

Dear colleagues,

I am pleased to present the new issue of the GEOBIZ newsletter. This issue is dedicated to GEOBIZ approach to Business-Academy collaboration highlighting the significance and development of cooperation models between education and business sector, approach to curriculum modernization and relevance of Business-Academia collaboration within the GEOBIZ project.

Also, we bring the announcement of our first workshop "Challenges and innovative methods of cooperation in Academia-Business education for the needs of the labor market" which will be held in Pristina on March 18<sup>th</sup>, 2021.

Of course, this is also an invitation to join us. For all information and additional inquiries, feel free to contact us at [info@geobiz.eu](mailto:info@geobiz.eu).

Vesna Poslončec-Petrić

## SIGNIFICANCE AND DEVELOPMENT OF MODELS OF COOPERATION BETWEEN THE EDUCATION AND BUSINESS SECTORS



Branko Božić  
University of Beograd

The development of the economy of a society today cannot be imagined without adequate education and the use of modern technologies. In the field of GI, this is especially pronounced, since the already mentioned conditions impose the need to rationalize a huge amount of data and information that is collected by various sensors and depending on the needs, classified and filtered to the limits of their processing and analysis. There is an increasing need to collect and analyze spatial data in real time and monitor phenomena at the time of their occurrence.

All this requires a change in the model of education and increasing reliance on the needs of the market to create new values and provide the highest quality services. There is an increasing emphasis on the development of problem-solving skills, teamwork, lifelong education and digital skills. The ability to use

modern information technologies is sought. The classic form of teaching where the student has a passive role that listens to certain lessons and then tries to apply the acquired knowledge, is replaced by new forms of learning where students are far more active and where they face real problems at the very beginning of learning.

One such model is Problem Based Learning (PBL) where students solve an actual problem through teamwork, analyzing the extent to which they can use their prior knowledge and what else they need to learn to solve a given problem. In this way, students themselves define the content of learning, better understand the needs for learning and thus significantly strengthen the motivation to learn. Students solve the problem through individual learning by collecting available literature considering the context of the problem. The teacher is in the role of a guide, he must respect the process and organization of work and guide students towards the expected outcomes. Finally, students exchange knowledge and present a solution to the problem. Evaluation of learning outcomes in PBL is particularly specific. In addition to teachers

---

and students are involved in the process of evaluating their work, work results and the quality of the whole process. The learning process is iterative. The experiences of one cycle are used to improve the next. In the process, experts outside the school can play an important role. They can also be involved in the learning process and assessment of learning outcomes.

The problem is a significant component of communication between teachers and the business sector. The teacher must follow the needs of the market and the development of technology and be able to offer the labor market a skilled workforce capable of adapting to new requirements and solving current problems using all the advantages of new technologies increasing market competitiveness.

The need for cooperation between the university and the business sector is emphasized not only in the educational process but also in the research process, modern production and process management and valorisation of knowledge acquired through work. Altogether, it is a guarantee of raising the quality of services and achieving the desired model of lifelong learning.

Cooperation in the educational process should be sought through the engagement of prominent economy experts in teaching, through the engagement of business sector experts in curriculum development, through practical teaching of students, organization of training of existing staff through special courses,

lifelong learning cycle and use of existing resources, instruments and equipment.

When it comes to research, it is very important that prominent experts are engaged in developing new methods of work and increasing the quality of services as well as material support that the business sector can offer to colleges.

In the field of managing or managing processes for work or learning, it is important to exchange staff in the governing bodies of the faculty or the company where the exchange of information takes place and profiles the common environment.

Also, the certification of acquired knowledge and the recognition of acquired qualifications is of particular importance because it provides the possibility of greater labor mobility and increased competitiveness and thus increases the level of services.

All of the above is only part of the possibility of business cooperation between the education and business sectors. However, without the active role of individuals, managers in the educational and business environment, cooperation will be just an unfulfilled desire, and everyone will suffer damage. Meetings and talks between the two sides will surely lead to the desired results. It is the only way to gain mutual trust and to understand how important the symbiosis of education and industry is for the development of society's economy and the increase of living standards.

