INTE 2014

Innovation approaches for better self–assertion of the University of Zilina, Faculty of Special Engineering graduates in accordance with actual labour market needs

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Abstract

One of the basic criterions of the university education quality evaluation is also successful self–assertion of its graduates in specific field at the labour market. This positive information is important also for students of secondary schools who decide where to continue in their study. Neither the Faculty of Special Engineering (FSE) of the University of Zilina disposes with good evaluation. But the Faculty continually tries to improve the results of this criterion. The Faculty participates in many projects that help to improve this evaluation, e.g. it participates in the project Innovation and internationalization of education – tools of quality enhancement of the Zilina University in the European Education Area. The aim of this paper is point out – propose how to increase self–assertion of the graduates in specific field at the labour market through innovation of study programme and changes in approaches of university teachers to actual trends in economic environment.

Keywords: innovation; study programme; graduates; self-assertion; labour market.
1. Introduction

Prosperity of the university can be evaluated not only from the view of applicants’ number but also from the view of graduates’ assertion at the labour market. It is expected that information concerning the graduates’ assertion at the labour market will play more and more important role in selection of the university by the secondary school graduates. Greater interest in university brings more students and more money. For the actual and also future university prosperity is very important to know assertion of the students at the practice and adapt the study programmes to the labour market needs.

The Faculty of Special Engineering of the University of Zilina in Slovakia (FSE) educates learned specialists in study programme Crisis Management that is oriented especially on public administration and self-administration. The basis of our paper is to point out that if the FSE wants to obtain better evaluation in the graduates’ assertion in specific field it is needed to develop another new study programme Risk management oriented on business sphere.

The reason of this new study programme creation is also increasing perception of the need to manage risks in the world also from the side of non-financial organizations representatives that is not limited only on the insurance of supposed risk sources. Managers have to be prepared for important decision makings to ensure prosperity, financial stability and competitiveness in conditions of uncertainty and risk. The list of potential risk sources is continually extending and especially un-prepared organizations are in danger. To know the risks is the way how to avoid stress that comes with risk appearing just in the most inconvenient time.

The important world investors say that they do not have aversion towards risk but have aversion towards surprise and therefore they ask greater transparency of enterprises to risk management. They are convinced that reliable risks management ensures less negative surprises, greater financial stability and provides opportunity for profits.

2. Actual state of things

2.1. Unemployment of the university graduates in the Slovak Republic

Looking for self – assertion at the labour market is for many university graduates in Slovakia long-distance race. This fact confirm also data from the EU Statistical office (Eurostat) which say that one third of young university graduates, in age up to 25 years, in Slovakia has no work. [11]

Concerning the interest for study at a university in Slovakia, for the first time in year 2013 the number of applicants was lower than planned number of accepted university students for the study. As results from the Fig. 1 that compares number of applicants with number of people born in 1994 (primary age of the applicant) it is more than probable that this trend will not change in the next years and the drop of interest to study at the universities will continue and the supposed minimum will be achieved in years 2020 - 2022. Actual level could be approached around the year 2030. [2] This indicates that the universities will have to struggle for the student especially through proved quality what can be observed also at present.

The Slovak university students are aware that to find their first working position they need several months. E.g. Slovak graduates of economic fields reserved for finding their first job 4,6 months. Their European colleagues are greater pessimists and reckon with 5,5 months to find a work. This results from the survey Graduate Barometer 2013. [11]

In interest to improve their position at the labour market young people in Slovakia find their job already during their study. The diploma from the university is for them certain plus and competitive advantage. Achieving the maximum education and increasing educational level is not only the interest of individuals but also educational policies of all European economies.
2.2. Analysis of needs and requirements of the labour market in Slovakia

The actual situation in Slovakia is characterized by turbulent and dynamic environment of the society life. According to professional crisis managers’ this turbulency is caused by three forces – technologies, globalization and so called crisis syndrome of the 21st century. As a result of these motions the external business environment impacts have many times so unexpected occurrence and course that they cause critical or crisis consequences for the enterprises. [1]

Such situation influences management processes disturbed with traditional or new threats and various unexpected crises (e.g. financial, economic crisis). The managers are more and more forced to deal with risk management. We can say that also in Slovakia the risk management trend is increasing. The reason is recent financial crisis that taught the Slovak managers not to underestimate the importance of external risk factors and their effect on enterprise, to assess the risk and response adequately. Based on the more studies, incorrect management of cash flow and insufficient financial risks management, i.e. missing early warning from the financial manager are the main reasons of enterprise failure during crisis in Slovakia [6]. We can say that the human factor is often the cause of serious problems, not only the workers but also especially managers. This fact confirms also research of the Institute for Crisis Management that says that incorrect management results in more than half enterprise crises, about 29% are caused by workers and only 19% are caused by external forces.

