

Methodological approach for questionnaires development in Bulgarian-Romanian scientific project

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Methodological approach *The logic of questionnaires used by a Bulgarian-Romanian scientific project: The year of 2010 has marked the beginning of a bilateral project between Ruse University "Angel Kunchev" (Bulgaria) and University "Politehnica" Timisoara (Romania). The goal of this bilateral project is to discover some knowledge gaps of the students/graduates from the technical and economical specialties at both universities in area of starting business activities. This report presents part of the progress of the multinational team and more precisely – it describes the logic of the questionnaires, which both teams have developed together.*

Key words: Ruse university, Politehnika Timisoara, Questionnaire, Students, Entrepreneurship.

1. INTRODUCTION

In 2010 the Ruse University "Angel Kunchev" and Timisoara Politehnica University has started a joint project, entitled COMPARATIVE STUDY REGARDING THE TRAINING NEEDS FOR DEVELOPMENT OF ENTREPRENEURIAL COMPETENCES IN THE CONTEXT OF E.U. POST-INTEGRATION. At the Romanian side the project has been signed between the National Authority for Scientific Research and University "Politehnica" Timisoara [1]; from Bulgarian side this project has been signed between National Science Fund of Bulgaria and Ruse University "Angel Kunchev" [3].

The project aim is to discover some knowledge gaps of the students/graduates from the technical and economical specialties in the area of new business creation, entrepreneurial culture development based on learning through university-long education. The work programme of the project requests 18 months of active work, including the surveys design and implementation for outlining of the training needs for entrepreneurs, and dissemination of the results. Besides the lucrative meeting of both teams, there are regular internet communications between the teams to synchronize the activities, related to the design of the questionnaires and thus to push the project forward. The methods of project research are analysis and investigation based on questionnaires. The target groups are undergraduate students and graduate students in master courses at the two universities (partners of this bilateral project). In addition, based on bilateral discussions, the two teams have agreed to design a questionnaire for some local entrepreneurs, because their opinions could have some catalyzing effects.

It is of great need and importance to design the questionnaires (both for students and entrepreneurs) in a way, which makes them suitable to have comparative analyses and to achieve the project aim. The here presented questionnaires have been developed in a few steps (phases), taking into consideration the scientific background, which has already been developed at both universities, but also the expertness, which has been developed thanks to previous international contacts with other institutional partners or researchers.

Aim of the report – to show how the designs of the questionnaires fit the aim of this bilateral project and thus they become the fundament for obtaining some reliable results.

Tasks of the report:

- to analyze the scientific expertness of the both teams, based on their publications and career development;
- to describe the structure both of the student and entrepreneur questionnaires by revealing the logic of their design;
- to give some conclusions, related both to the reliability of the two questionnaires and being good examples for development of similar bilateral projects.

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Based on the surveys there are reports with conclusions which have to be disseminated on the specific regional groups of interest. This report is part of the dissemination activities. The results with some statistical summaries of these two questionnaires are the matter of preparation of other reports, which to be presented at Ruse University scientific conference and published on its web-address, too.

2. PREVIOUS EXPERIENCE

2.1. Previous experience of the Bulgarian team

Ruse University team has been constructed by two academics with PhD degrees and three PhD candidates [3]. All of them are from the faculty of Business and Management, contributors to the Ruse University Entrepreneurship Center. Their scientific expertise, related to organization and implementation of scientific research, is in a few directions:

- participation in scientific projects, which aim is to study the innovations, as they are of key importance for starters to act as entrepreneurs. Some of these studies are related to: business models issues [12], [19]; others are focused on the relations among consumer behavior and the firm innovation activities [24]; barriers to the innovation activities of the companies [11]; the assessment of the innovation effectiveness [22], etc.;
- participation in educational projects, which foster the entrepreneurship education; the academic efforts are focused on [21]: the organization of the educational process in entrepreneurship at the universities; mentoring students to participate business plan competition; implementation of the Student company of the Junior Achievement Foundation in Bulgaria; etc.;
- consulting students who are willing to start some business activities and need help in developing their business model and to develop some variants, because of financial limits [18];
- study the career development of the graduates as a precondition for the universities to develop cluster of knowledge [15];
- have studied different sectors from the Bulgarian economy, such as wine production [23], automotive industry [8], energy efficiency [5], biomass for energy usage [17], cattle-breeding [20], etc.

An important constant advantage of the Bulgarian team is the opportunity to collaborate with the other academics from the Department of Management and Business Development [13], as this department has been the core of all here-mentioned projects and initiatives, related to foster the entrepreneurship at Ruse University.

Another advantage is the fact that most of the members from the Bulgarian team have short or long direct experience in family businesses, which means that they have already put themselves in the shoes of the entrepreneurs.

