

The Attitude of the College Students to Entrepreneurial Skills Development in the Subject E-commerce

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Abstract. One of the main goals of many educational courses at various colleges, especially those which focus on applied economics and management, is the development of students' entrepreneurship skills. It is usually accomplished through various project-oriented tasks. The development of the students' entrepreneurship skills is also the primary objective of the E-commerce course offered by our Faculty of Economics. This course combines theoretical knowledge and practical skills. Students work on a number of practical exercises with the aim to create a functional e-shop. They have to look for business opportunities, understand economic processes, work within a team, and be able to promote their ideas, strategies, and procedures. Finally, yet most importantly, they must not be afraid to present and defend their solutions. This study examines whether and to what extent this approach contributes to the development of skills which are usually associated with entrepreneurship. The exploration was performed based on students' evaluation. Means-end chain model and hierarchical value map approach were chosen as a research method. The results of this research show that entrepreneurship skills are being developed except for a motivation of students to accept a risky business competitive environment. However, the propensity to take risk is one of the basic traits of successful entrepreneurs. Our future effort will aim therefore at modifying our educational content. Greater emphasis will be placed on how to teach students to accept competitive environment which is risky and mostly unpredictable.

Keywords: entrepreneurship, electronic commerce, education, active learning.

1. Introduction

Currently, entrepreneurship skills are one of key attributes for students if they want to successfully navigate the job market after graduation. Many employers prefer students with entrepreneurship experience when hiring for entry-level positions. They consider these students to be more accountable for their own actions, have teamwork skills and know how to execute. Students with entrepreneurship experience are also considered to

have better communication and sales skills that are necessary to be successful in business today.

It is also widely accepted that entrepreneurship can be learnt and a positive relationship can be found between higher education levels and high levels of entrepreneurial activity (GEM, 2006). Many universities in the USA, Europe, East Asia and Latin America developed or expanded entrepreneurship programs and designed unique and challenging curricula for entrepreneurship education (Kuratko, 2005). The rapid development of IT technology also provides many opportunities for learning entrepreneurship skills (Zunfeng and Chunling, 2011), or for college students to start their own businesses (Chen *et al.*, 2012). E-commerce topics used in entrepreneurship education can create a new learning culture that corresponds better with students' habits and interest and can provide the necessary support for effective teaching and learning to take place. Creating real-life opportunities for students to practice these skills, such as starting and operating an e-shop or other online activity can bridge the distance between learning concepts presented in the classroom and skills needed to solve practical problems connected with e-business activities.

A substantial body of literature deals with some aspects of entrepreneurship education, such as educational process and structure, preparatory role of entrepreneurship education, entrepreneurial learning, and other. However, some researchers argue that graduates' needs for entrepreneurship education do not match actual outcomes in terms of entrepreneurial skills, knowledge and attitudes (Matlay, 2008). On the other side, this author states based on his research, that most graduate entrepreneurs seemed to be satisfied with the outcomes of their entrepreneurship education, both in relative and in absolute terms.

We are aware that the disparity between entrepreneurial skills education and the real practice exists. In this paper, we concentrate on how and to what extent our teaching approach helps to develop and support the students' entrepreneurship skills. For example, does the approach used in the E-commerce course improve the students' motivation to set up their own online businesses? Hence, the purpose of this study is to understand the students' experiences and their value perspectives with regard to the teaching approach that we use to promote students' entrepreneurship skills.

The means-end chain model was used for this evaluation (Gutman, 1982). This method, which emphasizes individual experience, allows to explore the students' opinions and to understand the students' value cognition concerning respective learning methods. We employ the means-end chain model to explore and link respective elements as they are perceived by students. These elements are: attributes that characterize our teaching approach, consequences, and personal values (Gutman, 1982). They were obtained from interviews conducted with the students. They form a logical framework which makes an evaluation of the linking of the found attributes, benefits, and personal values possible. This way, it is possible to explain whether learning methods used in the course have reached their targets based on students' value cognition.

