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STUDY PROGRAM ACCREDITATION ON TECHNICAL FACULTIES

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ABSTRACT
Study program accreditation is very important part of Quality Assurance process in High Education Institutions. Based on external assessment team members in accreditation process experiences will be presented in accreditation of study programs from filed of technical science. Process of accreditation was conducted within Tempus project ¨ESABIH¨ along with a accreditation of different 33 study programs on Public HEIs in Bosnia and Herzegovina. About 42% of these study programs where from the field of technical science. As a Conclusion external assessment team member's recommendation will be presented.
Keywords: accreditation, study program, technical faculties

1. INTRODUCTION

Accreditation process as a part of Quality Assurance process on every High Education Institution is very important in order to obtain best possible products in this meaning – best educated students.2003. Quality Assurance system was represented as the main priority for the High Education in European Union, since 2005 B&H Universities have put great effort to establish and developing QA system similar to the ones in EU. Process of accreditation in B&H is relatively new process and it's received its importance with the foundation of Agency for Development of Higher Education and Quality Assurance in 2007. Some Universities, Faculties and Study programs has done accreditation from the different expert groups like EUA, Slovenian National Accreditation Agency and etc.

As a part of Tempus Project: European Union standards for accreditation of study programs on BiH Universities 33 study programs were accredited. Study programs where from various fields of science but most of them was from the field of technical science. About 42% study programs was from the part of technical sciences.

Various fields of education and types of study programs where represented in this process as a part of this Tempus project. Authors of this paper where included in this process as a active participant like part of expert groups or accreditation commission secretaries. They will express their experience in this process and point of view for improvement.

2. ACCREDITATION PROCESS

Accreditation process has several steps which were developed by Project Consortium in order to help better preparation of Study programs in creation of self-assessment report and be prepared for External assessment.

2.1. First step

First step was that guidelines for accreditation and self – assessment report was created, training of experts from B&H and students representatives was conducted and teams on study programs level were appointed in order to create self –assessment report.

2.2. Second step

Second step was that each study program should develop a self-assessment report which was delivered to the external assessment team members. Self assessment report was consisting of description and analysis on 7 Criterion's. They were:

- *Educational objectives* – trough this chapter / criterion focus was on general and specific competences. Description of these competencies is the one's that students should gain during their education. Specific domain demands are described in the way how they are harmonized with the requirements of the labour market, economy, industry and society and are they in line with qualification network. This part of Self evaluation report is very important because it shows recognition of Study programs and its graduates in society, this chapter was created in critical and realistic order with SWOT analysis of this part and with created action plans for improvement.
- *Curriculum* – Content of this chapter / criterion was based on Curriculum description and it's correspondence between objectives and study program content, how the curriculum content helps and enable students to achieve the final qualifications. Important part was that description how are the some courses connected with relevant professions. The way of how is the curriculum connected to the demands of economy, society, international trends and labour market needs. Through this process important place is a work load, workload description is done trough the monitoring process.
- *Human resources* – This chapter / criterion described the staff qualification for the study program needs. Presentation of alignment of professional and academic demands is important and all the items can be used in creation of self evaluation report like research expertise, research activity, level of specialization etc. Staff / student's ratio was presented, along with size of workforce, ration between academic / non academic staff, gender distribution, age distribution, academic level distribution.
- *Students* - This chapter / criterion is dedicated to students matters. Examination and test organization is presented along with the enrollment procedure, complaint procedure etc. Important part is practical training which is crucial for technical science so practical training is described in details (how is conducted, where, who is responsible, guidance, assessment etc.). Students involvement in teaching process with student mobility and it's promotion is also presented. All this information about student matters are presented in various type of annex's with calculation of different ratio's like student passing rate, students mobility per year, alumni, employability, dropout rate etc.
- *Physical resources (facilities)* – This chapter / criterion described the facilities and material resources for adequate programme implementation. How is the finance allocated in order to obtain new teaching methodologies and innovations in teaching process are very important for proper functioning of study program . Equipment used in teaching process is presented but it's is also checked at the site visit by the External assessment team members. Annex of different calculation's like ratio space / student (in square meters), accessibility and others are presented.
- *Internal quality assurance* – This chapter / criterion described the Internal quality assurance process in the periodical assessment of study program. Different ways of quality assurance process are applicable in different Institutions but both Study programs described IQMS which is in accordance to the demands of ENQA and HEA. Different parameteres where followed and different key performance indicators where calculated and presented in this process.
- *Results achieved* – this Chapter / Criterion described the results achieved according to he planned goals.

Every self-assessment team has a period of time to collect data to process them and create SWOT analysis on every criterion. This process was very important because it gives real - time picture about the study program coherence with the same programs in EU and region.

2.3. Third Step

Third step in this process was external assessment team site visit what included: analysis of SER, discussions with team member's form appointed study programs, study of additional materials, facilities visit and creation of oral report.
All these steps are presented in Figure 1.