## APPROACH TO CURRICULUM MODERNIZATION WITHIN THE GEOBIZ PROJECT



*Almir Karabegović*  
*GAUSS Ltd., Tuzla*

Approach to curriculum modernization within the GEOBIZ project should result with outcome *D2.3 Designed geoinformatics (practical part) courses*. These courses include practical part (cases with full data set for exercising), lecturing

---

and teaching material which will be stored in project cases/courses repository.

Main inputs for this task are:

- 24 problem-based cases collected in T2.2 and
- Chosen courses for modernization by 9 Partner HEIs.

The task is to process these cases methodologically and described them as teaching and learning material (practical parts). Project plans to modernize 20 bachelor and master courses (practical parts) in nine HEI's, making an average of three ones per HEI.

Total duration of the project task is 14 weeks.

The task is divided into seven activities:

1. Evaluation of the cases stored in repository (from educational perspective) and structuring the practical part of courses
2. Identification of need for intervention in theoretical part of courses for achieving full compliance between theoretical and practical part of courses
3. Methodological and educational processing of the cases
4. Preparing teaching and learning material for practical part of courses
5. Preparing, where necessary, theoretical sections
6. Internal testing of developed practical part of courses and
7. Analyze of developed courses and describe results testing in a summary report.

The task group has decided to divide the task delivery in two phases:

- Task 2.3 first delivery: Project document describing each case in a form of a course practical part (three activities)

- Task 2.3 second delivery: Detailed description of each case ready for use (four activities)

The first phase is completed and it is delivered 24 case description with 87 lab exercises. In total, it is recommended 325 class hours.

Partner HEIs chose the courses for modernization and suggested which labs they would use. To facilitate that the task group prepared a questionnaire for them. It is suggested 25 courses with total of 355 class hours.

The second phase implies preparing detailed description for every case with respect to chosen courses, which should enable next tasks in the continuation of the work.

The final document should have the following sections:

1. Prerequisite (prerequisites for attending the practical part of the course dealing with the selected use case)
2. Exercises/Use Case Objective (the objective(s) of exercises with the case study selected)
3. Problem Formulation (formal description of the engineering problem in the use case selected)
4. Available Data Sets (data and metadata sets available for practice and problem solving from the use case including input data and resulting post-processing data)
5. Used Methods, Techniques, Tools and Operations (a brief description of the methods, techniques, tools, and SW/HW operations used to solve the problem from the use case)
6. Exercises/Use Case Content: List of Activities (brief description of exercises for the use case with conducted activities)

- 
7. Expected Outcomes (description of the expected results with its form and meaning related to the problem)
  8. Acquired Competences (competencies that the student acquires after successfully mastering the exercises for the use case)
  9. Lab Exercises by Tasks (list of exercises described by tasks)
  10. Discussion, Further Research, and Data Update (discussion of the results related to the use case solution)
  11. Do-It-Yourself (description of the method and examples of independent practice of students through homework or assignments in the classroom after mastering the exercise)
  12. Theoretical Material (listed, mapped and attached theoretical parts from lectures related to exercises)

All task documents are available on project working platform [GEOBIZ – Moodle T2.3](#) and [GEOBIZ Repository](#).

## GEOBIZ APPROACH BUSINESS-ACADEMY COLLABORATION



*Dušan Jovanović*  
*University of Novi Sad*

Special task in WP 5 is organization of national business-academia workshops (T5.5). Partner countries (UNBL, UNSA, UT and UPT, UCG, UPHP and UBT, and TUM and UST) are responsible for organization of business-academia cooperation workshops/conferences. Those one-day events will gather identified companies active in field of geoinformatics, interested faculties/universities and will be open for general professional audience. The aim of those national/regional events is to raise awareness among the audience, open discussion about the business-academia cooperation, hear out needs and ideas from business sector and pave the way for formalization of cooperation.

Business-academia workshops/conferences will be supported by expert's form program countries and partner companies which will present business-academia cooperation models

in their countries (universities) and practical examples of cooperation (companies).