The results of this research can serve to improve programs aimed at developing entrepreneurship skill of students and can also be used as a reference for teachers when tasking students with establishing their own e-commerce businesses.

2. Research Background

2.1. Teaching the Subject E-commerce

E-commerce is now commonly used form of business. Almost every business organization takes advantage of the Internet for some business activity. It is therefore essential that students in business-related fields have good knowledge of e-commerce, its implementation and its functioning, as well as its advantages and disadvantages.

The E-commerce course is one of several courses we offer whose aim is to develop the student's entrepreneurship skills. In this course, we use the active learning approach that focuses less on the transmission of information by means of lectures. Instead we emphasize the developing entrepreneurship skills and critical thinking of students. The use of components of active learning makes this course efficient, see for example (Beranek and Remes, 2012; McKeachie and Svinicki, 2006; Ngai, 2007; Nerguizian *et al.*, 2011; Renkl *et al.*, 2002; Rezaee *et al.*, 2006 and Williams *et al.*, 2006) and attractive for students. During the course, students are divided into small teams in which they solve a series of tasks. All the tasks are tied to the core project that the course focuses on – the establishing and operating of an experimental e-shop (or other business activity online). The tasks are assigned with the goal to establish a functioning, real-life Internet e-shop. It should also attract customers. Students are also encouraged to have fun when performing all these activities. The e-shop should also have some potential for real profit. Simultaneously, students are invited to start this project as their own small business. We tell them it can be the selling clothes on eBay, selling products or services to fellow students or creating the next Facebook or Google. The students are encouraged not much to care if it succeeds or fails, just to try it and learned something from it. Every year, at least some individuals really try to establish their own business on the base of the course project. We have been teaching this subject for several years. During that time, three Internet start-up companies evolved from these students' projects. One of them, for example, was student's online game server.

2.2. Entrepreneurship Skills

Entrepreneurship is considered one of the most important instruments that drive economic growth and innovation, a notion supported by empirical research (Van Praag and Versloot, 2007). For this reason, many European countries (European Commission, 2006) and the United States (Kuratko, 2005) have been promoting and including entrepreneurship education in school curricula. A key assumption underlying these programs is that entrepreneurship skills can be taught and are not too determined by personal characteristics. This fact is supported by many studies. For example Van der Sluis *et al.* (2006), Van der Sluis and Van Praag (2007), Jones and English (2004) and Galloway *et al.* (2005) show that the effectiveness of general educations of entrepreneurship to enhance entrepreneurship skills is positive. In addition, Karlan and Valdivia (2006) states,

for example, that business training is especially effective for motivated people who applied for a microfinance loan to start their own business.

This area has also been studied by other authors who use various qualitative or quantitative methods and questionnaires to obtain data. The authors deal with various aspects of entrepreneurship skills. The main themes are entrepreneurial propensity (Radosevic and Yoruk, 2013), educational process and structure (Kun-yi *et al.*, 2013; Fayolle and Omrane, 2011), entrepreneurship education preparatory role in relation to existing and nascent entrepreneurs (Norton and Moore, 2006), entrepreneurship education research state of art (Fayolle, 2010, 2011), entrepreneurial learning (Fayolle, 2008, 2012) and other.

These authors predominantly point to the positive influence of entrepreneurship education on effective innovation and economic prosperity. They analyze and present various education programs and their mainly positive results. On the other side, some authors evaluate some education programs more sceptically. For example Oosterbeek *et al.* (2010) analyses the Junior Achievement Young Enterprise program (Junior Achievement Young Enterprise Europe annual report, 2006) at several schools in the Netherlands. He states that this program did not have the intended effect and that result of his research stands in sharp contrast to earlier positive outcomes of assessments based on the assessment of the involved parties.

Hence, it is desirable to carefully examine the effectiveness of different programs and courses and adapt their content according to the student's abilities and changes in business environment. However, the present development of IT technology, as we already mentioned, and its inclusion into the education process provide opportunities to make learning more entertaining and interactive. It also enables us to enhance practical experience and autonomous learning. Perceived fun, the use of technologies and the possibility of further development positively influence the students' satisfaction level. The students' perspective provides a strong feedback for the teachers to adopt the curriculum and devise tasks and assignments concerning entrepreneurship education in classrooms.