2.2. Previous experience of the Romanian team and other researchers

“Politehnica” University of Timisoara team has been constructed by four academics with PhD degrees (one associate professor and three lecturers) and one PhD candidate. All of them are from the Faculty of Management in Production and Transportation, members of the Management Department. Their scientific and practical experience and expertise, related to team work in international and national project, in order to organize and implement scientific research results, is in few directions:

- participation of scientific projects, which aim is to study the innovation level and in the same time the impact of the educational system over the entrepreneurial activity dynamic [25], or to study the level of innovation and entrepreneurship in Romanian small and medium size enterprises [26].
- evaluation of the entrepreneurial phenomenon in general and points out the importance of entrepreneurship among women [14], or to contributes to a better understanding of the entrepreneurial phenomenon and also, to a more correct

perception about differences between women and men entrepreneurial activity in Romania [9].

- have a different studies regarding the entrepreneur profile from 5 West Region in Romania or which is the entrepreneur role from countries which currently are in transition period to the market economy [10];
- have a different studies regarding: management for productivity in SMEs and entrepreneurship activity [29], models for the analysis of the innovation level for IT&C entrepreneurial activity in Romania [27], or strategy development model for innovation in entrepreneurship [28].

An important strength of the Romanian team is the opportunity to collaborate with the other academics from the Management Department of our faculty but in the same time the chance to work in research team with specialists from other universities, for example:

- as a part of larger research project about the entrepreneurial phenomenon - Excellence Research Partnership for Development of Entrepreneurial Aptitudes and of Competitive Human Capital inside the Economy and the Society Based on Knowledge and Innovation [4];
- as a coordinator of a national research project regarding the scenarios forecasting sectors and industries with innovative potential of the Romanian economy towards 2020 [2].

Another opportunity is that every year in order to fulfil the graduation project, all team members keeps a direct connection with the real business environment, working in mixed teams with students in order to solve specific business problems.

3. STRUCTURE OF THE STUDENT QUESTIONNAIRE

In the spring of 2011 the Bulgarian-Romanian team has discussed the design of the questionnaire, as the aim of the project is "to discover the knowledge gaps of the students/graduates from the technical and economical universities in area of new business creation, entrepreneurial culture development based on learning through university-long education" [1], [3]. To implement the project goal five modules with questions [16] have been designed. The preparation of these questions has been done by two brain storms – the first one has been done at each of the two universities, while the second one has been participated by both teams.

Module 1. Do I wish to become an entrepreneur?

The purpose of this group of questions is to identify the basic arrangement (willingness) of the students to start their own business. This module consists of two questions with close answers, because thus they are suitable for designing of graphics and get some better comparative analyses between the two universities. These questions are in fact a measure instrument, which indicates the general direction of the coming answers from the students – interested or not interested in entrepreneurship.

Module 2. Are you ready to become an entrepreneur?

The purpose of this group of questions is to identify if the students are aware of the career of the entrepreneur. Although most of the questions are closed, some of them allow the students to give some explanations. Two of the questions are with open answers and they can be grouped and thus to put the answers from these questions in some graphics, too.

Module 3. What personal qualities do you need for being an entrepreneur?

After the students (by module 1) have shown their willingness to chose among being employed and self-employed and (by module 2) have become aware about the daily-life of entrepreneurs, then comes the moment they to understand what personal features they need in order to become entrepreneurs. The purpose of module is to identify what is missing in the students in order they to become more self-related to start a career of entrepreneurs. Some of the questions study their skills to interact with the others (16 - 20), while another group of questions (21-24) is focused on their skills to develop order and

self-discipline. All questions expect close answers, which makes them easy for statistical analyses.

Module 4. What do I get from the education at my university?

The purpose of this group of questions is to identify the benefits of the educational system in support to the students' intentions to become starters. From one side, this module helps to identify the level of knowledge that the students have already received in variety of categories, such as: technology, management, marketing, finance and accounting, banking, legislation, communications, creativity and innovations, etc. From the other side the module helps to identify the usefulness of the academic curriculum to form skills for negotiation, self-control, sustained work, conflict mediation, interpersonal/group communication, etc.

Module 5. What are those issues, which I need, but the educational system at my university doesn't give to me?

The purpose of this group of questions is to identify those disciplines (or thematic modules from disciplines) which are important for the "would-be-entrepreneurs", and the students wish to get extra knowledge, experience, and self-confidence. The students need these issues when they start their business. In module for the students become aware about the gaps in their education. This awareness helps them to form suggestions in module 5, which suggestions to improve the educational system in a way to reduce the gaps of knowledge to start a career of entrepreneurs. All questions in module 5 are open, because it is important to catch as more ideas as possible.

4. STRUCTURE OF THE ENTREPRENEUR QUESTIONNAIRE

As we already said in the previous chapters the aim of the project is "to discover the knowledge gaps of the students/graduates from the technical and economical universities in area of new business creation, entrepreneurial culture development based on learning through university-long education" [1], [3]. Starting from these premises both work teams have agreed the idea that it is really necessary to extend our investigation group in order to find some new and original opinions, suggestions and solutions, not only from inside of the system, but also from the outside. Therefore, in addition, the project team has designed a questionnaire for entrepreneurs, because their opinions would have catalyzing effects for the research results. The procedure for questionnaire preparation has been similar as in the case of the students enquire, these questions has been done by two brain storms.

