurial effectiveness. Without taking into account your prior experiences, please indicate how your studies at EBS, so far, have helped developed each of them.

Table 22: Results – Business and organizational effectiveness

Q12	Not at all	Very Little	Little	Much	Very Much
Ability to think outside the box (N=85)	2%	7%	28%	46%	17%
Analytical ability (N=85)	2%	7%	33%	46%	12%
Communication ability (N=85)	4%	7%	23%	38%	28%
Financial planning & cash flow management (N=85)	6%	10%	34%	41%	9%
Human relations ability (N=85)	2%	13%	25%	48%	12%
Latest technologies to find information (N=85)	5%	19%	31%	35%	10%
Leadership ability (N=85)	1%	11%	39%	42%	7%
Marketing (N=84)	0%	7%	26%	55%	12%
Networking (N=84)	4%	11%	36%	40%	9%
Ability to solve problems (N=85)	1%	14%	30%	41%	14%
Teamwork (N=85)	2%	5%	25%	41%	27%
Strategy (N=85)	4%	8%	41%	38%	9%

6.2.4 Results – Courses and Specialization

Question 13 – Please indicate courses you have passed during previous semesters/years. The courses abbreviations are shown in the appendix C.

Table 23: Results – Courses and specialization (courses)

Code	Name (eng)	Frequency
Adv.	Advertising	10
Bus.P	Business Planning	21
Bus.S	Business Simulation INTOPIA	4
Cont.	Contemporary Issues in Tourism Management	0
E-Bus.	E-Business / E-Commerce	0
Eve.M	Event Marketing	0
Exp.	Export	2
Hot.I	Hotel Reception and Conference Services I	16
Hot.II	Hotel Reception and Conference Services II	5
Int.B	International Business	8
Int.R	International Business Opportunities in the Baltic Region	0
Log.	Logistics	1
Mar.P	Marketing & Public Opinion Research	10
Mar.S	Marketing and Sales	40
	Marketing of Toursim and Hospitality	2
Pro.I	Professional Sales I	8
Pro.II	Professional Sales II	5
Sale	Sales and Advertising	8
Serv.	Service Marketing	1
Sole	Sole Proprietorship. Managing small and growwing businesses	1
Stud.	Student Enterprises	30

Question 14 – What is your major or specialization?

Table 24: Results – Courses and specialization (specialization)

Q14	Number	% (N=84)
Major in Accounting and Finance (BBA)	17	20%
Major in Marketing and Public Relations (BBA)	27	32%
Major in Hotel Reception and Conference Services (BBL)	15	18%
Specialization in Banking (BEB)	3	4%
Specialization in Sales (BEB)	11	13%
Other	11	13%

6.3 Analysis

This section shows different association of findings and analyzes their relevancy in respect to the four comparisons. Moreover, only questions; Q1, Q2, Q7, Q8, Q9, Q10, Q11, Q12 and Q13, are analyzed. Additionally, questions are aggregated in relation to the following comparisons: the mode of study, the language of instruction, the bachelor program degree and the class.

6.3.1 Analysis – General Information

The general information segment was composed of the first ten questions of the SEE questionnaire. Questions Q3, Q4, Q5, were used to aggregate the comparison results. Question Q6 was set to assure that none of the respondent was an exchange student. Consequently, questions Q1, Q2, Q7, Q8, Q9, Q10 were analyzed according to the four comparisons.

Question 1 – the results showed that 77% of first year and second year undergraduate students studied during the daytime. 81% of them were studying in a bachelor program in which the language of instruction is Estonian. The following table collates the results of question 1 in respect to the four comparisons.

Table 25: Analysis – General information (age)

Q1	Mode of Study		Language		Program			Class	
Born	Day (N=65)	Eve (N=19)	Eng (N=16)	Est (N=68)	BBA (N=49)	BBL (N=17)	BEB (N=18)	1 Year (N=48)	2 Year (N=36)
76-86	6%	58%	6%	21%	14%	0%	44%	15%	22%
87-91	94%	42%	94%	79%	86%	100%	56%	85%	78%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%

Students born between 1987 and 1991 represented 94% of students enrolled in the daytime program. This quota is fairly understandable considering the fact that it is the first level of higher education. The age distribution of students enrolled in evening programs is more homogenous, with only 42% of students born between 1987 and 1991. Interestingly enough, 100% of the students in the BBL program were born in 1987 or later. The BBA program followed with 86% and BEB is an older group with 56% born 1987 or later. The comparison between first and second year shows stability within the age group with a dominance of younger students.

Question 2 – the following table shows the four comparisons in respect to the gender.

Table 26: Analysis – General information (gender)

Q2	Mode of Study		Language		Program			Class	
	Day (N=66)	Eve (N=19)	Eng (N=16)	Est (N=69)	BBA (N=50)	BBL (N=17)	BEB (N=18)	1 Year (N=48)	2 Year (N=37)
Male	42%	47%	38%	45%	38%	24%	78%	33%	57%
Female	58%	53%	62%	55%	62%	76%	22%	67%	43%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%

Regardless of the mode of study, the language, the program and the classes, there is a predominance of females enrolled in undergraduate courses. Moreover, with the exception of the Bachelor of Entrepreneurship and Business Administration (BEB) program, with 78% male, most of the groups are characterized by a higher number of females.

Question 7 – the following table depicts the four comparisons in regard to the employment status of the students.

Table 27: Analysis – General information (employment status)

Q7	Mode of Study		Language		Program			Class	
	Day (N=66)	Eve (N=19)	Eng (N=16)	Est (N=69)	BBA (N=50)	BBL (N=17)	BEB (N=18)	1 Year (N=48)	2 Year (N=37)
Full-Time	5%	68%	6%	22%	16%	6%	39%	14%	24%
Part-Time	27%	11%	19%	25%	24%	29%	17%	21%	27%
No Work	68%	21%	75%	53%	60%	65%	44%	65%	49%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%

The analysis shows that 68% of day-time students do not work in parallel with their studies, which contrasts with the 79% of evening students that do work at least part-time. Fortunately, this is not surprising. The evening mode of study is designed to respond to this kind of demand. 3 out of 4 students studying in English do not work, and only 1 out of 2 students studying in Estonian are in the same situation. In contrast with BBA and BBL, respectively 60% and 65% of students are not working; only 44% of BEB students are without work. Furthermore, there is an improvement while comparing first year and second year undergraduates' employment situation. The ratio passed from 35% in first year to 51% in second year students.

Question 8 – the following table shows the proportion of employees and entrepreneurs within the group of students working full-time and part-time.

Table 28: Analysis – General information (employment type)

Q8	Mode of Study		Language		Program			Class	
	Day (N=21)	Eve (N=15)	Eng (N=4)	Est (N=32)	BBA (N=20)	BBL (N=6)	BEB (N=10)	1 Year (N=17)	2 Year (N=19)
Employee	67%	87%	75%	75%	70%	100%	70%	82%	68%
Entrepreneur	33%	13%	25%	25%	30%	0%	30%	18%	32%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%

The general tendency was that students are more likely to be employees rather than entrepreneurs. In contrast, 1 out of 3 day-time students was an entrepreneur versus the 1 out of 8 evening-time students. The ratios are similar to those found when comparing the language of instruction with 1 out of 4 students being an entrepreneur. However, all working students following the BBL program were working as employees. Finally, there was a noticeable difference when comparing first year and second year students. The ratios of entrepreneurs were 18% and 32% respectively for first year and second year.

Question 9 – the following table shows the extent to which students perceived the overall impact of the EBS education in relation to entrepreneurship. The four comparisons were aggregated and analyzed according to the level of perception.

Table 29: Analysis – General information (definition of entrepreneur)

Q9	Mode of Study		Language		Program			Class	
	Day (N=64)	Eve (N=17)	Eng (N=16)	Est (N=65)	BBA (N=47)	BBL (N=17)	BEB (N=17)	1 Year (N=45)	2 Year (N=36)
Not at all Very_Little Little	48%	53%	44%	51%	57%	53%	24%	64%	31%
Much Very_Much	52%	47%	56%	49%	43%	47%	76%	36%	69%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%

Students, regardless of the mode of study and the language of instruction, were equally divided in respect to their perception of the entrepreneurship education at EBS. The balance between students expressing; not at all, very little and little, and students marking; much and very much, is homogenous. Fortunately, students from the Entrepreneurship program (i.e. BEB) mostly agreed on the fact that their education at EBS did favorably educate them on entrepreneurship and on being entrepreneurial. Another interesting point was the contrast between first and second year students. While only 1 out of 3 first year students felt that the education at EBS did provide, to some extent, entrepreneurial qualities, about two-thirds of second year students agreed with it. This change can be credited to the institution's work in instructing and educating students about entrepreneurship.

Question 10 – the following table depicts the desired future career path of the students. The results are aggregated in relation to the four comparisons.

Table 30: Analysis – General information (future career goal)

Q10	Mode of Study		Language		Program			Class	
	Day (N=65)	Eve (N=19)	Eng (N=16)	Est (N=68)	BBA (N=50)	BBL (N=16)	BEB (N=18)	1 Year (N=46)	2 Year (N=38)
Large Company	23%	11%	44%	15%	30%	12%	0%	24%	16%
Medium Company	15%	5%	6%	15%	14%	13%	11%	17%	8%
Small Company	2%	11%	0%	4%	2%	6%	5%	2%	5%
Own Company	42%	63%	31%	50%	38%	50%	67%	44%	50%
Family Business	12%	0%	6%	10%	10%	13%	6%	4%	16%
Other	6%	10%	13%	6%	6%	6%	11%	9%	5%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%

As mentioned above, 87% of evening students and 67% of daytime students worked as employees. Moreover, the table above shows that 63% of the evening students expressed the desired to establish and manage their own company. This number is impressive considering that 79% of evening students were working and 86% of them were working as employees. 42% of daytime students pointed out the desire to start their own company. Fortunately, BEB program students showed the highest interest in starting their own business. Moreover, none of the BEB students were planning a career in a large company. Another interesting finding was that 50% of BBL students chose the entrepreneurial career path while none of them was working as entrepreneur. It is important to note that 50% of second year students considered the career path of an entrepreneur as a future possibility, while this alternative represented 44% for the first year. Most of the students marking 'other' as a choice were first year students. The alternative career paths that were added spanned from: politician in economics/finances, education, and a combination of the list proposed, indecisive about their future, multiple companies' creation, and international companies.

6.3.2 Analysis – Personal Effectiveness

Question 11 – the following table depicts the different personal entrepreneurial traits/skills in relation with the mode of study, the language of instruction, the bachelor program, and the class.