3. Material and Methods

In our research, we focused on whether our teaching approach helps, according to students' perception, to develop skills which are usually associated with entrepreneurship. We explored how they perceive basic characteristics of this approach, what it brings to them. What, for example, teamwork means to them, whether they like activities such as working with technologies or performing certain business operations, whether they have any concerns and other. The evaluation is performed using the means-end chain methodology described by Gutman (1982). The means-end chain model is used widely in marketing. Qualitative research with an emphasis on individual experience helps understand the relationship between the attributes of a product and the satisfaction of consumers with the same product (Turcinek *et al.*, 2012). The means-end chain model can explain the selection of services by consumers; whether the product meets the target values of consumers, customers' values from a rational point of view, and whether customers get benefits through product attributes (product properties).

This method was also used for evaluation of various students' learning activities, see for example Birknerova (2010), Gosen and Washbush (2004), Mawdesley *et al.* (2011), or Lin and Tu (2012). The essence of the means-end chain methodology is the cognitive representation of concatenation of product attributes, consumers' perceived positive consequences, and consumers' personal values (Gutman, 1982; Gutman, 1997). Means-end analysis considers the attributes of the product, and the corresponding outputs integrate into a single framework (Reynolds and Gutman, 1988) (Frauman *et al.*, 1998). Three important concepts of this method are the attributes (A), consequences (C) and values (V). Lower levels in the means-end chain (attributes which can be further divided to concrete attributes, abstract attributes and functional consequences) indicate how the products are perceived by consumers, while higher-level (psycho-social consequence, instrumental value, final value) represent a cognitive process of consumers connected with certain product (Walker and Olson, 1991; Mulvey *et al.*, 1994; Walker and Olson, 1991). Joubert and Mabunda (2007) formulated a list of values for the purpose of market research. This list contains nine core values. It includes values such as a sense of belonging, excitement, warm relationships with others, self-realization, being well respected, fun, and enjoyment of life, security, self-respect, and a sense of accomplishment. Means-end chain methodology describes a motivation by which consumers reach their final values. It also evaluates the link that connects together the attributes, consequences and values. It gradually creates a personal hierarchy of values. The technique used to identify these value components is called laddering. It is based on qualitative interviews that allow the finding of the connection between attributes, consequences and objectives and, ultimately, the entire value system of individuals (Gengler *et al.*, 1999).

The laddering interviews with students were conducted during the winter semester 2013. At first, demographic data were collected. Subsequently, the students were asked to talk about their experiences, feelings and motives. The students were also told that there were no wrong or right answers. Here is an excerpt from one laddering dialogue:

Researcher: Looking at the different types of activities within the scope of business and commerce on the Internet, could you describe the attributes that you find as the most important?

Respondent: Implementation of e-commerce transactions.

Researcher: Can you express it more specifically?

Respondent: For example, it was possible to try different strategies and techniques that are used in the real business of e-commerce.

Researcher: Why was it important to you?

Respondent: We had the opportunity to design an e-shop, to think about its contents, about what to offer customers, and about what the downstream processes are. Just trying this out was important in understanding how such a business works.

Researcher: Can we express this briefly? Was it – the understanding of business concepts in the field of e-commerce?

Respondent: Exactly.

Researcher: How was it beneficial to you?

Respondent: In many subjects, we discussed various aspects of business and management. We dealt with various tasks, but here in this subject we were asked to execute our project on the Internet. We had to solve the task in order to attract as many potential customers as possible. These activities made me feel good; I felt myself very good with what I was doing.

Researcher: Can we express this feeling as a feeling of self-fulfilment?

Respondent: Exactly.

In this interview the respondent expressed attribute, consequence, and value for the active learning approach used in the subject E-commerce:

- **Attribute:** E-shop establishing and operation.
- **Consequence:** Understanding of business concepts in the field of e-commerce.
- **Value:** Self-fulfilment.