Module 1. Why have I chosen the career of an entrepreneur vs. employ career

The purpose of this group of questions is to identify those factors, which have been critical for the entrepreneurs to start their own businesses. This module includes, as otherwise entire questionnaire for entrepreneurs almost only open questions, even is more difficult to process the answers an to compare the results, but our declared intentions in this case has been to find out sincerely and original opinions. The module consists of ten questions. It starts with a semi open question which allow to identify the reasons why the entrepreneurs have been started their businesses. Then, the second question is dedicated to identify the start-up support and third if it has been followed by a previous model. The next seven open questions are focused on aspects as: necessary knowledge for starting a business; which are the personal features and if they can be developed by training, etc.

Module 2. What have I got from the educational system (secondary and university levels) in order to start my business?

The purpose of this group of questions is to identify the benefits from the educational system (both secondary and university levels) to the starters. The module starts with a five points Likert scale question followed by other two questions in order to identify the opinions of the entrepreneurs about the benefits of the educational system in support to them intentions to become starters. From one side, this module helps to identify the importance and level of knowledge that the entrepreneurs consider they have already

received in variety of categories, such as: technology, management, marketing, finance and accounting, banking, legislation, communications, creativity and innovations, etc. From the other side, the module helps to identify the usefulness of the academic curriculum to form skills for negotiation, self-control, sustained work, conflict mediation, interpersonal/group communication, etc.

Module 3. What is the knowledge, which I didn't get from the educational system and I has been supposed to learn it on my own?

The purpose of this group of questions is to identify the gaps in their education, which gaps have important influence in their career as entrepreneurs. The module includes two open questions regarding the necessary knowledge, which the entrepreneurs consider that they didn't get from the educational system, and then to describe the price they have paid to compensate supposed gaps.

Module 4. What should I recommend to the "would-be-entrepreneurs"

The purpose of this group of questions is to get some advices from the "lions" how a "rabbit" to become a "fox". This module consists of four open questions which allow identifying (based on entrepreneurs business experience) the main obstacles: connected to the competition; connected with the human resources; connected with finances; related to material resources; related to immaterial resources (information, intellectual property, etc.) legislation, etc., to start and develop a new business. In the same time the answers of the last two questions could be the best recommendations for new starters in order to avoid in the beginning some mistakes or to choose most appropriate business field.

Module 5. Recommendations from the entrepreneurs

The purpose of this group of questions is to identify those small and realistic steps, which Ruse University and University "Politehnica" have to do in training students and to increase the level of knowledge and skills among the "would-be-entrepreneurs" to start their business. In the same time the last question offers to the entrepreneurs the possibility to pointed out how they are willing to support the universities through: information that can be used for studying entrepreneurial cases, information about successful as well as unsuccessful entrepreneurship practices, sharing their own experience in starting and developing business, participation in simulations, games and other interactivities, etc.

CONCLUSION

This report presents part of the progress of the multinational team and more precisely – it describes the logic of the questionnaires, which both team have developed together. Summarizing the progress of the scientific work of the two teams it is possible to present some of the following conclusions:

- The project aim is to discover the knowledge gaps of the students/graduates from the technical and economical sciences in the area of new business creation, entrepreneurial culture development based on learning through university-long education.
- The methods of project research are analysis and investigation based on questionnaires. The target groups are undergraduate students and graduate students in master courses at the two universities (partners of this bilateral project) and in addition, based on bilateral discussions, the two teams have agreed to include as a sample local entrepreneurs from both countries.
- The questionnaires have been developed in a few steps (phases), taking into consideration the scientific background, which has already been developed at both universities, but also the expertness, which has been developed thanks to previous international contacts with other institutional partners or researchers.
- They have been designed in outstanding tolerance and creativity between all 10 scientists, who participate this project and besides the lucrative meeting of both teams, there were regular internet communications between the teams to

synchronize the activities, related to the design of the questionnaires and thus to push the project forward.

- The questionnaires (both for students and entrepreneurs) as a result of team work have been designed in a way, which makes them suitable to have comparative analyses and to achieve the project aim.

Therefore it is expected thanks to the questionnaires this bilateral project to achieve an improvement of existing academic structures and educational offer at both universities and thus there to be a better start for the students as entrepreneurs, and from the other hand – to make stronger the collaboration among the scientists from the two universities, which is a fundament for initiation of other international projects and some bilateral activities.

We would like to give our thanks to the national authorities of the two countries, because this bilateral project could happen thanks to the financial support of the Romanian National Authority for Scientific Research and the National Science Fund at the Bulgarian Ministry of Education Youth and Science. We hope the project achievements to be useful to scientists, who search for opportunities to develop bilateral projects involving our two countries.

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