Table 31: Analysis – Personal effectiveness

Q11		Mode of Study		Language		Program			Class	
		Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Initiative (N=84)	Not at all - Little	35%	37%	33%	36%	41%	24%	33%	36%	35%
	Much - Very much	65%	63%	67%	64%	59%	76%	67%	64%	65%
Reflection (N=80)	Not at all - Little	59%	76%	64%	62%	70%	35%	71%	64%	61%
	Much - Very much	41%	24%	36%	38%	30%	65%	29%	36%	39%
Responsibility (N=84)	Not at all - Little	38%	42%	40%	39%	43%	29%	39%	36%	43%
	Much - Very much	62%	58%	60%	61%	57%	71%	61%	64%	57%
Motivation (N=85)	Not at all - Little	29%	26%	25%	29%	34%	24%	17%	31%	24%
	Much - Very much	71%	74%	75%	71%	66%	76%	83%	69%	76%
Opportunity (N=85)	Not at all - Little	32%	47%	25%	38%	36%	24%	44%	42%	27%
	Much - Very much	68%	53%	75%	62%	64%	76%	56%	58%	73%
Uncertainty (N=84)	Not at all - Little	40%	79%	27%	54%	53%	29%	56%	53%	43%
	Much - Very much	60%	21%	73%	46%	47%	71%	44%	47%	57%
Problems (N=85)	Not at all - Little	27%	58%	25%	36%	34%	24%	44%	42%	24%
	Much - Very much	73%	42%	75%	64%	66%	76%	56%	58%	76%
Persistence (N=81)	Not at all - Little	61%	71%	67%	62%	77%	35%	50%	65%	60%
	Much - Very much	39%	29%	33%	38%	23%	65%	50%	35%	40%
Manage Risks (N=84)	Not at all - Little	38%	68%	63%	41%	50%	29%	47%	50%	39%
	Much - Very much	62%	32%	38%	59%	50%	71%	53%	50%	61%
Commitment (N=83)	Not at all - Little	34%	42%	40%	35%	39%	35%	29%	38%	33%
	Much - Very much	66%	58%	60%	65%	61%	65%	71%	62%	67%
OVERALL	Not at all - Little	39%	55%	41%	43%	48%	29%	43%	46%	39%
	Much - Very much	61%	45%	59%	57%	52%	71%	57%	54%	61%

Each characteristic was weighted the same and assumed, in this study, to play equivalent roles in the development of the necessary personal traits and skills for a future entrepreneur. Initiative was positively perceived as part of the education at EBS by two-thirds of the students, while BBL students recorded a 76% positive perception rate. In contrast, according to students, reflection was insufficiently addressed during the education. Yet, 2 out of 3 BBL students argue in its favor. Responsibility was positively perceived by two-fifth of the students, regardless of the comparison type. A high level of motivation was greatly addressed within the education at EBS. It was the entrepreneurial trait and skill that had the highest perception level among students. According to undergraduate students, the ability to recognize and act on opportunity was taught well at EBS. Moreover, 2 out of 3 students noted that they passed courses that helped in affirming this skill. Tolerance for uncertainty and ambiguity was a crucial personal trait and skill necessary to future entrepreneurs. Students reported having mixed opinions concerning the development of this skill. On average, only every other student agreed that this skill was sufficiently addressed. It is important to point out that one-fifth of evening students positively perceived EBS education in fostering this trait and skill. On the contrary, 3 out of 4 students studying in English and 70% of BBL students were convinced of the positive impact of EBS courses on this skill. 2 out of 3 students marked that EBS courses enhanced their ability to define problems. Furthermore, 3 out of 4 day-

time students, students studying in English, BBL students, and second year students, argued in EBS's favor. First year and second year students perceived their courses to enhance to a little extent the persistence skill necessary to entrepreneurship. On average, 3 out of 5 students agreed on 'little incentive' created during the courses in relation to persistence. The ability to take and manage risks is addressed during courses at EBS. Evening students and students following English program marked this ability to be developed to a little extent, whereas daytime students and BBL students perceived this skill to be instructed to a much greater extent. On average 2 out of 3 students perceived their passed courses to enhance their commitment to the spirit of entrepreneurship.

6.3.3 Analysis – Business and Organizational Effectiveness

Question 12 – the following table depicts the different business and organizational effectiveness skills in respect to the mode of study, the language of instruction, the bachelor program, and the class.

Table 32: Analysis – Business and organizational effectiveness

Q12		Mode of Study		Language		Program			Class	
		Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Outside Box (N=85)	Not at all - Little	36%	42%	50%	35%	40%	35%	33%	48%	24%
	Much - Very much	64%	58%	50%	65%	60%	65%	67%	52%	76%
Analytical (N=85)	Not at all - Little	45%	32%	44%	42%	44%	41%	39%	50%	32%
	Much - Very much	55%	68%	56%	58%	56%	59%	61%	50%	68%
Communication (N=85)	Not at all - Little	33%	37%	31%	35%	38%	29%	28%	35%	32%
	Much - Very much	67%	63%	69%	65%	62%	71%	72%	65%	68%
Finance CashFlow (N=85)	Not at all - Little	48%	53%	69%	45%	56%	41%	39%	65%	30%
	Much - Very much	52%	47%	31%	55%	44%	59%	61%	35%	70%
Human Relations (N=85)	Not at all - Little	32%	68%	25%	43%	40%	41%	39%	44%	35%
	Much - Very much	68%	32%	75%	57%	60%	59%	61%	56%	65%
Find Information (N=85)	Not at all - Little	48%	74%	44%	57%	58%	47%	50%	48%	62%
	Much - Very much	52%	26%	56%	43%	42%	53%	50%	52%	38%
Leadership (N=85)	Not at all - Little	50%	53%	56%	49%	58%	35%	44%	54%	46%
	Much - Very much	50%	47%	44%	51%	42%	65%	56%	46%	54%
Marketing (N=84)	Not at all - Little	32%	37%	31%	34%	31%	53%	22%	48%	14%
	Much - Very much	68%	63%	69%	66%	69%	47%	78%	52%	86%
Networking (N=84)	Not at all - Little	52%	42%	63%	47%	57%	41%	39%	57%	41%
	Much - Very much	48%	58%	38%	53%	43%	59%	61%	43%	59%
Solve Problems (N=85)	Not at all - Little	38%	68%	44%	45%	48%	41%	39%	48%	41%
	Much - Very much	62%	32%	56%	55%	52%	59%	61%	52%	59%
TeamWork (N=85)	Not at all - Little	30%	37%	38%	30%	38%	29%	17%	40%	22%
	Much - Very much	70%	63%	63%	70%	62%	71%	83%	60%	78%
Strategy (N=85)	Not at all - Little	48%	68%	44%	55%	48%	65%	56%	63%	41%
	Much - Very much	52%	32%	56%	45%	52%	35%	44%	38%	59%
OVERALL	Not at all - Little	41%	51%	45%	43%	46%	42%	37%	50%	35%
	Much - Very much	59%	49%	55%	57%	54%	58%	63%	50%	65%

Each skill and characteristic was weighted the same and assumed, in this study, to play equivalent roles in the development of the necessary business and organizational skills for a future entrepreneur. Concerning the ability to think outside the box, three-fifths of the students perceived their education to enhance this quality. Moreover, 2 out of 3 BEB students, 2 out of 3 students enrolled in English conducted bachelor program, and 3 out of 4 second year students argued that their courses positively enhanced such skill. 3 out of 5 surveyed students claim that the courses enhanced, to a good extent, their analytical abilities. Communication ability is central to entrepreneurship and any career in general. Fortunately, more than two-thirds of students reported that EBS courses helped in developing this skill to a good extent. BBL and BEB students particularly perceived this skill to be on point with the education at EBS. Students reported that financial planning and cash flow management were addressed to a little extent only. By comparison, second year students reported that this ability was addressed to a much better extent. 3 out of 5 students positively perceived the education at EBS to foster human relations ability. Whilst two-thirds of the day-time students perceived the courses to help, only a third of the evening students shared this opinion. Students have mixed opinions in respect to the course's ability to provide the latest technological tools to find information. However, three-fourths of the evening students and two-thirds of the second year students pointed out that little investment was placed in instructing this ability during courses. Leadership ability was addressed in general to an average extent according to students across different modes of study, language of instruction, program and classes. Marketing is a topic and ability that students mostly perceived as properly addressed in the education. Moreover, 4 out of 5 BEB students claimed that it was part of the development schemes of the education. A noticeable variation between first year students and second year students was justified by the fact that a Marketing course was taken during the second or third semester. There was a mixed perception on the impact of EBS courses in developing networking skill. Fortunately, BBL and BEB students, and second year students were more inclined to believe the course's positive impact on this skill. The ability to solve problems is of primary importance for an entrepreneur as well as a future entrepreneurial employee. 62% of day-time students believed their courses helped develop this ability, which is in contrast with the 32% of evening students. Additionally,

3 out of 5 BBL and BEB students against only 1 out of 2 BBA student perceive the EBS courses to provide only little help to the development of this skill. On average 70% of the students recognized that their courses developed team-working ability. Moreover, BEB students and second year students, respectively with 83% and 78%, showed the highest perception score in this ability. On average, students have an opposite perception of the help the courses provide in respect to strategy. Only 32% of evening students agreed on the fact that EBS courses enhance strategic ability. When comparing first year and second year students, whilst only 38% of the first year students perceived, to a good extent, the school's education to develop such ability, 59% of the second year students concurred with this.

6.3.4 Analysis – Courses and Specialization

Question 13 – the following table depicts the different courses taught under the supervision on the department of entrepreneurship. Moreover, it shows in which period students are passing specific courses.

Table 33: Courses conducted by the department of entrepreneurship

Code	Name (eng)	BBAi	BBAs	BBAo	BBLs	BBLo	BEBs	BEBo
Adv.	Advertising	UN Maj	UN Maj	Sp-Y3			Au-Y2 (*)	Sp-Y3 (*)
Bus.P	Business Planning	Au-Y2	Sp-Y3 Maj	Sp-Y2			Sp-Y3	Sp-Y3
Bus.S	Business Simulation INTOPIA	Sp-Y3	Sp-Y3 Maj	Sp-Y3			Au-Y3	Au-Y3
Cont.	Contemporary Issues in Tourism Management	UN						
E-Bus.	E-Business / E-Commerce			UN (*)			Sp-Y3	Au-Y3
Eve.M	Event Marketing	UN Maj (*)	UN Maj (*)					
Exp.	Export						Au-Y3 (*)	Sp-Y2 (*)
Hot.I	Hotel Reception and Conference Services I				Au-Y1 Maj			
Hot.II	Hotel Reception and Conference Services II				Sp-Y1 Maj			
Int.B	International Business	Au-Y3	Au-Y3	Sp-Y2	Sp-Y3	Sp-Y3	Au-Y3	Sp-Y2
Int.R	International Business Opportunities in the Baltic Region	UN Maj (*)	Au-Y3 Maj (*)	UN Maj (*)				
Log.	Logistics			UN (*)			Sp-Y2 (*)	Au-Y3 (*)
Mar.P	Marketing & Public Opinion Research	UN Maj (*)	UN Maj (*)	Au-Y3 (*)			UN (*)	Au-Y2 (*)
Mar.S	Marketing and Sales	Sp-Y2	Au-Y2	Sp-Y1	Au-Y2	Au-Y2	Au-Y1	Sp-Y1
	Marketing of Toursim and Hospitality				UN	Au-Y3		
Pro.I	Professional Sales I						Au-Y1 Spe	
Pro.II	Professional Sales II						Sp-Y1 Spe	
Sale	Sales and Advertising				UN (*)	UN (*)		
Serv.	Service Marketing			UN (*)	UN (*)	UN (*)		
Sole	Sole Proprietorship. Managing small and growwing businesses						Sp-Y2	Au-Y3
Stud.	Student Enterprises	Sp-Y1	Sp-Y1		Sp-Y2 (*)		Sp-Y2	

The abbreviations used in the table above are labeled as follow:

- Au: Autumn
- Sp: Spring
- Y1: Year 1
- UN: undefined period
- Maj: Major
- Spe: Specialization
- (*): The course is an free elective within the bachelor program

This table combined information extracted from programs and courses syllabi. This study research centers on first year and second year undergraduate students. Even though courses passed by students at the time of the study should coincide with the table above, there are disparities. Students taking courses earlier than is required in their bachelor program characterized such differences. Additionally, the following table depicts the frequencies to which each course was passed.

Table 34: Frequencies to which each course was passed.

Q13	Adv.	Bus.P	Bus.S	Cont.	E-Bus.	Eve.M	Exp.	Hot.I	Hot.II	Int.B	Int.R
Frequency	10	21	4	0	0	0	2	16	5	8	0

Q13	Log.	Mar.P	Mar.S	Mar.T	Pro.I	Pro.II	Sale	Serv.	Sole	Stud.	
Frequency	1	10	40	2	8	5	8	1	1	30	

The most popular courses between first year and second year students were: Marketing and Sales, Student Enterprises, Business Planning, and Hotel Reception and Conference Services I. It was pointed out that the Student Enterprises course was part of all day-time bachelor programs. Moreover, the course is taken in the spring of the first year, or the spring of the second year of bachelor degree. Thus, only 30 students marked this course as passed at the time of the survey. Courses that were on-going during the spring were not supposed to be noted as passed by students. Marketing and Sales is a compulsory course for all bachelor programs, which explained its high frequency in the survey. The Student Enterprises course is compulsory to all day-time students with the exception of students following the BBL program for which it is an elective. Business planning is

compulsory for all students at the exception of the BBL students. The findings from the survey were consistent with the findings from the study of programs' contents.

