

Challenges on setting-up the research and development tools and capacities in a transitional country (Kosovo)

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Summary

This paper presents progress and challenges made on setting-up the research and development (R&D) tools and capacities in a transitional country, Kosovo. Thus, the largest public higher education institution of Kosovo, the University of Prishtina (UP) is taken as a case study. It examines the establishment process of R&D structure at the UP from scratch; status quo analysis of R&D situation within the institution; setting up an R&D strategy, structures and procedures; as well as the development of R&D services and instruments for the UP.

The paper reflects the major problems that the UP encountered on establishment of research information technology (IT) - based information system, development of impact point system and implementation of an e-Science magazine.

Keywords: R&D unit; R&D strategy, structures and procedures; R&D services and instruments - research IT - based information system, development of impact point system and implementation of e-Science magazine.

1 Introduction

Kosovo as a youngest European country is characterized by a low level of economic development. Its GDP per capita is \$2,750 (IMF, 2010 estimation) and estimated unemployment rate around 45.3%. Population is around 1840000 and 70% of population is under 35 years old (CIA World Fact-book, 2011).

Research and development activities (R&D) have always been marginalized in Kosova. The Higher Education Strategy (2005-2015), is the first document that made a more systematic effort to address the issue of RD by including it among its strategic objectives and priorities (Ministry of Education, Science and Technology of Kosovo). However, the priority given in the strategic document was not followed with an adequate allocation of fund. Until recently, the general expenditure on R&D in Kosovo amounted to only approximately 0.1% of GDP, or even less, according to some estimates. This is a ratio significantly below the European average, and well below the average of the countries in the region and many developing countries (National Research Council, 2010).

The Higher Education System in Kosova is comprised of public and private institutions. There are 3 public universities (University of Prishtina, University of Mitrovica and University of Prizren),

and 17 other private higher education providers (colleges and professional higher education providers).

The University of Prishtina is the oldest and the biggest one. Since its establishment in 1970, and until recently, it served as a main driving force for advancement of knowledge, as well as the only address for providing higher education for the Kosova youth. Moreover, it served as a generator for all political movements leading toward the Independent Kosovo. Currently, it has around 55000 students and 2000 teaching staff. It is comprised of 17 faculties.

Research component has found its place in the Statute of the UP. Article 5, reflects this vision by stating that it aims to be a leading centre for the advancement of knowledge, ideas and science in higher the education system in Kosova (University of Prishtina, 2004); this is also confirmed by the UP Strategy 2009-2013 (ADA-UP, 2009). Furthermore, articles 171, 172, 173, 174 and 175, of the Statute of the UP, represent a sufficient legal base for promotion of R&D activities. Although the article 172 obliges the academic staff to engage in research work, this is not yet included even in the employment contract. In cases where the R&D activities are being conducted by the UP researchers, it takes place on an ad hoc basis rather than in an institutionalized way.

The paper examines introduction of the R&D structure, development of services and instruments, as well as problems encountered on introduction of the research IT tools especially on development of impact point system and implementation of e-Science magazine. The paper presents further the future perspectives of R&D activities at the UP.

2 Setting-up the research and development (R&D) tools and capacities at the University of Prishtina

The UP as the largest higher education institution in Kosovo is mainly teaching-oriented. There was no R&D system until 2008. The national and university leadership did not provide any budget allocation to support R&D activities and systems. On the other hand, there was a big pressure on the institution from the national levels and society as a whole that it starts moving its initiatives towards the recent developments.

As a result, a project proposal was developed aiming to apply for European Union (EU) funds for changing the existing situation. It was a regional project with Montenegro, Macedonia Bosnia & Herzegovina and Kosovo. The existing situation was translated into the specific objectives of the call for funding:

- To support partner country university (PCU) in the modernization and quality enhancement process of higher education by development of clear R&D strategies based on analytical assessment and benchmark analysis;
- To contribute to knowledge triangle of education, research and innovation at PCU by establishing R&D Service Centre
- To support PCU to approach European Higher Education Area (EHEA) and European Research Area (ERA) by implementation of models for strengthening international cooperation networks among partner countries higher education institutions, EU universities (EUU), industry and society until.