Based on these trends it is needed to enforce the change in management. New conditions require new approaches. The basis is to accept legitimate requirements for changing managers competences. According to Antušák (2009) it is needed to complete general literacy of managers with crisis literacy element, Fig.2. The universal advice how to avoid the crises does not exist. There are several methods, tools and recommendations for elimination of impacts of actual structural changes and overcoming the crises. Their acceptation depends on each country, each organization. [5]
3. Actual situation in assertion of the FSE graduates at labour market

3.1. Evaluation of the FSE in Slovakia

FSE is the faculty of technological and managerial orientation. The basic task of the FSE is to provide university education and carry out research activities within accredited study programmes Security Management, Crisis Management, Rescue Services, Security and Critical Infrastructure Protection in bachelor, engineering and doctorate study. Faculty provides also continuing education in above mentioned accredited study programmes. Bachelor, engineering and doctorate study programmes are realized in full-time and external forms of study [12].

Graduates of the FSE study programme Crisis Management are theoretically prepared for the professional life in the governmental sphere as well as in the private sector. The main sphere of the competence within the public sector is connected to the roles and tasks of risk and emergency management in governmental institutions, municipalities, and in the environmental institutions. Graduates have accurate knowledge on risk solution methods; they can provide risk analysis in various environments. They can deal with risk assessment and crisis elimination on management positions in public sphere or in (non) - industrial sector.

Evaluation of the Slovak universities and faculties, based on publicly available and verifiable data about education and research, realizes academic rating and ranking agency (ARRA). FSE is included in the group – other social sciences that involves social sciences faculties focused on public administration, international relations, political - economic science, mass - media communication and other related fields. In year 2012 FSE rating (53%) within this group was 3nd position. The evaluation criteria were as follows [2]:

- Education 74%
- Study attractivity 54%
- Science and research publications 13%
- Doctorate study 52%
- Obtained grants 73%

In comparison with evaluation in 2011, FSE moved from 6th to 3rd position especially thanks to increasing obtained foreign research grants.
3.2. Actual situation in assertion of the FSE graduates

According to the Academic ranking and rating agency [2] only 1.42% of the FSE graduates (calculated as share of unemployed graduates towards all graduates for years 2010-2012) are unemployed. According to official information of the Ministry of Education, Science, Research and Sport of the Slovak Republic the employment rate of the FSE graduates for years 2011 and 2012 are 96, 2%. The total number of graduates in these years was 502. [14]

In year 2013 FSE realized own survey to find out the graduates assertion. From this survey results that 57% of graduates found their first work within 3 months, 23% within 6 months, 12% within 12 months, 6% found their first work during study. The greatest deal of the FSE graduates assertion is in the field of security and protection 36%. In public administration, self-administration is working 13%, in education 6% and 81% found their work in business (Fig.3).

![Graph showing various fields of graduates assertion](image)

Fig. 3. FSE graduates assertion in specific fields [14]

In year 2011 Department of Crisis Management realized own survey. One of the aims was to find out the assertion of the graduates of study programme Crisis Management. From the total numer of respondents 62% indicated that they are working in the field differing from their study (Fig.4). [10]

![Graph showing various responses of graduates assertion](image)

Fig. 4. Crisis Management department graduates assertion
From the survey results that only small number of graduates is employed in crisis management and it is evident that they do not use knowledge specifically oriented on crisis management but rather knowledge from general subjects. Majority of them (79%) thinks that education should be more oriented on practice.

4. Approaches to better assertion of the FSE graduates at the labour market

The actual situation at the labour market in Slovakia should reflect in education or creation of new study programmes. For the FSE is necessary to prepare such study programme that would attract the students and allowed them to find better assertion in practice. Very important role should play internal factors of educational system, i.e. real quality of education, development of scientific - research activity, pedagogical abilities of teachers, their ability to gain the students and develop their creativity and self-activity, development of contacts with foreign schools, companies and other institutions, etc. Also the considerations about the content of the subjects, methods and tools of education are very important. This is connected with increasing demands for teachers, their ability to absorb latest knowledge as well as practical experience and effectively use them in educational process. [9]

4.1. FSE approach to creation of new study programme

The basic condition for further FSE development is creating new study programme and improve the system of crisis management especially in private sector. FSE has started a lot of activities; it participates in various projects, e.g. Flexible and attractive study at the University of Zilina for the needs of labour market and knowledge society. The aim of this project was preparation of new bachelor study programme Risk Management and preparation of accreditation documents of study programme Civil Protection in English language.