The data collection consisted of structured interviews with students who passed the E-commerce course. Altogether, 58 students were interviewed. These were undergraduate students, of which 44 were women and 14 were men. All respondents were aged between 20 and 25 years. The interviews were recorded.

Content analysis and coding of the data was performed according to relevant literature (Reynolds and Gutman, 1988). Two separate judges coded the data. This was due to a reduction of the problem of subjective evaluations. The index of reliability (Perrault and Leigh, 1989) was 0.84, exceeding the recommended guideline (inter-rate reliability = 0.70). All disagreements were resolved by discussion. From 56 out of the 58 interviews, it was possible to extract meaningful ladders and categories of meaning. The coding process resulted in a list of 20 categories (see the Table 1 below).

Table 1
Categories and frequencies (f)

Attributes	f	Consequences	f	Values	f
E-shop establishing and operation	38	Understanding of business concepts in e-commerce	52	Self-fulfilment	38
Teamwork	23	Emotional exchange	28	Relationships within the team	29
Various business processes	18	Enhancing of managerial skills	20	Being respected	10
Work with technologies	17	More detailed thoughts	17	Fun and enjoyment of life	10
Social network on Internet	7	Understanding of Internet technologies	10	Flexibility	10
Competition among solutions of various teams	3	Acquired experience	7	Creativity	8
		Use of knowledge from the finance area	5	Independence	1

4. Results

Relevant categories were analyzed after finishing the interviews with the students. Subsequently, possible links between categories – attributes, consequences and values – were examined using the method described, for example, by Gengler and Reynolds (1995), Veludo-de-Oliveira *et al.* (2006), and others. An example might be an attribute “E-shop establishing and operation”, which was defined as the ability to establish and to run an experimental e-shop, including relevant business operations. The value “Self-fulfilment” is defined as a feeling of satisfaction with certain activities. Each attribute, consequence, or value was defined in a similar way. These definitions were used to capture the common meaning across all interviews and to identify important links. The work (Joubert and Mabunda 2007) was helpful when identifying relevant values. Overall, six attributes, seven consequences and seven values were determined. They are listed in Table 1 according to their frequency of occurrence.

One hundred and six ladders were constructed based on all interviews. The average number of times the ladder was mentioned was 1.89 (as it was mentioned above, 56 from 58 results of interviews were applicable). The longest ladder consisted of five categories (attributes, consequences, and values) and the shortest of three ones. An implication matrix was created (Reynolds and Gutman, 1988). It has overall 351 links; the average number of links per node is 17.55. The rows and columns of this matrix represent the links between the attributes, consequences and values, and the data in the cells show the relationships between these variables.

The hierarchical value map was created based on analyzed relations of attributes, consequences, and values. It is shown in Fig. 1. The chain of relationships in this map

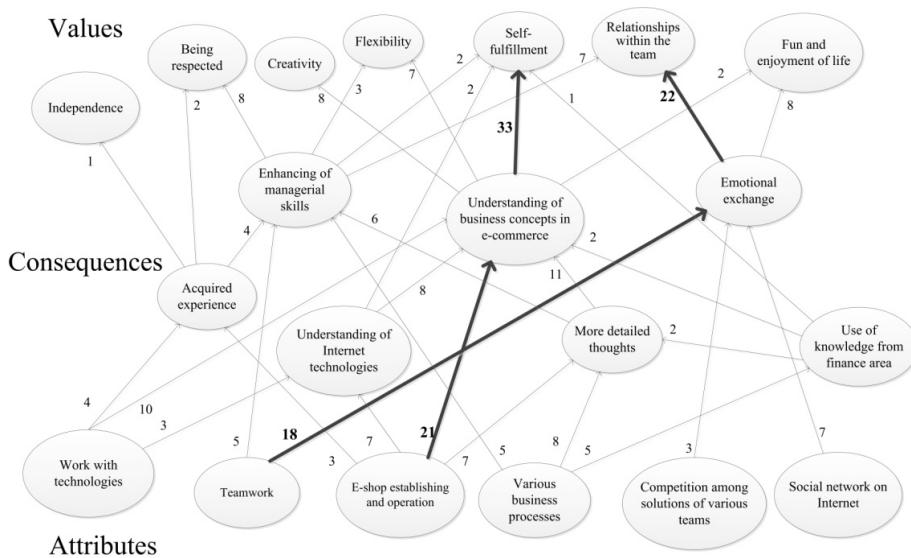


Fig. 1. Resulting hierarchical value map.

helps to understand the students' benefits and values connected with attributes of active learning approach used in the subject E-commerce.