The installment of R&D system at the University of Prishtina comprised by a number of steps:

- Conduction of analytical assessment of the current R&D situation at the UP

- Establishment of a Research & Development Centre at the University of Prishtina
- Capacity building measures
- Development of R&D services and IT instruments for the UP
- Long-term perspectives of R&D at the UP.

2.1 Conduction of analytical assessment of the current R&D situation at the UP

In the University of Prishtina there were many individual research activities carried out by the teaching staff and young researchers on an ad hoc basis. However, these activities were not institutionally reported and registered neither at the Faculty nor at the University levels in a kind of database. Usually, the research activities were initiated and implemented on individual initiatives without any institutional support or approval. Thus, the research that took place were not necessarily in line with or contribute to the mission of the Faculty, respectively of the UP. Moreover, one could hardly get information on who is doing what in terms of the research and development activities.

As a result, in the first year of the project implementation, there was a questionnaire distributed among the University staff to get an overview on the R&D situation at the UP in relation to the respective trends in the EU member states. The questionnaires were developed in close cooperation with all project partners. The information gathered provided an important input and a strategic instrument that served as a solid base for a substantial strategy development. This was done in order to assess the status quo of research performance at the University of Prishtina. It is worthwhile mentioning that the assessment of this nature was conducted for the first time at the UP. The survey showed that there is not a focal point in charge of the evaluation process. Therefore, evaluations, if at all, are carried out sporadically and never systematically for the entire university, not to mention the whole country.

Sample selection was very important to reach a representative group of the populations being studied. Six faculties were selected to participate in the survey. The faculties were selected which were thought to be the driving force for the R&D at the UP. Additionally, the rector or a vice rector participated in answering questions. Five separate questionnaires were developed and distributed to be completed by either the rector or a vice-rector or at least six deans or vice deans of each partner country university with the following topics (Alkan et al. 2009/2011):

Questionnaires developed for central level (answered by Rector /Vice-Rector):

- General situation at university level
- Situation of research cooperation at university level
- External environment of university

Questionnaires developed for central level (Deans/Vice-Deans):

- Situation of research cooperation at faculty level

The survey showed that there is no institutional cooperation of the University of Prishtina with the industry and economy. As a result, direct support of the economy for performing R&D activities in the mutual interest of the stakeholders is lacking. There is no information about the R&D contribution in the growth of GDP of Kosova, if contributing at all. Due to budget constraints, support received from the government is also very low. One of the reasons for this insignificant

low performance of the UP in the field R&D rests in the lack of a focal point, which is a driving force in the form of an office for fast-tracking of the R&D activities.

2.2 Establishment of a Research & Development Centre at the University of Prishtina

The needs assessment results have shown that a focal point is missing which would collect information on staff carrying out research and development activities, forwards different calls to the interested researchers, disseminates information to the university staff, provides support for project development and tracks existing projects, calls for proposals and initiatives on R&D activities at the faculty and university level. The research showed that no office was in charge of the R&D function to promote, encourage, support and track R&D activities.

As a response to the existing situation, it was decided to establish the R&D Centre. The first step was to recruit a Manager and an Assistant through an open call. The main responsibilities of the staff comprised of an active participation in the project activities, capacity building in Kosovo and at the EU partner universities, as well as contributing to all project activities in order to ensure successful functioning of an R&D centre.

Activities of the R&D Centre were supervised and monitored by the project coordinator. The Centre as such has been placed within the Office for Academic Development (as one of the four components) and reports directly to the Vice-Rector for Teaching and Scientific Research, as presented below.

Main activities of the Centre consist of:

- Collect information on the running R&D projects at the UP and store them in the database;
- Regularly check different call for applications and distribute them to the staff of the UP (via email, distribution of the posters at the faculties etc) and store them in the database;
- Facilitate interested researchers to develop and submit applications;
- Provide trainings to the UP staff on project development and management;
- Serve as a hub of communication among UP and international partners;
- Bridge the gap of communication among of the faculties and university on one side and economy on the other;
- Provide all the needed support to the faculties and university on facilitating and raising the number of submitted proposals in different research fields.