A relevant question would be "what is the average number of courses, provided by the department of entrepreneurship, taken by student at the time of the survey?"

Table 35: Average number of courses taken at the departement of entrepreneurship

Q13b	Zero course	1 course	2 courses	3 courses	4 courses	5 courses	6 courses
Number	29	19	13	6	6	2	10
% (N=85)	34%	22%	15%	7%	7%	3%	12%

It is important to point out that 34% of students that took part of the survey had not completed a single course provided by the department of entrepreneurship. Moreover, 71% of all surveyed students had passed at most 2 courses provided by the entrepreneurship department.

6.4 Discussion / Conclusion

In this section, discussions about the second research question (RQ2) are shown.

RQ2: HOW ENTREPRENEURIAL ARE THE EBS STUDENTS?

- RQ2.1: To which extent first year and second year undergraduate students perceive the entrepreneurship education at EBS to forge necessary entrepreneurial mindsets and skills.
- RQ2.2: What are the similarities and differences between; degree programs, classes, language of instruction, and mode of study.

The SEE Questionnaire was issued to undergraduate students at EBS with the objective of assessing their perception of the education effort in providing and forging entrepreneurial mindsets and skills. It was pointed out in the literature review that students believed to have the necessary tools and skills, and who expressed the desire to become an entrepreneur were five times more likely to pursue this path. This survey was used as a surrogate to understand to what extent undergraduate students were entrepreneurial. Therefore, by assessing what career path students were interested in and

to what extent students perceived their education to foster an entrepreneurial mindset and skills, the researcher identified how entrepreneurial EBS undergraduate students were.

General Information – it is common at EBS to be working during undergraduate studies and it is a dominant characteristic of evening students for obvious reasons. It is possible to attribute the fact that, more BEB students were working than in other bachelor programs to the average age of the group. An interesting result is the increase of number of second year students' entrepreneurs in comparison to first year students. This change can be credited to some extent to the Student Enterprises course.

An interesting finding is the high level of perception within BEB students of the role of their education in developing the ability to identify opportunities when others see chaos, contradictions and confusion, and to provide solutions to unmet needs. Additionally, another finding is the increase in ratio when comparing first year and second year students. This positive students' perception level is the work of the entrepreneurship department and the institution as a whole.

Starting a company is a common career choice for EBS students. Evening students are more likely to start their own company than day-time students. There are several possible reasons for that and EBS education might not be the main reason. Evening students are on average older than daytime students and are more likely to work during their education. Moreover, they have an experience in active life that younger students may not have. The researcher believes that with previous work experience, as an employee or entrepreneur, students are more attracted to entrepreneurship, or are keener to understand the requirements of being an entrepreneur. It is reassuring to find that 2 out of 3 BEB students were planning an entrepreneurial career by starting their own company. Finally, it is possible to attribute the increase in the choice to start a company, between first year and second year students to EBS education. Moreover, second year students are less interested in working for large or medium size company and are keener in working as an entrepreneur or in a family business. This is a possible opposition to some literature attesting that entrepreneurship education should be separated from business school

institutions, which tend to graduate middle managers as opposed to entrepreneurs or graduates with entrepreneurial mindsets.

Personal Effectiveness – the overall situation was satisfactory for day-time students but it was a concern for evening students. This difference possibly resulted from the difference in age and work experience between both groups. This might be a common issue when or if day-time and evening courses are instructed the same way. In other words, if courses' contents, syllabi, and end of course assessments are similar for both group, evening students are more likely to already have learned many of these skills prior to the education at EBS. Moreover, this can justify the difference in perception between evening and day-time students. It is impossible for the researcher to confirm that it is the case for EBS. BBL students claim that their program is helping to a great extent in the development of personal effectiveness. Second year students perceived their studies at EBS to help in developing personal effectiveness to a greater extent than first year students. Considering the fact that 71% of all surveyed students only passed at most 2 courses provided by the entrepreneurship department, this situation is to be credited to EBS institution as a whole and to some extent to the department of Entrepreneurship.

Business and Organizational Effectiveness – the overall situation was satisfactory for day-time students and balanced for evening students. The reasons are not assessed in this study but an understanding of the situation would increase the perceived quality of education within the evening student group. Fortunately, BEB students have the highest perception of quality level and other programs follow closely. BEB students are the most convinced of the help provided by their education. The program was designed around entrepreneurship and this could be the reason for such a level of positive perception. Therefore, these results could be credited to the department of entrepreneurship. Interestingly enough, there was an increase between first year and second year students. It is impossible at present to differentiate the extent to which the entrepreneurship department contributes to this fact compared to the rest of the institution. However, it is evident that with only 29% of students that have passed courses managed by the

department of entrepreneurship, the rest of the EBS institution and departments play an important role in forging business and organizational effectiveness.

Courses and specialization – an important finding was that 71% of students had only passed at most two courses conducted by the entrepreneurship department. Most of the courses provided by this department occurred during the third semester and after. This study could not assess to what extent each courses provided by the department were designed to enhance an entrepreneurial mindset and skills. It is clear that an obvious mistake is to consider each course to provide the same level of information in regards to entrepreneurship. This is one of the reasons the researcher states its incapability to fully assess the impact of each course. Consequently, students having only passed few courses from the department of entrepreneurship cannot fully negate the impact of the department's effort in forging entrepreneurial mindsets and skills; having an entrepreneurship department in any institution does spillover to other departments and courses. Owning to this, the impact of the entrepreneurship department is greater, and it is not only limited to the courses provided by this department.

7 CONCLUSION / FURTHER RESEARCH

The overall aim of this study was to investigate a method to measure entrepreneurship education and its effect on students. The purpose of this case study was to:

- Assess the level of entrepreneurship education effort, in producing students with entrepreneurial mindsets and skills.
- Assess the extent to which students perceived the entrepreneurship education to forge the necessary entrepreneurial mindsets and skills.
- Be a starting point to improve the validity and reliability of this method of measure.
- Find the shortcomings of this method and propose additional research studies to be done.

This chapter shows the conclusion of the current study and proposes further researches ideas.

Investigating a method to measure entrepreneurship education and its effect on students. – This sentence characterizes the global aim of this research and EBS was the case test. The researcher carefully links entrepreneurship education to students' perception of its role in developing entrepreneurial mindsets and skills. The case study shows a good correlation between the entrepreneurship education and its effect on students. EBS' level of entrepreneurship education effort is merely above the median in the worst-case scenario. Moreover, setting, each dimension with the same influence on the output, each category with the same influence on the dimension and each question with the same influence on the category is unlikely to be completely realistic. Additional case studies will bring lights to rather or not this setting is consistent and actually measures at best the entrepreneurship education effort. On the other hand, the method used to assess the effect of the entrepreneurship education on students is reliable to a good extent. In this case study, it is clear after analysis of the SEE data that the majority

of students perceive the education at EBS to foster and develop the necessary entrepreneurial mindsets and skills. It is worth noting that in this case study only first and second year students are used to investigate the method. The SEE is useable for other studies with minimal changes and it is a valid tool for assessing student perception of entrepreneurship education effect.

The method (i.e., the framework model, the analytical method and the SEE) needs more case studies; to increase its validity and reliability, and to develop a general method to measure entrepreneurship education and its effect on students. Even though the researcher believes that the method do measure what it is set to perform, there is room for improvement.

Further Researches – A possible research could be to develop a more relevant and elaborate weighing system for the dimensions, categories, and questions. With researches that study the interrelationship between dimensions, their relevance to each other and their actual influence to the output level of entrepreneurship education effort.

Another possible research could perform a quantitative study (several institutions and their students) to verify if the method of measure is reliable and valid. This type of research should greatly improve the tool, or at least introduce a better method.

Another research could be to select from the 448 institutions that took part of the SEHEE; the 10 best performing institutions, the 10 central and the 10 lowest performing institutions (according to the SEHEE), and use the method of measuring entrepreneurship education and its effect on students. This research would have the positive aspect of comparing the ranking and show if it holds under the analytical method (i.e., entrepreneurship education effort) and assess and compare entrepreneurship education effect on students and establish a ranking.

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Appendix A – Questionnaire to Professor Tiit Elenurm

APPENDIX A

Entrepreneurship Education at EBS:
Preview of Questions.

Answers provided by:

Professor Tiit Elenurm

Chair and Head of the Department of Entrepreneurship

The purpose of these questions is to obtain an overall view of the state of teaching of entrepreneurship at EBS. Moreover, these questions are part of a larger questionnaire used by the European Commission to assess the state of Entrepreneurship in Higher education in Europe.

Only the most relevant questions, in respect to the thesis work, are displayed in the following pages. These questions are sent prior the interview for previewing purpose.

Please keep in mind that, in these questions, "entrepreneurship education is broadly defined (i.e. the entrepreneurship education activities aim to foster entrepreneurial mindsets, attitudes and skills and can cover a range of aspects such as idea generation, start-up, growth and innovation)" (SEHEE, 2008 p.1).

Your willingness to participate is very important and very much appreciated.

THANK YOU!

APPENDIX A

1. **Approximately, for how many years has EBS offered entrepreneurship education?**

   Entrepreneurship Education _____ year(s)

2. **What are the overarching entrepreneurship goal(s) for your institution?**
   (Tick all that apply)

   My institution doesn't have entrepreneurship goals ☐

   To provide access to entrepreneurship opportunities for ALL students at my institution ☐

   To embed awareness of entrepreneurship throughout ALL curricula provision ☐

   To inspire students toward seeking an entrepreneurial career or life ☐

   To foster entrepreneurial behaviours, skills and mindsets ☐

   To conduct state-of-the-art research on entrepreneurship ☐

   To increase the number of graduate start-up businesses ☐

   To seek opportunities for commercially exploiting knowledge present at my institution ☐

   To maximise technology transfer revenues ☐

   That the entrepreneurship education as a whole should generate income for the institution ☐

   Other, please specify: ☐

   _____
   _____
   _____

3. **Does your organisation have institution-wide policies/action plans (in writing) for undertaking entrepreneurship education?**

   By policies/action plans we mean written policies that on a more concrete level clarify how the entrepreneurship goals/strategy are to be achieved. (Only one answer)

   Yes ☐

   No ☐

APPENDIX A

4. Does your institution at the present time…
One answer on each line

	Yes	No
Have in-house development of entrepreneurship teaching curriculum and/or teaching methods?	☐	☐
Import entrepreneurship teaching curricula and/or teaching methods from other HEIs?	☐	☐
Have a formalised national exchange of good practice in entrepreneurship education?	☐	☐
Have a formalised international exchange of good practice in entrepreneurship education?	☐	☐
Include entrepreneurs/practitioner s in the development of entrepreneurship teaching materials?	☐	☐

5. Does your institution at the present time have cross-faculty/interdisciplinary formalized collaborations in developing new entrepreneurship education?
(Only one answer)

Yes ☐

No ☐

6. How often does your institution make use of the following main teaching methods in the entrepreneurship education?
Only one answer on each line

	Often	Sometimes	Rarely	Never
Lecturing	☐	☐	☐	☐
Case studies	☐	☐	☐	☐
Entrepreneurs/Practitioners in class-room	☐	☐	☐	☐
Project teams	☐	☐	☐	☐
Company visits	☐	☐	☐	☐
Venture simulation/mini companies	☐	☐	☐	☐
Others, please specify:				
_____	☐	☐	☐	☐
_____	☐	☐	☐	☐
_____	☐	☐	☐	☐

7. Did your institution offer extra-curricula activities focusing on entrepreneurship in the previous academic year?
Tick all that apply

No, my institution did not offer any extra-curricula entrepreneurship activities	☐
Yes, seminars/workshops	☐
Yes, business plan/venture capital competitions	☐
Yes, company visits	☐
Yes, matchmaking events between students and external stakeholders/springboards	☐
Yes, summer school	☐
Yes, mentoring schemes/personal coaching for entrepreneurial students	☐
Yes, other, please specify: _____	☐