As a leader of this task 5.5, according to the project plan, we have started with activities in July 2020. First activity for each partner country was to delegate a contact person who will be the representative and coordinator for this task at a partner university. After that, all partners identified potential participants in the business sector who would be invited to the workshops.

University of Banja Luka will call Governmental authorities (Ministry of Scientific and Technological development, Higher Education and Information Society, Ministry of Agriculture, Forestry and Water Management), Public administrations (Institute for Genetical Resources, Higher School of Agriculture, Center for development of the village), Companies (Geonova, SV Company, Geo-Centar).

University of Sarajevo propose List of more than 290 institutions and companies, from different B-A cooperation area (from education, research, valorisation and management area)

---

Technical University of Moldova, and Tiraspol State University, provide list of 38 institutions and companies: Academic/universities – 9, Public enterprises – 17 and 12 Private business companies – with total 41 contact email.

University of Pristina, and University for Business and Technology, propose list of 34 different institutions and companies.

University of Tirana, and Polytechnic University of Tirana together propose 60 different

institutions and companies and total 108 contact email.

Finally, University of Montenegro prepare a list of 86 different institutions and companies and contact email.

Now we are just one step to first business-academia workshops. UPHP and UBT will hold first B-A workshop in GEOBIZ project on 16<sup>th</sup> March in Priština, and TUM and UST will hold their joint business academia workshops on 22<sup>nd</sup> April in Chisinau.

## CHALLENGES AND INNOVATIVE METHODS OF COOPERATION IN ACADEMIA-BUSINESS EDUCATION FOR THE NEEDS OF THE LABOR MARKET



*Murat Meha*  
*University of Pristina*

### **GEOBIZ B-A workshop Pristina 18.03.2021**

Open perspectives are being developed within the GEOBIZ project, therefore UP "Hasan Prishtina" & UBT are partners in the process of development and implementation of this project in the Republic of Kosovo. On 18.03.2021, in Prishtina, the partners together, will organize a workshop of business-academy entitled "Challenges and innovative methods of cooperation in academia-business education for the needs of the labor market".

UP & UBT partners through the GEOBIZ project will start open communication and cooperation with internal state institutions as stakeholders in economic development. There are many

potential stakeholders in the business sector who will benefit from this project of Higher Education Institutions in improving skills and competences in geoinformatics and geoinformation. Regarding the participation in the B-A workshop, we have contacted more than 60 representatives of business, public, private and institutional sectors. This was done to inform them about new creative forms of academia-business to achieve good practical results. Meeting the demands of the labor market is directly related to the development of technology, education of young experts, gathering progressive experiences from EU countries through internship and joint education. We see that in our technologically advanced world that "location and space" are analyzed and managed through SDI. In the last decade this was successful in Kosovo, with a tendency to advance, therefore for this purpose HEI must provide experts with knowledge and skills that meet the specific requirements of the

---

labor market in the field of geoinformation. Knowledge and skills in this field can be best obtained through direct communication with stakeholders, such as workshops, symposiums, professional conferences, etc.

From the audience in this workshop, through digital or direct communication, such as Faculties, Universities, private and public business, we expect to gain information of particular interest for the future of experts in the field of geoinformatics and geoinformation.

---

### Impressum

*GEOBIZ news is an e-newsletter of "Business driven problem-based learning for academic excellence in geoinformatics" - GEOBIZ project. This newsletter is published by GEOBIZ Project office with the support of the Erasmus+ program: Higher Education – International Capacity Building (N° 610225-EPP-1-2019-1-HR-EPPKA2-CBHE-JP)<sup>1</sup>.*

*Editor in chief: Assist. Prof. Vesna Poslončec-Petrić, PhD.; Faculty of Geodesy, University of Zagreb. Your contributions please send to: [info@geobiz.eu](mailto:info@geobiz.eu) or [vesna.poslonceec@geof.hr](mailto:vesna.poslonceec@geof.hr).*

---

<sup>1</sup> *This project has been funded with support from the European Commission. This e-newsletter reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.*