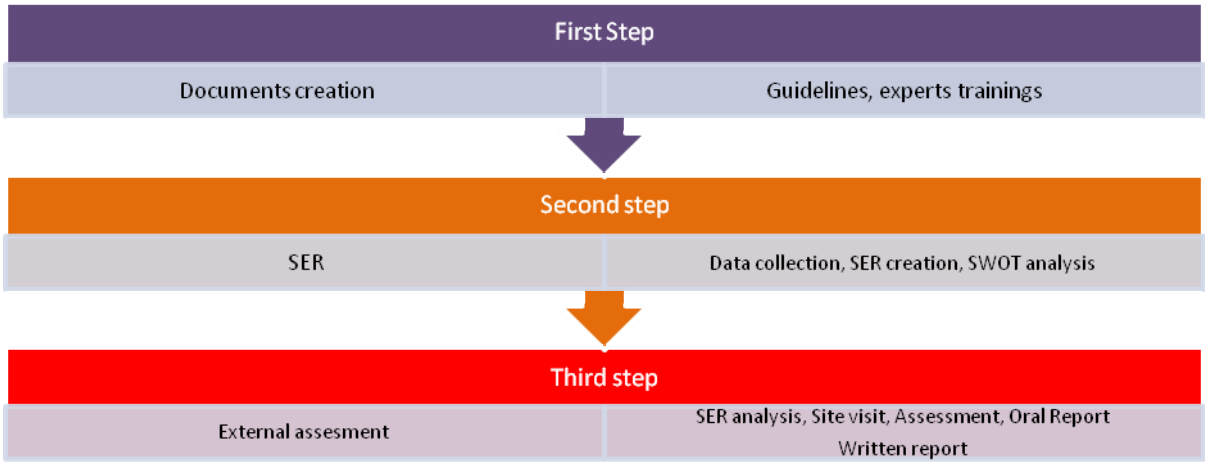

Figure 1. Schematic presentations of accreditation steps.

3. DIRECTIONS RATHER THAN A CONCLUSION

Based on external assessment team member experience in external assessment process in study programs at University of Zenica and University of East Sarajevo in study program Management of production technologies and Computers science and informatics common conclusion could me made:

3.1. Educational objectives

Educational objectives are very good and students gain general and specific competences within in study programs in given area. These objectives are in accordance with level and orientation in most study programs and they are harmonized with specific demands in the field and they full fill expectations of stakeholders, labour market etc.

3.2. Curriculum

Curriculum is designed in way to be coherent with similar study programs in region and EU, these curriculums are in accordance with educational objectives.

3.3. Human resources

Human resources are very good and they have alignment of professional and academic demands with sufficient number involved in teaching process. Most of staff comes with previous experience in work field what is essential for development of study programs like this.

3.4. Students

Students assessment and answers where common on the study programs where this experts have been as a part of external assessment team. Common problems that students encounter are not enough practical training. There is existence of practical training in various methods and modules but it is still inadequate for full recognition and preparation for work in industry. This should be note for consideration how to improve this process. Better connection with industry, society, stakeholders, employees trough the creation of certain programs for student praxis should improve this process. There is lack of mobility among students what can be referred to another social problems like lack of

special funds for mobility. There is individual mobility and mobility on Faculty level trough different competitions, but there is still very low percentage of student mobility.

3.5. Material aspects

This criterion was fairly for every study program. There is enough space in facilities for good study program needs.

3.6. Internal quality assurance

Process of Quality Assurance started in 2005 in B&H Universities and it is continually developing and improving. Study programs have good organizational structure in order to create QA environment.

3.7. Results achieved.

Educational output and accomplished level are very good and they are in accordance with the necessary qualification based on information's gained from ALUMNI and Stakeholders representatives. Important notice that there is no, still Qualification framework on National level in Bosnia and Herzegovina.

This process of accreditation of study programs is very important for every type of study program especially for Study programs in field of Technical science. ESABIH Tempus project and within conducted activities where first test for these study programs for future National process of accreditation. Creation of self – assessment report and data collection was the best training for self evaluation team members. Conclusion made by external assessment team should be used in order to improve their work, teaching process and Quality Assurance system.
Action undertaken after the oral report of external commission is already giving results. Study program at Mechanical engineering already have taken actions in curriculum innovation, creation of new syllabi. Actions that will be taken in Faculty of Electrical engineering will be changed. This is true result and objective of this project and this activity.

4. CONCLUSION

Upon the previous findings conclusions are:

- Key performance indicators (KPI) following at Faculty, Department, Study program and Chair's level is the best element for state detection and improvement activity conduction.
- Creation of SER with a following of all previous elements by this criterion and KPI's will allow bench marking of related Faculties and Study programs.
- Documents created during this process can be assessed and will be useful to the Faculties who will engage in the accreditation process.
- The experience of staff involved in this project will help in improvement of QA system in these Institutions.

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