Two dominant relations linkage pathways can be identified in the hierarchical values map presented on the Fig. 1:

A) E-shop establishing and operation – Understanding of business concepts in e-commerce – Self-fulfilment. In this linking path, the source attribute is “E-shop establishing and operation”. This attribute occurs most frequently in interviews. It related to the students' reflection of practices and strategies within e-shop implementation, including business operations and product or finance planning. Since the students dealt with real (even if experimental) e-shops or other business activity online, they had to carefully think about the establishing, implementation, operation, communication, and marketing practices. With these activities, the students learned to understand the business concepts in the field of e-commerce including how to implement an e-commerce business plan and others. They also had to consider where to locate their business and what marketing tools to use. Even if they operated an e-shop (or conducted other business activity online) for a short time, they learned some of the indicators used to measure the status of their business, customer satisfaction and financial performance, and others. Problem solving and implementation of e-commerce operations allowed students to develop analytical decision-making skills, including problem identification and solving or some technical skills. The students worked in teams and had to maintain relationships within a team to be able to promote their ideas and to defend their solutions. Moreover, implementing such independent work gave the students a sense of fulfilment. It was about their ideas, their solutions, and their results.

This linkage path also indicates that the content of the course is well prepared regarding technology aspects. On the other hand, this linkage path may indicate that it suits the students to deal with business activities online; however such activities are rather technical and operational. This fact also results from the strong preference for the attribute “work with technologies”. This result may indicate that students prefer a stable and predictable environment that differs from real business environment.

B) Teamwork – Emotional Exchange – Relationships within the team. In this second important linking path, the source attribute is “Teamwork”. Assignments were submitted by teams. Each team member was to play a role within the team like being in charge of technical aspects, implementation, marketing, strategy, computing financial ratios and others. When working together, students deepened their friendships and their emotional exchanges. The students also had to be able to promote their ideas and defend their solutions. They had to learn how to communicate and how to get along with other partners. The students working together provided an opportunity to get to know people with different kinds of thinking, share experiences, and thus contribute to good interpersonal relations.

5. Discussion and Conclusions

In this study, we presented the assessment of whether our learning approach used in the E-commerce course contributes to the development of students' entrepreneurship competencies. This evaluation was performed based on the students' opinions gained from in-depth interviews. Soft laddering technique was used. We wanted to understand the linking relationship between the three categories: attributes, consequences, and values as perceived by students. The results were represented in the form of the hierarchical value map that allows us to explain the students' behaviour when solving various tasks within the E-commerce course. The ultimate goal was to determine whether these perceived attributes, consequences and values corresponded to ones that are connected with entrepreneurial competences of students.

Students consider the "E-shop establishing and operation", "teamwork" and "work with technologies" the most important attributes. Consequences "Understanding of business concepts in e-commerce" and "emotional exchange" are the most frequently mentioned. The most important values are "self-fulfilment" and "relationships within the team". The results of the study (linking path A) also show that the students evaluated positively the fact that they could immediately apply the acquired knowledge. It gave them a sense of fulfilment.

On the other hand, the students also appreciated interpersonal relationships. The students had to work together as a team; they improved their communication skills and the ability to share information to exchange views and to come to consensus. It should be noted that this value was emphasized especially by female students.