The another project the FSE participates in is the project Innovation and Internalization of Higher Education – Tools of Quality Improvement at the University of Zilina in the European Higher Education. The aim of the activity 1.3 Creation and innovation of study programmes with emphasis on the needs of labour market and knowledge society (02/2013 – 06/2015) is to support the quality of education at the University of Zilina through innovative forms, attractive study materials and rationalization of study programmes.

The partial aims include:

- Design of new study programmes and accreditation documents of study programmes of the 1st, 2nd and 3rd degree of higher education at the selected faculties of the University of Zilina.
- Analysis and comparison of existing study programmes with offer of the European universities.
- Creation of modern content of study programmes in accordance with the labour market needs and knowledge society.
- Improving graduates assertion at the labour market in accordance with their qualification.

Within the activities of this project the Crisis management department is working also on elaboration of accreditation documents for new study programme Risk Management

Within preparation of new study programme Risk Management the FSE management should:
- Support scientific-research activities in the field of risk management.
- Contact and cooperate with other EU universities of similar orientation in research and education.
- Develop cooperation with institutions and enterprises dealing with risk and crisis management in business environment.
- Ensure methodical and content preparation of new subjects.
- Support qualification growth of own teachers in risk management.
- Ensure publishing of literature in the field of risk and crisis management.
- Support courses, trainings and other forms of continuing education in the field of enterprise risk and crisis management.
The basis of new study programme Risk Management is to teach the students that risk management is rational systematic approach to work with risk and uncertainty (risk integration into key managerial decisions) with use of tools and methods of risk management. It is a part of management of the subject and is oriented on ensuring security or stability of managed system, analysis of risks and possible threats and looking for possible corrective measures to minimize negative effects and their growth to crisis. The aim of the effective risk management is not only to prevent business failures but to ensure proper management connected with measure of risk acceptability.

4.2. Approach of university teachers to own potential development

The most valuable assets of organizations of this century are employees disposing of needed knowledge. The main competitive advantages are innovations, learning and ability of continual change. Just this competitive advantages comes from human potential not only of the FSE but from the whole University of Zilina. The teacher is essential element having impact on the quality of education. Practical encompassment of effective education is basic condition to ensure that the precisely selected content of the subjects is transformed to the system of graduates knowledge, abilities, capabilities and attitudes through effective forms and methods [9]. High teachers’ professionalism, responsibility, credibility and team approach belong to the most important attributes.

Each teacher should have own self-development [7]:

- to have ability of career growth and self-development – reflect, diagnose, evaluate own pedagogical activity, to plan own growth and education, to have general cultural and social view, to know trends of society development and education, to be methodologically equipped for teacher’s research,
- to identify with professional role and faculty/university – to identify with role of teacher, to know the aims of university development/FSE, to represent the profession, to communicate effectively with social partners.

For development of the university teachers’ potential the University of Zilina undertakes to form environment supporting creativity and knowledge development, i.e. enables the teachers to educate, supports their initiative to increase their qualification and develop their abilities. Development of teachers’ potential (capabilities, knowledge, skills, competences, etc.) contributes to building skillful and efficient human potential of the university. This systematic development permanently increases the value and prestige of the FSE and the whole University of Zilina [3].

Faculty and university have to provide various mechanisms that help teachers to increase their interest to develop their professional and personable potential. Within the university Blašková [4] recommends the approaches of teachers’ potential development as follows:

- Coaching and mentoring are very suitable methods of complex potential development. These methods should be realized by seniors and colleagues gradually higher from the same department or other departments of the same faculty.
- Purposeful support of stays at foreign universities that the University of Zilina has good working relations with. The content can be development not only scientific but also pedagogical cooperation with contributions for students and other colleagues. This form also helps to achieve the aims of departments, faculties and university.
- Selection and development of accurate people, their coordination to be able to cooperate and systematically develop their knowledge. One way of organizations development and obtaining competitive advantage at the market is to employ and support such people who are able to work, use and develop their knowledge potential [15].

5. Conclusion

The results of the FSE work related to creation and realization of new study programme that should help the graduates to find better assertion at the labour market will depend especially on the teachers. It depends on each
person if all his/her potential and knowledge wealth will develop, enhance and effective use for the benefit of students, colleagues, department, faculty and university. Educational and scientific - research activities together with moral profile of university teacher reflect in personality of university students. University teacher is main impulse of successful realization of educational process and starting up the progressive development of student personality. University teacher has to be carrier of properties and qualities that we want to develop in the university students.

Acknowledgements

Publication of this paper was supported by the European Union within the project No. 26110230079 Innovation and internationalization of education – tools of quality enhancement of the Zilina University in the European Education Area.

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