Impact of University Networking on Students’ Mobility and Motivation

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1 Summary
The paper presents the observations and research on the students’ mobility and motivation in the region on Central and Eastern Europe based on the case study of a CEEPUS (Central European Exchange Program for University Studies) network. The network is in its third year and involves 32 academic institutions and 6 industrials from 15 countries from the region of Central and Eastern Europe, over the 16 eligible countries in CEEPUS program. The network is interdisciplinary and integrates academics in the area of electrical and mechanical engineering, architecture, information and communication technologies, mathematics and management. More information on the network and its activities can be found on the web site: ceepusmodcad.ubt-uni.net. Data are collected from the teachers in the network and Surveys on students’ interest and preferences are filled by the students in the network. A CEEPUS Leadership Academia for Students was realized in June 2018 in Maribor, Slovenia and the floor was given to students in the network. The quantitative data in the CEEPUS network and the students’ feedback from surveys, projects, presentations and discussions at the Academia are analyzed and some trends and good practices are given as confirmation of the strong impact that academic networking has on increasing students’ motivation and mobility.

2 Identification of students interests and requirements for increasing motivation

2.1 Evaluation of students’ motivation at the start of the new CEEPUS network
From the very beginning of this networking project, the focus was given to the students and their motivation to participate in network activities. At the Kick-off meeting, which took place in Technical University-Sofia, Bulgaria, in October 2016, all partner institutions sent representatives. There a study on students’ interests was launched. All teachers filled a form with courses, tools and tutorials that they offer, in 5 categories:
- Mathematical and/or theoretical method, he/she can teach
- Software Tools and/or Hardware equipment and/or Measurement instrumentation
- Vision on the future development in some scientific area
- Social, environmental and Ethical aspects of scientific research nowadays
- Other topics.
The network collected a knowledge base with 116 topics.
Then students from partner institutions were invited to select 10 topics each. Initially 21 students from 8 countries filled the Survey.

2.2 Results from the study on students’ motivation and continuation
Students in the network have shown interest to study the topics proposed. They have shown curiosity and interest to topics and tools proposed. Only one additional topic was added by a student.
The main deficit identified from the Survey was the small number of offers in the category “Social, environmental and Ethical aspects of scientific research nowadays”. A Round table on that topic was planned and a CEEPUS Leadership academia for students to focus further on students motivation.

The second and third year of the network, the Knowledge base with topics proposed by teachers has grown to 160 topics, the survey was extended to new partner institutions from new partner countries that joined the network and the number of students responders has doubled.

2.2 CEEPUS Leadership academia for students

Led by the results of the survey, the network organized CEEPUS Leadership academia for Students in University of Maribor, Slovenia, in June 2018. The main goal was to make students express themselves. They were grouped in teams by couples (one local Slovenian student and one foreign incoming student) and each team developed a project from the list:

- Web site development for the CEEPUS Leadership Academy in Free Web site developer (ex:Wix).
- What motivates/demotivates me to become engineer and/or manager?
- Impact of international exchange, programs like Erasmus and CEEPUS on students motivation to study engineering and management
- What I want to study in Engineering and/or Management?
- What are the expectations and the inspiration to study Engineering and Management? What’s the case for young women?
- How studying Engineering and/or Management will help me to influence social, ecological and political development?
- The importance for Engineering and Management Studies for my country and for Europe.

The teams worked a week on their projects and they had consultations with the lecturers in the Academia. Then they presented the projects to an audience of students and lecturers in the Academia. Each project was followed by a discussion.

2.3 Impact on students’ motivation

The results from CEEPUS Leadership Academia for Students show that students need and want to talk to their teachers and colleagues on academic topics. Students have motivation to study but they want to be an active agent in the academic process. They search inspiration in their teachers and they need the space to create. Students like both to cooperate and to compete.

A report from the Academia was elaborated together with the participating students, who also created a poster for the Academia, which was presented on the “25th Int. conference on systems, signals and image processing IWSSIP’2018” in Maribor. The report was sent to all teachers in the network and also to administrators in the partner institutions in the network. These results are used for better defining intensive study programs (Summer schools, Elective courses, International weeks, etc.) in the network. During the 3 years of the network the number of students taking part in the activities of the network doubled and the number of requests from students, on incoming events in the network, increased considerably.

3 AUTHORS’ BIOGRAPHIES

Galina Marinova is associate professor in the Faculty of Telecommunications in Technical University Sofia. She is teaching courses in Computer-aided design in electronics, communications and nanocommunications. She’s responsible for research and innovation activities in the department “Technology and management of communication systems”. G.Marinova did one year post-doctoral research in CNAM-Paris, France in 1999/2000. She’s coordinator of CEEPUS network project: CIII-BG-1103-03-1819. Modelling, Simulation and Computer-aided Design in Engineering and Management and she is contact person in Technical UNIVERSITY-Sofia of the CEEPUS network CIII-SI-1313-01-1819 Autonomous Vehicles Universities. She has experience as coordinator of several Erasmus+ projects with program and partner countries.