8. Does your institution conduct research on entrepreneurship?
(Only one answer)

Yes	☐
No	☐

9. Does your institution conduct research on entrepreneurship education?
(Only one answer)

Yes	☐
No	☐

10. Does your institution track the individual alumni?
Tick all that apply

Yes, to keep in contact with the alumni	☐
Yes, to keep track of the number and growth of venture started by graduates	☐

Yes, for other reasons, please specify:

_____ ☐

_____ ☐

_____ ☐

No. ☐

11. Does your institution involve the alumni in its entrepreneurship activities?
(Only one answer)

Yes ☐

No ☐

12. Please estimate the number of academic staff involved in your institution's entrepreneurship activities (in-curricular as well as extra-curricular)
(if you don't know the exact figure, please give your best estimate)

Number of academic staff _____

13. Please estimate the percentage of the academic staff, involved in providing your institution's entrepreneurship activities, that have their own experience as entrepreneurs.
(if you don't know the exact figure, please give your best estimate)

Percentage of academic staff with entrepreneurial experience _____ %

14. Are guest lecturers/practitioners with practical experiences as entrepreneurs used in the entrepreneurship education?
(Tick all that apply)

To a great extent ☐

To some extent ☐

To a limited extent ☐

Not at all ☐

15. At your institution, is it compulsory for academic staff members who (want to) teach entrepreneurship to engage in training/coaching aimed at developing/improving their entrepreneurship teaching skills?
(Only one answer)

Yes ☐

No ☐

16. Does your institution require that academic staff members have actual entrepreneurial experience before they are allowed to teach entrepreneurship?
(Only one answer)

Yes ☐

No ☐

17. Did students at your institution evaluate the entrepreneurship courses in the previous academic year?
(Only one answer)

Yes ☐

No ☐

18. Does your institution have a formalised evaluation procedure for following up on its entrepreneurship goals and strategies?
(Only one answer)

Yes ☐

No ☐

19. What are the 3 main barriers to entrepreneurship education at your institution?
(Tick only 3 barriers)

Some of the academic staff oppose the introduction of entrepreneurship education ☐

Limited expertise among academic staff/current level of educator competence is inadequate ☐

No demand for entrepreneurship education from the students ☐

APPENDIX A

Academic staff do not have enough time to engage in entrepreneurship education	☐
No support from the top management at my institution	☐
No funding available to support the entrepreneurship education	☐
No support from the government/policy environment for entrepreneurship education needs improving	☐
At my institution no recognition is given for excellence in entrepreneurship education	☐
There is no academic credibility in entrepreneurship education	☐
There is a lack of good-quality entrepreneurship education materials	☐
The entrepreneurship education depends on the efforts of a single person/a few people	☐
The entrepreneurship education lacks strategic integration at my institution	☐
Others, please specify:	
_____	☐
_____	☐
_____	☐

THANKS AGAIN FOR YOUR COLLABORATION.

Appendix B – Questions to the vice chairman of the student council

Answers gathered by

Toomas Tuude
Vice Chairman of the Student Council

(1) How many students (daytime and evening time combined) were enrolled at EBS in the previous academic year? *(Give approximation if exact figure not known)*

Bachelor Students
Number of students: _____ 912 (778 active + 37 eurasmus + 97 not active)

Master Students
Number of students: _____ 516 (391 active + 125 not active)

PhD Students
Number of students: _____ 37 (29 active + 8 not active)

(2) How many students (bachelor students only) of each program are currently enrolled at EBS. Please indicate the different numbers in the table below.

	BBA Eng. Day	BBA Est. Day	BBA Est. Eve	BBL Est. Day	BBL Est. Eve	BEB Est. Day	BEB Est. Eve	BEB Rus. Day	BBA Rus. Eve
1st Year	35	27	20	31	2	55	25	17	
2nd Year	28	33	51	25	13	31	31	0	25
3rd Year & Over	47	42	47	24	50	26	58	0	33
TOTAL	110	102	118	80	65	112	114	17	58

(3) How many MALE / FEMALE (bachelor students only) of each program are currently enrolled at EBS. Please indicate the different numbers in the table below.

	BBA Eng. Day		BBA Est. Day		BBA Est. Eve		BBL Est. Day		BBL Est. Eve		BEB Est. Day		BEB Est. Eve	
GENDER	M	F	M	F	M	F	M	F	M	F	M	F	M	F
1st Year	18	17	9	17	6	7	9	22	0	2	38	17	13	8
2nd Year	11	11	9	4	10	11	1	14	5	8	14	7	16	8
TOTAL	29	28	18	21	16	18	10	36	5	10	52	24	29	16

Appendix C – SEE questionnaire

EBS Undergraduate Students:
Entrepreneurship Education Assessment

The purpose of this survey is to assess the views of undergraduate students regarding Entrepreneurship Education in a broad sense. When answering questions please take into account all types of lectures and courses you have studied so far.

Your participation to this study is completely voluntary. Your responses are strictly confidential and data from this research will be reported only in the aggregate. Your willingness to participate is very important and very much appreciated.

Instructions: Please mark your responses to the questions bellow by filling up the most appropriate circle and ticking the right boxes.

(Example; Period of the Day: ⊗ – Morning ○ – Afternoon)

It takes less than 7 minutes to complete this questionnaire.

THANK YOU!

APPENDIX C

BASIC INFORMATION

(1) Please write in your Year of Birth:

1	9		

(2) Please indicate your Sex:

◯ – Male ◯ – Female

(3) Please indicate your Bachelor Degree Program:

◯ – BBA: International Business Administration (in English)
◯ – BBA: International Business Administration (in Estonian)
◯ – BBL: Business Administration and Languages (in Estonian)
◯ – BEB: Entrepreneurship and Business Administration (in Estonian)
◯ – BEB: Entrepreneurship and Business Administration (in Russian)
◯ – Other

(4) Please indicate your current Class:

◯ – 1st Year (Freshman)
◯ – 2nd Year (Junior)
◯ – 3rd Year & over (Senior)
◯ – Unclassified (none of the above)

(5) Please indicate your mode of Study:

◯ – Daytime ◯ – Evening

(6) Are you an Exchange Student?

◯ – Yes ◯ – No

(7) You are currently:

◯ – Working full-time
◯ – Working part-time
◯ – Not working (go to question 9)

(8) You are currently working as:

◯ – An Employee
◯ – An Entrepreneur

APPENDIX C

ENTREPRENEURIAL TRAITS/SKILLS

(9) Definition of Entrepreneur:

One simple definition of an Entrepreneur or Intrepreneur (within an organization) is: "identifying opportunities when others see chaos, contradictions and confusion, and providing solutions to unmet needs".

Please indicate how your studies at EBS have developed this ability.

◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(10) Please indicate your future career goal: (mark only 1 choice)

◯ – Join a large size company (more than 250 employees)
◯ – Join a medium size company (less than 250 employees)
◯ – Join a small size company (less than 50 employees)
◯ – Start your own company
◯ – Join a family business
◯ – Other (please specify): _____

(11) Personal Effectiveness

The following characteristics are important to personal entrepreneurial effectiveness. **Without taking into account your prior experiences**, please indicate how your studies at EBS, so far, have helped develop **each** of them.

(a) – Initiative:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(b) – Reflection:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(c) – Responsibility:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(d) – High level of motivation:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(e) – Ability to recognize and act on opportunity:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(f) – Tolerance for uncertainty and ambiguity:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(g) – Ability to define problems:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(h) – Persistence:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(i) – Ability to take and manage risks:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(j) – Commitment:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(12) Business & organizational Effectiveness

The following skills are important to managerial effectiveness. **Without taking into account your prior experiences**, please indicate how your studies at EBS, so far, have helped develop **each** of them.

(a) – Ability to think outside the box:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(b) – Analytical ability:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(c) – Communication ability:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(d) – Financial planning & Cash Flow management:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(e) – Human Relations ability:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(f) – Latest technologies to find information:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(g) – Leadership ability:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(h) – Marketing:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(i) – Networking (people inter-action):
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(j) – Ability to solve problems:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(k) – Teamwork:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

(l) – Strategy:
◯ – *Not a all* ◯ – *Very Little* ◯ – *Little* ◯ – *Much* ◯ – *Very much*

APPENDIX C

COURSES / MAJOR / SPECIALIZATION

(13) Please indicate courses you have **passed** during **previous** semesters/years
(Mark all that apply)

☐ – Advertising (Reklaamikorraldus)
☐ – Business Planning (Äriplaan)
☐ – Business Simulation INTOPIA (Ärisimulatsioon)
☐ – Contemporary Issues in Tourism Management (Kaasaegsed turismi trended…)
☐ – E-Business (E-äri)
☐ – Event Marketing (Üritusturundus)
☐ – Export (Ekspordi Korraldamine)
☐ – Hotel Reception and Conference Services I (Hotelli vastuvõtt ja… I)
☐ – Hotel Reception and Conference Services II (Hotelli vastuvõtt ja… II)
☐ – International Business (Rahvusvaheline äri)
☐ – International Business Opportunities Baltic Region (Rahvusvahelised… Balti)
☐ – Logistics (Logistika)
☐ – Marketing & Public Opinion Research (Turu- ja avaliku arvamuse uuringud)
☐ – Marketing and Sales (Turundus ja müük)
☐ – Marketing of Tourism and Hospitality (Turism ja majutusasutuste turundus)
☐ – Professional Sales I (Professionaalne müük I)
☐ – Professional Sales II (Professionaalne müük II)
☐ – Sales and Advertising (Müük ja reklaam)
☐ – Service Marketing (Müük ja reklaam)
☐ – Sole Proprietorship. Small and growing businesses (Etteõtlusega tegelev üksikisik)
☐ – Student Enterprises (Tudengiettevõtted)

(14) What is your Major or Specialization: (Mark only 1 choice)

◯ – Major in Accounting and Finance (BBA)
◯ – Major in Marketing and Public Relations (BBA)
◯ – Major in Hotel Reception and Conference Services (BBL)
◯ – Specialization in Banking (BEB)
◯ – Specialization in Sales (BEB)
◯ – Other (please specify): _____

THANKS AGAIN FOR YOUR COLLABORATION.

Appendix D – SEHEE questionnaire

Q	*INPUTS*	*CATEGORIES*	*QUESTIONS*
Q1		General survey	Q1: What is the highest study level at your institution?
Q2		General survey	Q2: How many academic staff were employed at your entire institution in the previous academic year?
Q3		General survey	Q3: How many students [Undergraduates/graduates/postgraduates] were enrolled at your entire institution in the previous academic year?
Q4		General survey	Q4: Please indicate which type of Higher Education Institution (HEI) you represent.
Q5		General survey	Q5: Multidisciplinary: Please indicate which subjects that are available at your institution
Q6		General survey	Q6: Specialized institutions: Please indicate your institution's type of specialization.
Q7		General survey	Q7: Does your institution offer any in-curricular or extracurricular activities focusing on the development of entrepreneurial behavior, skills, knowledge, mindsets and experiences?
Q8		General survey	Q8: Does your institution ONLY offer courses where entrepreneur- ship accounts for less than 25 percent of the course curriculum?
Q9		General survey	Q9: Approximately, for how many years (including the present academic year) has your institution offered entrepreneurship education?
Q10	Teaching & Methods	Courses	Q10: Does your institution have undergraduate (bachelor) students?
Q11	Teaching & Methods	Courses	Q11: Approximately how many in-curricula entrepreneurship courses did your entire institution offer to undergraduate students in the previous academic year?
Q12	Teaching & Methods	Courses	Q12: Please estimate the number of UNDERGRADUATE students that in the previous academic year passed these in-curricula entrepreneurship courses mentioned in the previous question?
Q13	Teaching & Methods	Courses	Q13: Please estimate what percentage of these undergraduate students were male versus female.
Q14	Teaching & Methods	Courses	Q14: Undergraduates: Entrepreneurship courses can have various contents. Here we distinguish between:
Q16	Teaching & Methods	Courses	Q16: Approximately how many in-curricula entrepreneurship courses did your entire institution offer to graduate students in the previous academic year?
Q17	Teaching & Methods	Courses	Q17: Please estimate the number of GRADUATE students that in the previous academic year passed these in-curricula entrepreneurship courses mentioned in the previous question?
Q18	Teaching & Methods	Courses	Q18: Please estimate what percentage of these graduate students were male versus female – Male
Q19	Teaching & Methods	Courses	Q19: Graduates: Entrepreneurship courses can have various contents. Here we distinguish between:
Q21	Teaching & Methods	Courses	Q21: Approximately, how many in-curricula entrepreneurship courses did your entire institution offer to postgraduate students in the previous academic year?
Q22	Teaching & Methods	Courses	Q22: Please estimate the number of POSTGRADUATE students that in the previous academic year passed these in-curricula entrepreneurship courses mentioned in the previous question?
Q23	Teaching & Methods	Courses	Q23: Please estimate what percentage of these postgraduate students were male versus female.
Q24	Teaching & Methods	Courses	Q24: Postgraduates: Entrepreneurship courses can have various contents. Here we distinguish between:

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Q	INPUTS	CATEGORIES	QUESTIONS
Q25	Teaching & Methods	Courses	Q25: Is entrepreneurship primarily integrated across curriculum or taught only in specialized courses/modules at your institution (on average across all study levels)?
Q26	Teaching & Methods	Courses	Q26: Entrepreneurship courses can have different focal points with respect to the entrepreneurial process. Here we distinguish between:
Q27	Teaching & Methods	Degrees	Q27: Did your institution offer one or more degree programs in entrepreneurship (irrespective of study level) in the previous academic year?
Q29	Teaching & Methods	Degrees	Q29: Please estimate the number of students at each study level enrolled in the degree program(s) in the previous academic year?
Q30	Teaching & Methods	Degrees	Q30: Please indicate which overall subjects at your institution did offer in-curricula entrepreneurship courses and/or entrepreneurship degree(s) (no matter study level) in the previous academic year.
Q31	Strategy	Ent. Goals	Q31: Is entrepreneurship embedded in your institutions written over all mission statement?
Q32	Strategy	Ent. Goals	Q32: What are the overarching entrepreneurship goal(s) for your institution?
Q33	Strategy	Ent. Policies	Q33: Does your organization have institution-wide policies/action plans (in writing) for undertaking entrepreneurship education?
Q34	Strategy	Ent. Policies	Q34: What percentage of the different faculties/disciplines at your institution have their own entrepreneurship policies/action plans (in writing)?
Q35	Strategy	Ent. Policies	Q35: Please indicate which specific overall subjects have their own entrepreneurship policies/action plans (in writing).
Q36	Strategy	Strategic embeddedness	Q36: Which person has the primary responsibility for the entrepreneurship education at the strategic level at your institution?
Q37	Strategy	Strategic embeddedness	Q37: Please indicate which subjects at your institution that have entrepreneurship champions that act as spokesmen/ advocates at management level and/or among senior personnel to support the entrepreneurship education activities.
Q38	Teaching & Methods	Curriculum	Q38: Does your institution at the present time.
Q39	Teaching & Methods	Curriculum	Q39: Does your institution at the present time have cross-faculty/ interdisciplinary formalized collaborations in developing new entrepreneur- ship education?
Q40	Teaching & Methods	Teaching Methods	Q40: How often does your institution make use of the following main teaching methods in the entrepreneurship education?
Q41	Teaching & Methods	Extra-curricula actv.	Q41: Did your institution offer extra-curricula activities focusing on entrepreneurship in the previous academic year?
Q42	Teaching & Methods	Extra-curricula actv.	Q42: Please estimate the total number of all students (at any level) that participated in extra-curricular entrepreneurship activities in the previous academic year?
Q43	Institution Infra.	Ent. appointments	Q43: How many entrepreneurship chairs/professorships did your institution have in the previous academic year?
Q44	Institution Infra.	Research in Ent.	Q44: Does your institution conduct research on entrepreneurship?
Q45	Institution Infra.	Research in Ent.	Q45: Does your institution conduct research on entrepreneurship education?

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Q	INPUTS	CATEGORIES	QUESTIONS
Q47	Institution Infra.	Cross-Discipline Struc.	Q47: Can all students at your institution take entrepreneurship courses and have them credited to their degree regardless of to which faculty/discipline they are connected?
Q48	Institution Infra.	Cross-Discipline Struc.	Q48: Did your institution offer cross-faculty/multidisciplinary entrepreneurship activities (both in-curricula and extracurricular) in the previous academic year?
Q49	Institution Infra.	Cross-Discipline Struc.	Q49: Does your institution provide opportunities for entrepreneur- ship students from different faculties/disciplines to mix in the classroom?
Q50	Institution Infra.	Approaches	Q50: Does your institution have an entrepreneurship department?
Q51	Institution Infra.	Approaches	Q51: Does your institution have a dedicated entrepreneurship centre or similar formalized entity?
Q52	Institution Infra.	Approaches	Q52: Does your institution provide incubator facilities?
Q53	Institution Infra.	Approaches	Q53: Does your institution have a technology transfer office (TTO)?
Q54	Outreach	Alumni	Q54: Does your institution track the individual alumni?
Q55	Outreach	Alumni	Q55: Does your institution involve the alumni in its entrepreneur- ship activities?
Q56	Outreach	Link with Stakeholders	Q56: Does your institution at the present time have links with one or more of the following stakeholders as a result of/to improve your institution's entrepreneurship activities?
Q57	Outreach	Community Engagement	Q57: Is it possible for entrepreneurship students at your institution to.
Q58	Outreach	Community Engagement	Q58: Please estimate what approximate percentage of all students graduated with actual practical entrepreneurial experience from activities offered by your institution in the previous academic year? Practical entrepreneurial experience gained through opportunities offered by your institution. For example gained from e.g. business plan competitions, incubators, etc.
Q59	Outreach	Community Engagement	Q59: Did your institution in the previous academic year transfer knowledge to society?
Q60	Outreach	Community Engagement	Q60: Does your institution.
Q61	Development	H.R. Dev. & Mngt.	Q61: Please estimate the number of academic staff involved in your institution's entrepreneurship activities (in-curricular as well as extracurricular).
Q62	Development	H.R. Dev. & Mngt.	Q62: Please estimate the percentage of the academic staff involved in providing your institution's entrepreneurship activities that have their own experience as entrepreneurs.
Q63	Development	H.R. Dev. & Mngt.	Q63: Are guest lecturers/practitioners with practical experience as entrepreneurs used in the entrepreneurship education?
Q64	Development	H.R. Dev. & Mngt.	Q64: Does your institution provide recognition for achievements of academic staff in entrepreneurship education?
Q65	Development	H.R. Dev. & Mngt.	Q65: At your institution, is it compulsory for academic staff members who (want to) teach entrepreneurship to engage in training/coaching aimed at developing/improving their entrepreneurship teaching skills?
Q66	Development	H.R. Dev. & Mngt.	Q66: Does your institution require that academic staff members have actual entrepreneurial experience before they are allowed to teach entrepreneurship?
Q67	Development	User-driven improv.	Q67: Did students at your institution evaluate the entrepreneurship courses in the previous academic year?

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Q	INPUTS	CATEGORIES	QUESTIONS
Q68	Development	User-driven improv.	Q68: Does your institution have procedures for evaluating whether the entrepreneurship courses have the anticipated medium/long-term effect?
Q69	Development	Evaluation	Q69: Does your institution have a formalized evaluation procedure for following up on its entrepreneurship goals and strategies?
Q70	Resources	Income Generation	Q70: What types of income generating activities related to entrepreneurship (excluding the actual in-curricular education for students) does your institution have?
Q71	Resources	Type of Funding	Q71: How were your institution's total entrepreneurship activities (both in-curricula and extra-curricula) primarily funded in the previous academic year?
Q72	Resources	Type of Funding	Q72: What is the primary source of external funding for entrepreneurship activities at your institution?
Q73	Resources	Budget Allocation	Q73: In the previous academic year, did your institution support its entrepreneurship goals with dedicated funding?
Q74	Resources	Budget Allocation	Q74: What was the (approximate) size in Euro (€) of the overall budget at your entire institution reserved for entrepreneurship activities (in-curricula and extra-curricular) in the previous academic year?
Q75	Resources	Budget Allocation	Q75: What percentage of the total entrepreneurship budget was allocated from internal funds versus received through external funding in the previous academic year?

Appendix E – Respondent / sources providing answers to the SEHEE questions

Table XX: Input – Teaching and Learning

Q	INPUTS	CATEGORIES	RESPONDENT / SOURCES
Q11	Teaching & Methods	Courses	Courses Syllabus
Q12	Teaching & Methods	Courses	Not Answered
Q13	Teaching & Methods	Courses	Not Answered
Q14	Teaching & Methods	Courses	Not Answered
Q16	Teaching & Methods	Courses	Not Focus
Q17	Teaching & Methods	Courses	Not Focus
Q18	Teaching & Methods	Courses	Not Focus
Q19	Teaching & Methods	Courses	Not Focus
Q21	Teaching & Methods	Courses	Not Focus
Q22	Teaching & Methods	Courses	Not Focus
Q23	Teaching & Methods	Courses	Not Focus
Q24	Teaching & Methods	Courses	Not Focus
Q25	Teaching & Methods	Courses	Online Sources & Courses Syllabus
Q26	Teaching & Methods	Courses	Courses Syllabus
Q38	Teaching & Methods	Curriculum	Prof. Tiit Elenurm
Q39	Teaching & Methods	Curriculum	Prof. Tiit Elenurm
Q27	Teaching & Methods	Degrees	Courses Syllabus
Q29	Teaching & Methods	Degrees	Administration Office
Q30	Teaching & Methods	Degrees	Online Sources & Courses Syllabus
Q41	Teaching & Methods	Extra-curricula actv.	Prof. Tiit Elenurm
Q42	Teaching & Methods	Extra-curricula actv.	Not Answered
Q40	Teaching & Methods	Teaching Methods	Prof. Tiit Elenurm

Table XX: Input – Strategy

Q	INPUTS	CATEGORIES	RESPONDENT / SOURCES
Q31	Strategy	Ent. Goals	Online Sources
Q32	Strategy	Ent. Goals	Prof. Tiit Elenurm
Q33	Strategy	Ent. Policies	Prof. Tiit Elenurm
Q34	Strategy	Ent. Policies	Not Answered
Q35	Strategy	Ent. Policies	Not Answered
Q36	Strategy	Strategic embeddedness	Online Sources
Q37	Strategy	Strategic embeddedness	Not Answered

Table XX: Input – Institution Infrastructures

Q	INPUTS	CATEGORIES	RESPONDENT / SOURCES
Q50	Institution Infra.	Approaches	Prof. Tiit Elenurm
Q51	Institution Infra.	Approaches	Online Sources
Q52	Institution Infra.	Approaches	Online Sources
Q53	Institution Infra.	Approaches	Online Sources
Q47	Institution Infra.	Cross-Discipline Struc.	Online Sources & Syllabus
Q48	Institution Infra.	Cross-Discipline Struc.	Online Sources
Q49	Institution Infra.	Cross-Discipline Struc.	Online Sources
Q43	Institution Infra.	Ent. appointments	Online Sources
Q44	Institution Infra.	Research in Ent.	Prof. Tiit Elenurm
Q45	Institution Infra.	Research in Ent.	Prof. Tiit Elenurm

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Table XX: Input – Outreach

Q	INPUTS	CATEGORIES	RESPONDENT / SOURCES
Q54	Outreach	Alumni	Prof. Tiit Elenurm
Q55	Outreach	Alumni	Prof. Tiit Elenurm
Q57	Outreach	Community Engagement	Online Sources & Syllabus
Q58	Outreach	Community Engagement	Prof. Tiit Elenurm
Q59	Outreach	Community Engagement	Prof. Tiit Elenurm
Q60	Outreach	Community Engagement	Not answered
Q56	Outreach	Link with Stakeholders	Not answered