From these results, it is also possible to gain a picture how the students evaluate the subject E-commerce in relation to the development of their own entrepreneurial competencies. Oosterbeek *et al.* (2010) describes ten most important determinants of successful entrepreneurship. They are: need for achievement, need for autonomy, need for power, social orientation, self-efficacy, endurance, risk-taking propensity, market awareness, creativity and flexibility. When we look at our categories, we can find some of these determinants among them. For example, the self-fulfilment category can correspond to a certain extent to the determinant need for achievement. Successful entrepreneurs build their company (e-shop) with their professional goals in mind. They set high target levels and put in much effort to reach them. Also, categories as autonomy, being respected, flexibility, and creativity can be found among Oosterbeek's determinants (Oosterbeek *et al.*, 2010). Relationships within the team correspond to the determinants social orientation which reflects the understanding (of successful entrepreneurs) that connections with others are required to realize their ideas.

It is possible to state that our teaching approach has had a positive impact on the development of entrepreneurial skills of students. Some determinants of successful entrepreneurship (Oosterbeek *et al.*, 2010) correspond to our categories and linkage paths. Nevertheless, the exception is the category concerning the risk-taking propensity. It did not appear in performed interviews. However, the relation to the risk arising from the implementation of real business activities is one of the crucial factors in entrepreneur-

ship. This result also ensues from the fact that the number of students who started their own business is very small. The reasons are two:

- Students are not willing to take risks and launch their own businesses. Generally, this is the attitude concerning the Czech students. Though they rate their professional skills high, they rely mostly on internships as the best opportunity to gain a good job in future (Deloitte, 2013). This factor, however, is difficult to model in the school environment. Nevertheless, we want to include elements of risk into the solving of practical problems within the assignments and tasks in the course E-commerce. We want to encourage students to launch their own businesses even for a short period of time in order to help students learn various business operation procedures in a competitive environment. The teaching guidelines for teachers could also be focused on helping students learn to handle crises, work in teams, effectively communicate and increase their capacity to handle stress.
- It also emerged from the interviews that most of the students were satisfied with the assignments and the active learning approach. They expect more when it comes to the timeliness of feedback and teaching support. The students felt that the teachers' guidance and feedback were still crucial to higher learning motivation and results, even when the course was to be in the format of team tasks and assignments. Teachers are expected to stimulate and motivate students to engage in discussions, debates and practical work while providing relevant support materials. In order to help the students benefit from the value of fun and enjoyment of life, teachers need to fine-tune the classroom atmosphere to make their lessons feel like competitions or games.

Our future research will explore entrepreneurial skills of the students after they entered the business practice. We want to explore whether or not their experience differs from what they went through at school. Results will be used to further improve the content of our courses.

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Kolegijos studentų nuostatos verslumo įgūdžių vystymo atžvilgiu el. komercijos dalyko kontekste

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Įvairiose kolegijose dėstomų edukologinių kursų, ypač susijusių su ekonomika ir valdymu, vienas pagrindinių tikslų yra verslumo ugdymas. Dažniausiai tai siekiama įgyvendinant įvairias projektines veiklas, pvz., sukurti veikiančią el. parduotuvę. Studentai turi išmanyti verslo plano galimybes, suprasti ekonomikos procesus, dirbti komandoje, reklamuoti idėjas, strategijas ir procedūras. Galiausiai, sukūrus produktą, dar svarbiau yra gebėti pristatyti ir apginti savo sprendimus. Tyrime nagrinėjama ar ir kiek pasirinkta mokymo strategija tobulina verslumo įgūdžius. Tyrimas buvo atliktas, pasitelkus studentų vertinimus. Buvo pasirinkti priemonių–tikslų grandinės modelio ir hierarchinės vertės žemėlapių metodai. Tyrimo rezultatai rodo, kad verslumo įgūdžiai tobulėjo, išskyrus studentų motyvaciją imtis verslo rizikingomis sąlygomis. Vis dėlto, polinkis prisiimti riziką yra viena iš pagrindinių sėkmingo verslininko bruožų. Todėl, remiantis šio tyrimo rezultatais, bus siekiama pakeisti mokymo turinį. Didžiausias dėmesys bus skiriamas studentų mokymui siekiant juos veikti konkurencijoje aplinkoje, kuri pasižymi rizika ir nenusipėjamumu.