Table XX: Input – Development

Q	INPUTS	CATEGORIES	RESPONDENT / SOURCES
Q69	Development	Evaluation	Not Answered
Q61	Development	H.R. Dev. & Mngt.	Prof. Tiit Elenurm
Q62	Development	H.R. Dev. & Mngt.	Prof. Tiit Elenurm
Q63	Development	H.R. Dev. & Mngt.	Prof. Tiit Elenurm
Q64	Development	H.R. Dev. & Mngt.	Not Answered
Q65	Development	H.R. Dev. & Mngt.	Prof. Tiit Elenurm
Q66	Development	H.R. Dev. & Mngt.	Prof. Tiit Elenurm
Q67	Development	User-driven improv.	Prof. Tiit Elenurm
Q68	Development	User-driven improv.	Not Answered

Table XX: Input – Resources

Q	INPUTS	CATEGORIES	RESPONDENT / SOURCES
Q73	Resources	Budget Allocation	Not Answered
Q74	Resources	Budget Allocation	Not Answered
Q75	Resources	Budget Allocation	Not Answered
Q70	Resources	Income Generation	Prof. Tiit Elenurm
Q71	Resources	Type of Funding	Not Answered
Q72	Resources	Type of Funding	Prof. Tiit Elenurm

Appendix F – SEE results

QUESTION 1

N = 84	Mode of Study		Language		Program			Class	
Q1	Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
1976	0	1	0	1	0	0	1	0	1
1977	0	1	0	1	1	0	0	0	1
1978	0	2	0	2	1	0	1	1	1
1979	0	3	0	3	0	0	3	2	1
1980	1	0	0	1	1	0	0	0	1
1981	0	1	0	1	0	0	1	1	0
1982	0	2	0	2	0	0	2	1	1
1983	0	0	0	0	0	0	0	0	0
1984	1	0	0	1	1	0	0	0	1
1985	1	0	0	1	1	0	0	1	0
1986	1	1	1	1	2	0	0	1	1
1987	7	3	4	6	7	1	2	6	4
1988	16	4	6	14	14	4	2	7	13
1989	21	0	4	17	11	4	6	10	11
1990	15	1	1	15	9	7	0	16	0
1991	2	0	0	2	1	1	0	2	0
Total	65	19	16	68	49	17	18	48	36

N = 84	Mode of Study		Language		Program			Class	
Q1	Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
1976	0.0%	1.2%	0.0%	1.2%	0.0%	0.0%	1.2%	0.0%	1.2%
1977	0.0%	1.2%	0.0%	1.2%	1.2%	0.0%	0.0%	0.0%	1.2%
1978	0.0%	2.4%	0.0%	2.4%	1.2%	0.0%	1.2%	1.2%	1.2%
1979	0.0%	3.6%	0.0%	3.6%	0.0%	0.0%	3.6%	2.4%	1.2%
1980	1.2%	0.0%	0.0%	1.2%	1.2%	0.0%	0.0%	0.0%	1.2%
1981	0.0%	1.2%	0.0%	1.2%	0.0%	0.0%	1.2%	1.2%	0.0%
1982	0.0%	2.4%	0.0%	2.4%	0.0%	0.0%	2.4%	1.2%	1.2%
1983	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1984	1.2%	0.0%	0.0%	1.2%	1.2%	0.0%	0.0%	0.0%	1.2%
1985	1.2%	0.0%	0.0%	1.2%	1.2%	0.0%	0.0%	1.2%	0.0%
1986	1.2%	1.2%	1.2%	1.2%	2.4%	0.0%	0.0%	1.2%	1.2%
1987	8.3%	3.6%	4.8%	7.1%	8.3%	1.2%	2.4%	7.1%	4.8%
1988	19.0%	4.8%	7.1%	16.7%	16.7%	4.8%	2.4%	8.3%	15.5%
1989	25.0%	0.0%	4.8%	20.2%	13.1%	4.8%	7.1%	11.9%	13.1%
1990	17.9%	1.2%	1.2%	17.9%	10.7%	8.3%	0.0%	19.0%	0.0%
1991	2.4%	0.0%	0.0%	2.4%	1.2%	1.2%	0.0%	2.4%	0.0%
Sub-T	77.4%	22.6%	19.0%	81.0%	58.3%	20.2%	21.4%	57.1%	42.9%
TOTAL	100.0%		100.0%		100.0%			100.0%	

Q1	Mode of Study		Language		Program			Class	
Born	Day (N=65)	Eve (N=19)	Eng (N=16)	Est (N=68)	BBA (N=49)	BBL (N=17)	BEB (N=18)	1 Year (N=48)	2 Year (N=36)
76-86	6%	58%	6%	21%	14%	0%	44%	15%	22%
87-91	94%	42%	94%	79%	86%	100%	56%	85%	78%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%

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QUESTION 2

N = 85	Mode of Study		Language		Program			Class	
Q2	Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Male	28	9	6	31	19	4	14	16	21
Female	38	10	10	38	31	13	4	32	16
Total	66	19	16	69	50	17	18	48	37

N = 85	Mode of Study		Language		Program			Class	
Q2	Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Male	32.9%	10.6%	7.1%	36.5%	22.4%	4.7%	16.5%	18.8%	24.7%
Female	44.7%	11.8%	11.8%	44.7%	36.5%	15.3%	4.7%	37.6%	18.8%

Q2	Mode of Study		Language		Program			Class	
	Day (N=66)	Eve (N=19)	Eng (N=16)	Est (N=69)	BBA (N=50)	BBL (N=17)	BEB (N=18)	1 Year (N=48)	2 Year (N=37)
Male	42%	47%	38%	45%	38%	24%	78%	33%	57%
Female	58%	53%	62%	55%	62%	76%	22%	67%	43%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%

QUESTION 7

N = 85	Mode of Study		Language		Program			Class	
Q7	Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Full-Time	3	13	1	15	8	1	7	7	9
Part-Time	18	2	3	17	12	5	3	10	10
No Work	45	4	12	37	30	11	8	31	18
Total	66	19	16	69	50	17	18	48	37

N = 85	Mode of Study		Language		Program			Class	
Q7	Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Full-Time	3.5%	15.3%	1.2%	17.6%	9.4%	1.2%	8.2%	8.2%	10.6%
Part-Time	21.2%	2.4%	3.5%	20.0%	14.1%	5.9%	3.5%	11.8%	11.8%
No Work	52.9%	4.7%	14.1%	43.5%	35.3%	12.9%	9.4%	36.5%	21.2%

Q7	Mode of Study		Language		Program			Class	
	Day (N=66)	Eve (N=19)	Eng (N=16)	Est (N=69)	BBA (N=50)	BBL (N=17)	BEB (N=18)	1 Year (N=48)	2 Year (N=37)
Full-Time	5%	68%	6%	22%	16%	6%	39%	14%	24%
Part-Time	27%	11%	19%	25%	24%	29%	17%	21%	27%
No Work	68%	21%	75%	53%	60%	65%	44%	65%	49%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%

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QUESTION 8

N = 36	Mode of Study		Language		Program			Class	
Q8	Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Employee	14	13	3	24	14	6	7	14	13
Entrepreneur	7	2	1	8	6	0	3	3	6
Total	21	15	4	32	20	6	10	17	19

N = 36	Mode of Study		Language		Program			Class	
Q8	Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Employee	38.9%	36.1%	8.3%	66.7%	38.9%	16.7%	19.4%	38.9%	36.1%
Entrepreneur	19.4%	5.6%	2.8%	22.2%	16.7%	0.0%	8.3%	8.3%	16.7%

Q8	Mode of Study		Language		Program			Class	
	Day (N=21)	Eve (N=15)	Eng (N=4)	Est (N=32)	BBA (N=20)	BBL (N=6)	BEB (N=10)	1 Year (N=17)	2 Year (N=19)
Employee	67%	87%	75%	75%	70%	100%	70%	82%	68%
Entrepreneur	33%	13%	25%	25%	30%	0%	30%	18%	32%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%

QUESTION 9

N = 81	Mode of Study		Language		Program			Class	
Q9	Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Not at all Very_Little Little	31	9	7	33	27	9	4	29	11
Much Very_Much	33	8	9	32	20	8	13	16	25
Total	64	17	16	65	47	17	17	45	36

N = 81	Mode of Study		Language		Program			Class	
Q9	Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Not at all Very_Little Little	38.3%	11.1%	8.6%	40.7%	33.3%	11.1%	4.9%	35.8%	13.6%
Much Very_Much	40.7%	9.9%	11.1%	39.5%	24.7%	9.9%	16.0%	19.8%	30.9%

Q9	Mode of Study		Language		Program			Class	
	Day (N=64)	Eve (N=17)	Eng (N=16)	Est (N=65)	BBA (N=47)	BBL (N=17)	BEB (N=17)	1 Year (N=45)	2 Year (N=36)
Not at all Very_Little Little	48%	53%	44%	51%	57%	53%	24%	64%	31%
Much Very_Much	52%	47%	56%	49%	43%	47%	76%	36%	69%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%

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QUESTION 10

N = 84	Mode of Study		Language		Program			Class	
Q10	Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Large Company	15	2	7	10	15	2	0	11	6
Medium Company	10	1	1	10	7	2	2	8	3
Small Company	1	2	0	3	1	1	1	1	2
Own Company	27	12	5	34	19	8	12	20	19
Family Business	8	0	1	7	5	2	1	2	6
Other	4	2	2	4	3	1	2	4	2
Total	65	19	16	68	50	16	18	46	38

N = 84	Mode of Study		Language		Program			Class	
Q10	Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Large Company	17.9%	2.4%	8.3%	11.9%	17.9%	2.4%	0.0%	13.1%	7.1%
Medium Company	11.9%	1.2%	1.2%	11.9%	8.3%	2.4%	2.4%	9.5%	3.6%
Small Company	1.2%	2.4%	0.0%	3.6%	1.2%	1.2%	1.2%	1.2%	2.4%
Own Company	32.1%	14.3%	6.0%	40.5%	22.6%	9.5%	14.3%	23.8%	22.6%
Family Business	9.5%	0.0%	1.2%	8.3%	6.0%	2.4%	1.2%	2.4%	7.1%
Other	4.8%	2.4%	2.4%	4.8%	3.6%	1.2%	2.4%	4.8%	2.4%

Q10	Mode of Study		Language		Program			Class	
	Day (N=65)	Eve (N=19)	Eng (N=16)	Est (N=68)	BBA (N=50)	BBL (N=16)	BEB (N=18)	1 Year (N=46)	2 Year (N=38)
Large Company	23%	11%	44%	15%	30%	12%	0%	24%	16%
Medium Company	15%	5%	6%	15%	14%	13%	11%	17%	8%
Small Company	2%	11%	0%	4%	2%	6%	5%	2%	5%
Own Company	42%	63%	31%	50%	38%	50%	67%	44%	50%
Family Business	12%	0%	6%	10%	10%	13%	6%	4%	16%
Other	6%	10%	13%	6%	6%	6%	11%	9%	5%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%

APPENDIX F

QUESTION 11

Q11		Mode of Study		Language		Program			Class	
		Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Initiative	Not at all - Little	23	7	5	25	20	4	6	17	13
(N=84)	Much - Very much	42	12	10	44	29	13	12	30	24
Reflection	Not at all - Little	37	13	9	41	32	6	12	28	22
(N=80)	Much - Very much	26	4	5	25	14	11	5	16	14
Responsibility	Not at all - Little	25	8	6	27	21	5	7	17	16
(N=84)	Much - Very much	40	11	9	42	28	12	11	30	21
Motivation	Not at all - Little	19	5	4	20	17	4	3	15	9
(N=85)	Much - Very much	47	14	12	49	33	13	15	33	28
Opportunity	Not at all - Little	21	9	4	26	18	4	8	20	10
(N=85)	Much - Very much	45	10	12	43	32	13	10	28	27
Uncertainty	Not at all - Little	26	15	4	37	26	5	10	25	16
(N=84)	Much - Very much	39	4	11	32	23	12	8	22	21
Problems	Not at all - Little	18	11	4	25	17	4	8	20	9
(N=85)	Much - Very much	48	8	12	44	33	13	10	28	28
Persistence	Not at all - Little	39	12	10	41	37	6	8	30	21
(N=81)	Much - Very much	25	5	5	25	11	11	8	16	14
Manage Risks	Not at all - Little	25	13	10	28	25	5	8	24	14
(N=84)	Much - Very much	40	6	6	40	25	12	9	24	22
Commitment	Not at all - Little	22	8	6	24	19	6	5	18	12
(N=83)	Much - Very much	42	11	9	44	30	11	12	29	24

Q11		Mode of Study		Language		Program			Class	
		Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Initiative	Not at all - Little	27.4%	8.3%	6.0%	29.8%	23.8%	4.8%	7.1%	20.2%	15.5%
(N=84)	Much - Very much	50.0%	14.3%	11.9%	52.4%	34.5%	15.5%	14.3%	35.7%	28.6%
Reflection	Not at all - Little	46.3%	16.3%	11.3%	51.3%	40.0%	7.5%	15.0%	35.0%	27.5%
(N=80)	Much - Very much	32.5%	5.0%	6.3%	31.3%	17.5%	13.8%	6.3%	20.0%	17.5%
Responsibility	Not at all - Little	29.8%	9.5%	7.1%	32.1%	25.0%	6.0%	8.3%	20.2%	19.0%
(N=84)	Much - Very much	47.6%	13.1%	10.7%	50.0%	33.3%	14.3%	13.1%	35.7%	25.0%
Motivation	Not at all - Little	22.4%	5.9%	4.7%	23.5%	20.0%	4.7%	3.5%	17.6%	10.6%
(N=85)	Much - Very much	55.3%	16.5%	14.1%	57.6%	38.8%	15.3%	17.6%	38.8%	32.9%
Opportunity	Not at all - Little	24.7%	10.6%	4.7%	30.6%	21.2%	4.7%	9.4%	23.5%	11.8%
(N=85)	Much - Very much	52.9%	11.8%	14.1%	50.6%	37.6%	15.3%	11.8%	32.9%	31.8%
Uncertainty	Not at all - Little	31.0%	17.9%	4.8%	44.0%	31.0%	6.0%	11.9%	29.8%	19.0%
(N=84)	Much - Very much	46.4%	4.8%	13.1%	38.1%	27.4%	14.3%	9.5%	26.2%	25.0%
Problems	Not at all - Little	21.2%	12.9%	4.7%	29.4%	20.0%	4.7%	9.4%	23.5%	10.6%
(N=85)	Much - Very much	56.5%	9.4%	14.1%	51.8%	38.8%	15.3%	11.8%	32.9%	32.9%
Persistence	Not at all - Little	48.1%	14.8%	12.3%	50.6%	45.7%	7.4%	9.9%	37.0%	25.9%
(N=81)	Much - Very much	30.9%	6.2%	6.2%	30.9%	13.6%	13.6%	9.9%	19.8%	17.3%
Manage Risks	Not at all - Little	29.8%	15.5%	11.9%	33.3%	29.8%	6.0%	9.5%	28.6%	16.7%
(N=84)	Much - Very much	47.6%	7.1%	7.1%	47.6%	29.8%	14.3%	10.7%	28.6%	26.2%
Commitment	Not at all - Little	26.5%	9.6%	7.2%	28.9%	22.9%	7.2%	6.0%	21.7%	14.5%
(N=83)	Much - Very much	50.6%	13.3%	10.8%	53.0%	36.1%	13.3%	14.5%	34.9%	28.9%

APPENDIX F

QUESTION 11

Q11		Mode of Study		Language		Program			Class	
		Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Initiative (N=84)	Not at all - Little	35%	37%	33%	36%	41%	24%	33%	36%	35%
	Much - Very much	65%	63%	67%	64%	59%	76%	67%	64%	65%
Reflection (N=80)	Not at all - Little	59%	76%	64%	62%	70%	35%	71%	64%	61%
	Much - Very much	41%	24%	36%	38%	30%	65%	29%	36%	39%
Responsibility (N=84)	Not at all - Little	38%	42%	40%	39%	43%	29%	39%	36%	43%
	Much - Very much	62%	58%	60%	61%	57%	71%	61%	64%	57%
Motivation (N=85)	Not at all - Little	29%	26%	25%	29%	34%	24%	17%	31%	24%
	Much - Very much	71%	74%	75%	71%	66%	76%	83%	69%	76%
Opportunity (N=85)	Not at all - Little	32%	47%	25%	38%	36%	24%	44%	42%	27%
	Much - Very much	68%	53%	75%	62%	64%	76%	56%	58%	73%
Uncertainty (N=84)	Not at all - Little	40%	79%	27%	54%	53%	29%	56%	53%	43%
	Much - Very much	60%	21%	73%	46%	47%	71%	44%	47%	57%
Problems (N=85)	Not at all - Little	27%	58%	25%	36%	34%	24%	44%	42%	24%
	Much - Very much	73%	42%	75%	64%	66%	76%	56%	58%	76%
Persistence (N=81)	Not at all - Little	61%	71%	67%	62%	77%	35%	50%	65%	60%
	Much - Very much	39%	29%	33%	38%	23%	65%	50%	35%	40%
Manage Risks (N=84)	Not at all - Little	38%	68%	63%	41%	50%	29%	47%	50%	39%
	Much - Very much	62%	32%	38%	59%	50%	71%	53%	50%	61%
Commitment (N=83)	Not at all - Little	34%	42%	40%	35%	39%	35%	29%	38%	33%
	Much - Very much	66%	58%	60%	65%	61%	65%	71%	62%	67%

OVERALL	Not at all - Little	39%	55%	41%	43%	48%	29%	43%	46%	39%
	Much - Very much	61%	45%	59%	57%	52%	71%	57%	54%	61%

Q11		Mode of Study		Language		Program			Class	
		Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Initiative	**N=**	65	19	15	69	49	17	18	47	37
Reflection	**N=**	63	17	14	66	46	17	17	44	36
Responsibility	**N=**	65	19	15	69	49	17	18	47	37
Motivation	**N=**	66	19	16	69	50	17	18	48	37
Opportunity	**N=**	66	19	16	69	50	17	18	48	37
Uncertainty	**N=**	65	19	15	69	49	17	18	47	37
Problems	**N=**	66	19	16	69	50	17	18	48	37
Persistence	**N=**	64	17	15	66	48	17	16	46	35
Manage Risks	**N=**	65	19	16	68	50	17	17	48	36
Commitment	**N=**	64	19	15	68	49	17	17	47	36

APPENDIX F

QUESTION 12

Q12		Mode of Study		Language		Program			Class	
		Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Outside Box	Not at all - Little	24	8	8	24	20	6	6	23	9
(N=85)	Much - Very much	42	11	8	45	30	11	12	25	28
Analytical	Not at all - Little	30	6	7	29	22	7	7	24	12
(N=85)	Much - Very much	36	13	9	40	28	10	11	24	25
Communication	Not at all - Little	22	7	5	24	19	5	5	17	12
(N=85)	Much - Very much	44	12	11	45	31	12	13	31	25
Finance CashFlow	Not at all - Little	32	10	11	31	28	7	7	31	11
(N=85)	Much - Very much	34	9	5	38	22	10	11	17	26
Human Relations	Not at all - Little	21	13	4	30	20	7	7	21	13
(N=85)	Much - Very much	45	6	12	39	30	10	11	27	24
Find Information	Not at all - Little	32	14	7	39	29	8	9	23	23
(N=85)	Much - Very much	34	5	9	30	21	9	9	25	14
Leadership	Not at all - Little	33	10	9	34	29	6	8	26	17
(N=85)	Much - Very much	33	9	7	35	21	11	10	22	20
Marketing	Not at all - Little	21	7	5	23	15	9	4	23	5
(N=84)	Much - Very much	44	12	11	45	34	8	14	25	31
Networking	Not at all - Little	34	8	10	32	28	7	7	27	15
(N=84)	Much - Very much	31	11	6	36	21	10	11	20	22
Solve Problems	Not at all - Little	25	13	7	31	24	7	7	23	15
(N=85)	Much - Very much	41	6	9	38	26	10	11	25	22
TeamWork	Not at all - Little	20	7	6	21	19	5	3	19	8
(N=85)	Much - Very much	46	12	10	48	31	12	15	29	29
Strategy	Not at all - Little	32	13	7	38	24	11	10	30	15
(N=85)	Much - Very much	34	6	9	31	26	6	8	18	22

Q12		Mode of Study		Language		Program			Class	
		Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Outside Box	Not at all - Little	28.2%	9.4%	9.4%	28.2%	23.5%	7.1%	7.1%	27.1%	10.6%
(N=85)	Much - Very much	49.4%	12.9%	9.4%	52.9%	35.3%	12.9%	14.1%	29.4%	32.9%
Analytical	Not at all - Little	35.3%	7.1%	8.2%	34.1%	25.9%	8.2%	8.2%	28.2%	14.1%
(N=85)	Much - Very much	42.4%	15.3%	10.6%	47.1%	32.9%	11.8%	12.9%	28.2%	29.4%
Communication	Not at all - Little	25.9%	8.2%	5.9%	28.2%	22.4%	5.9%	5.9%	20.0%	14.1%
(N=85)	Much - Very much	51.8%	14.1%	12.9%	52.9%	36.5%	14.1%	15.3%	36.5%	29.4%
Finance CashFlow	Not at all - Little	37.6%	11.8%	12.9%	36.5%	32.9%	8.2%	8.2%	36.5%	12.9%
(N=85)	Much - Very much	40.0%	10.6%	5.9%	44.7%	25.9%	11.8%	12.9%	20.0%	30.6%
Human Relations	Not at all - Little	24.7%	15.3%	4.7%	35.3%	23.5%	8.2%	8.2%	24.7%	15.3%
(N=85)	Much - Very much	52.9%	7.1%	14.1%	45.9%	35.3%	11.8%	12.9%	31.8%	28.2%
Find Information	Not at all - Little	37.6%	16.5%	8.2%	45.9%	34.1%	9.4%	10.6%	27.1%	27.1%
(N=85)	Much - Very much	40.0%	5.9%	10.6%	35.3%	24.7%	10.6%	10.6%	29.4%	16.5%
Leadership	Not at all - Little	38.8%	11.8%	10.6%	40.0%	34.1%	7.1%	9.4%	30.6%	20.0%
(N=85)	Much - Very much	38.8%	10.6%	8.2%	41.2%	24.7%	12.9%	11.8%	25.9%	23.5%
Marketing	Not at all - Little	25.0%	8.3%	6.0%	27.4%	17.9%	10.7%	4.8%	27.4%	6.0%
(N=84)	Much - Very much	52.4%	14.3%	13.1%	53.6%	40.5%	9.5%	16.7%	29.8%	36.9%
Networking	Not at all - Little	40.5%	9.5%	11.9%	38.1%	33.3%	8.3%	8.3%	32.1%	17.9%
(N=84)	Much - Very much	36.9%	13.1%	7.1%	42.9%	25.0%	11.9%	13.1%	23.8%	26.2%
Solve Problems	Not at all - Little	29.4%	15.3%	8.2%	36.5%	28.2%	8.2%	8.2%	27.1%	17.6%
(N=85)	Much - Very much	48.2%	7.1%	10.6%	44.7%	30.6%	11.8%	12.9%	29.4%	25.9%
TeamWork	Not at all - Little	23.5%	8.2%	7.1%	24.7%	22.4%	5.9%	3.5%	22.4%	9.4%
(N=85)	Much - Very much	54.1%	14.1%	11.8%	56.5%	36.5%	14.1%	17.6%	34.1%	34.1%
Strategy	Not at all - Little	37.6%	15.3%	8.2%	44.7%	28.2%	12.9%	11.8%	35.3%	17.6%
(N=85)	Much - Very much	40.0%	7.1%	10.6%	36.5%	30.6%	7.1%	9.4%	21.2%	25.9%

APPENDIX F

QUESTION 12

Q12		Mode of Study		Language		Program			Class	
		Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Outside Box	Not at all - Little	36%	42%	50%	35%	40%	35%	33%	48%	24%
(N=85)	Much - Very much	64%	58%	50%	65%	60%	65%	67%	52%	76%
Analytical	Not at all - Little	45%	32%	44%	42%	44%	41%	39%	50%	32%
(N=85)	Much - Very much	55%	68%	56%	58%	56%	59%	61%	50%	68%
Communication	Not at all - Little	33%	37%	31%	35%	38%	29%	28%	35%	32%
(N=85)	Much - Very much	67%	63%	69%	65%	62%	71%	72%	65%	68%
Finance CashFlow	Not at all - Little	48%	53%	69%	45%	56%	41%	39%	65%	30%
(N=85)	Much - Very much	52%	47%	31%	55%	44%	59%	61%	35%	70%
Human Relations	Not at all - Little	32%	68%	25%	43%	40%	41%	39%	44%	35%
(N=85)	Much - Very much	68%	32%	75%	57%	60%	59%	61%	56%	65%
Find Information	Not at all - Little	48%	74%	44%	57%	58%	47%	50%	48%	62%
(N=85)	Much - Very much	52%	26%	56%	43%	42%	53%	50%	52%	38%
Leadership	Not at all - Little	50%	53%	56%	49%	58%	35%	44%	54%	46%
(N=85)	Much - Very much	50%	47%	44%	51%	42%	65%	56%	46%	54%
Marketing	Not at all - Little	32%	37%	31%	34%	31%	53%	22%	48%	14%
(N=84)	Much - Very much	68%	63%	69%	66%	69%	47%	78%	52%	86%
Networking	Not at all - Little	52%	42%	63%	47%	57%	41%	39%	57%	41%
(N=84)	Much - Very much	48%	58%	38%	53%	43%	59%	61%	43%	59%
Solve Problems	Not at all - Little	38%	68%	44%	45%	48%	41%	39%	48%	41%
(N=85)	Much - Very much	62%	32%	56%	55%	52%	59%	61%	52%	59%
TeamWork	Not at all - Little	30%	37%	38%	30%	38%	29%	17%	40%	22%
(N=85)	Much - Very much	70%	63%	63%	70%	62%	71%	83%	60%	78%
Strategy	Not at all - Little	48%	68%	44%	55%	48%	65%	56%	63%	41%
(N=85)	Much - Very much	52%	32%	56%	45%	52%	35%	44%	38%	59%

OVERALL	Not at all - Little	41%	51%	45%	43%	46%	42%	37%	50%	35%
	Much - Very much	59%	49%	55%	57%	54%	58%	63%	50%	65%

Q12		Mode of Study		Language		Program			Class	
		Day	Eve	Eng	Est	BBA	BBL	BEB	1 Year	2 Year
Outside Box	**N=**	66	19	16	69	50	17	18	48	37
Analytical	**N=**	66	19	16	69	50	17	18	48	37
Communication	**N=**	66	19	16	69	50	17	18	48	37
Finance CashFlow	**N=**	66	19	16	69	50	17	18	48	37
Human Relations	**N=**	66	19	16	69	50	17	18	48	37
Find Information	**N=**	66	19	16	69	50	17	18	48	37
Leadership	**N=**	66	19	16	69	50	17	18	48	37
Marketing	**N=**	65	19	16	68	49	17	18	48	36
Networking	**N=**	65	19	16	68	49	17	18	47	37
Solve Problems	**N=**	66	19	16	69	50	17	18	48	37
TeamWork	**N=**	66	19	16	69	50	17	18	48	37
Strategy	**N=**	66	19	16	69	50	17	18	48	37

Appendix G – Coefficients for calculating output level

OUTPUT	DIMENSIONS	CATEGORIES	QUESTIONS	Coefficient	QUESTIONS	CATEGORIES	DIMENSIONS	OUTPUT
ENTREPRENEURSHIP EDUCATION EFFORTS LEVEL	TEACHING and LEARNING	COURSE	Q11		1/120	1/30	1/6	1
			Q14		1/120			
			Q25		1/120			
			Q26		1/120			
		DEGREE	Q27		1/90	1/30		
			Q29		1/90			
			Q30		1/90			
		CURRICULUM	Q38		1/60	1/30		
			Q39		1/60			
		EXTRA. ACTIV.	Q41		1/30	1/30		
		TEACH. METH.	Q40		1/30	1/30		
	STRATEGY	ENT. GOALS	Q31		1/36	1/18	1/6	
			Q32		1/36			
		ENT. POLICIES	Q33		1/36	1/18		
			Q34		1/36			
		STRAT. EMB.	Q36		1/36	1/18		
			Q37		1/36			
	INSTITUTION INFRA - STRUCTURES	APPROACHES	Q50		1/96	1/24	1/6	
			Q51		1/96			
			Q52		1/96			
			Q53		1/96			
		CROSS-DISP.	Q47		1/72	1/24		
			Q48		1/72			
			Q49		1/72			
		ENT. APPOINT.	Q43		1/24	1/24		
		RESEARCH ENT.	Q44		1/48	1/24		
			Q45		1/48			
	OUTREACH	ALUMNI	Q54		1/36	1/18	1/6	
			Q55		1/36			
		COMMUNITY ENGAGEMENT	Q57		1/72	1/18		
			Q58		1/72			
			Q59		1/72			
			Q60		1/72			
		LINK STAKE.	**Q56**		1/18	1/18		
	DEVELOPMENT	EVALUATION	**Q69**		1/18	1/18	1/6	
		H.R. DEVELOPMENT & MANAGEMENT	Q62		1/90	1/18		
			Q63		1/90			
			Q64		1/90			
			Q65		1/90			
			Q66		1/90			
		USER DRIVEN	Q67		1/36	1/18		
			Q68		1/36			
	RESOURCES	BUDGET ALLOCATION	**Q73**		1/36	1/18	1/6	
			Q75		1/36			
		INCOME GENE.	Q70		1/18	1/18		
		TYPE OF FUNDING	Q71		1/36	1/18		
			Q72		1/36			

Appendix H – Output level in the 3 case scenarios

OUTPUT	DIMENSIONS	CATEGORIES	QUESTIONS	BEST CASE	QUESTIONS	CATEGORIES	DIMENSIONS	OUTPUT
				Choice = 1				
ENTREPRENEURSHIP EDUCATION EFFORTS LEVEL	TEACHING and LEARNING	COURSE	Q11	1	1	1	1	0.82916667
			Q14		**1**			
			Q25		1			
			Q26		1			
		DEGREE	Q27		1	1		
			Q29		1			
			Q30		1			
		CURRICULUM	Q38		1	1		
			Q39		1			
		EXTRA. ACTIV.	Q41		1	1		
		TEACH. METH.	Q40		1	1		
	STRATEGY	ENT. GOALS	Q31		0	0.5	0.833333333	
			Q32		1			
		ENT. POLICIES	Q33		1	1		
			Q34		**1**			
		STRAT. EMB.	Q36		1	1		
			Q37		**1**			
	INSTITUTION INFRA - STRUCTURES	APPROACHES	Q50		1	0.5	0.875	
			Q51		1			
			Q52		0			
			Q53		0			
		CROSS-DISP.	Q47		1	1		
			Q48		1			
			Q49		1			
		ENT. APPOINT.	Q43		1	1		
		RESEARCH ENT.	Q44		1	1		
			Q45		1			
	OUTREACH	ALUMNI	Q54		1	1	1	
			Q55		1			
		COMMUNITY ENGAGEMENT	Q57		1	1		
			Q58		1			
			Q59		1			
			Q60		**1**			
		LINK STAKE.	**Q56**		**1**	1		
	DEVELOPMENT	EVALUATION	**Q69**		**1**	1	0.933333333	
		H.R. DEVELOPMENT & MANAGEMENT	Q62		1	0.8		
			Q63		1			
			Q64		**1**			
			Q65		1			
			Q66		0			
		USER DRIVEN	Q67		1	1		
			Q68		**1**			
	RESOURCES	BUDGET ALLOCATION	**Q73**		**1**	1	0.333333333	
			Q75		**1**			
		INCOME GENE.	Q70		0	0		
		TYPE OF FUNDING	Q71		0	0		
			Q72		0			

APPENDIX H

OUTPUT	DIMENSIONS	CATEGORIES	QUESTIONS	AVG. CASE	QUESTIONS	CATEGORIES	DIMENSIONS	OUTPUT
				Choice = 0.5				
ENTREPRENEURSHIP EDUCATION EFFORTS LEVEL	TEACHING and LEARNING	COURSE	Q11	0.5	1	0.875	0.975	0.6875
			Q14		**0.5**			
			Q25		1			
			Q26		1			
		DEGREE	Q27		1	1		
			Q29		1			
			Q30		1			
		CURRICULUM	Q38		1	1		
			Q39		1			
		EXTRA. ACTIV.	Q41		1	1		
		TEACH. METH.	Q40		1	1		
	STRATEGY	ENT. GOALS	Q31		0	0.5	0.666666667	
			Q32		1			
		ENT. POLICIES	Q33		1	0.75		
			Q34		**0.5**			
		STRAT. EMB.	Q36		1	0.75		
			Q37		**0.5**			
	INSTITUTION INFRA - STRUCTURES	APPROACHES	Q50		1	0.5	0.875	
			Q51		1			
			Q52		0			
			Q53		0			
		CROSS-DISP.	Q47		1	1		
			Q48		1			
			Q49		1			
		ENT. APPOINT.	Q43		1	1		
		RESEARCH ENT.	Q44		1	1		
			Q45		1			
	OUTREACH	ALUMNI	Q54		1	1	0.791666667	
			Q55		1			
		COMMUNITY ENGAGEMENT	Q57		1	0.875		
			Q58		1			
			Q59		1			
			Q60		**0.5**			
		LINK STAKE.	**Q56**		**0.5**	0.5		
	DEVELOPMENT	EVALUATION	**Q69**		**0.5**	0.5	0.65	
		H.R. DEVELOPMENT & MANAGEMENT	Q62		1	0.7		
			Q63		1			
			Q64		**0.5**			
			Q65		1			
			Q66		0			
		USER DRIVEN	Q67		1	0.75		
			Q68		**0.5**			
	RESOURCES	BUDGET ALLOCATION	**Q73**		**0.5**	0.5	0.166666667	
			Q75		**0.5**			
		INCOME GENE.	Q70		0	0		
		TYPE OF FUNDING	Q71		0	0		
			Q72		0			

APPENDIX H

OUTPUT	DIMENSIONS	CATEGORIES	QUESTIONS	WORST CASE	QUESTIONS	CATEGORIES	DIMENSIONS	OUTPUT
				Choice = 0				
ENTREPRENEURSHIP EDUCATION EFFORTS LEVEL	TEACHING and LEARNING	COURSE	Q11	0	1	0.75	0.95	0.54583333
			Q14		**0**			
			Q25		1			
			Q26		1			
		DEGREE	Q27		1	1		
			Q29		1			
			Q30		1			
		CURRICULUM	Q38		1	1		
			Q39		1			
		EXTRA. ACTIV.	Q41		1	1		
		TEACH. METH.	Q40		1	1		
	STRATEGY	ENT. GOALS	Q31		0	0.5	0.5	
			Q32		1			
		ENT. POLICIES	Q33		1	0.5		
			Q34		**0**			
		STRAT. EMB.	Q36		1	0.5		
			Q37		**0**			
	INSTITUTION INFRA - STRUCTURES	APPROACHES	Q50		1	0.5	0.875	
			Q51		1			
			Q52		0			
			Q53		0			
		CROSS-DISP.	Q47		1	1		
			Q48		1			
			Q49		1			
		ENT. APPOINT.	Q43		1	1		
		RESEARCH ENT.	Q44		1	1		
			Q45		1			
	OUTREACH	ALUMNI	Q54		1	1	0.583333333	
			Q55		1			
		COMMUNITY ENGAGEMENT	Q57		1	0.75		
			Q58		1			
			Q59		1			
			Q60		**0**			
		LINK STAKE.	**Q56**		**0**	0		
	DEVELOPMENT	EVALUATION	**Q69**		**0**	0	0.366666667	
		H.R. DEVELOPMENT & MANAGEMENT	Q62		1	0.6		
			Q63		1			
			Q64		**0**			
			Q65		1			
			Q66		0			
		USER DRIVEN	Q67		1	0.5		
			Q68		**0**			
	RESOURCES	BUDGET ALLOCATION	**Q73**		**0**	0	0	
			Q75		**0**			
		INCOME GENE.	Q70		0	0		
		TYPE OF FUNDING	Q71		0	0		
			Q72		0			