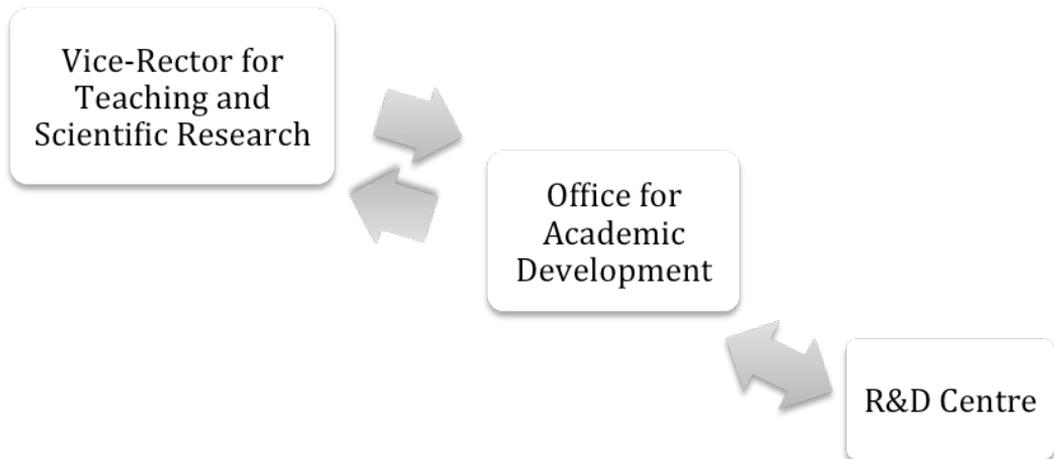


Figure 1: Structure of R&D Centre in the hierarchy of the UP

2.3 Capacity building measures

The EU project partners performed different trainings and provided consultancy to the recruited R&D centre staff. The capacity building measures focused on:

- Knowledge transfer & project management
- Research and development of know-how
- A workshop on international journal publishing

The trainings on knowledge transfer focused in conveying EU partners' experiences on ways to seek, organize, create, capture or distribute knowledge and ensure its availability for future users. On the other hand, the module of project management taught the staff of the Centre about planning, organizing, securing, and managing resources to achieve specific goals.

The aim of trainings on research and development of know-how focused on best practice in research and development; how to access EU R&D funded projects. In addition to this, trainers of the workshops provided participants with information necessary to understand the grants landscape, ways to implement joint partnership European projects, to identify relevant programs, to optimize the application and to promote the project proposal.

Furthermore, publication of research results in international journals is one of the weakest aspects of the UP teaching and research staff. In this regard, there were trainings performed by the EU partners on publishing in international journals. The staff of the Centre further disseminated the knowledge gained in the workshops. They distributed information to the interested researchers on: how to publish their research papers in widely read peer reviewed academic journals; understand the general editorial requirements of most scientific journals; how to structure papers and articles, and the benefits to be gained by publishing in internationally recognized peer-reviewed journals.

2.4 Development of R&D services and IT instruments for the UP

Based on the knowledge gained in the trainings, the Centre has developed tailor-made services for the UP based staff on their most pressing needs. The list of services offered has been built on the one presented above.

An important part of the project was also to develop IT instruments for the Centre, in order to support its every day work. The planned tools to be developed were:

- Database of researchers
- Database of existing R&D projects
- Database of open calls
- Database of agreements of the UP with the partners of the economy
- eScience Magazine
- Impact Point System

Since there was no data of the staff carrying out R&D activities and projects, the Manager and Assistant of the Centre, conducted face-to-face interviews with the Deans of all faculties. The aim of the interviews was to gather information on the current research activities at the faculty level. The data collected served as the ground for a database for researchers and existing R&D projects. In absence of a proper IT system and platform at the UP, the database was created by using Excel program. Additionally, a register of R&D open calls and agreements of the UP with the partners of the economy was also set up.

Creation of an eScience Magazine was planned to promote the UP as an institution which contributes to the creation of knowledge based society, whereas development of an Impact Point System aimed to support and facilitate the decision-making process of the UP's management while processing applications of the UP teaching staff for academic promotion.

Several meetings were organized to explore possible ways for development of an eScience Magazine and the Impact Point System. However, it resulted as an ambitious project activity since the R&D system was at its infant stage. The internal environment was and still is characterized by: low interest of the staff to engage in research activities, lack of motivation to publish research results in internationally recognized journals, lack of cooperation between the UP and industry and different EU research institutions, and lack of experience to access different R&D international calls. On the other side, the UP statutes do not make research activities a requirement for its teaching and research staff. This is due to the fact that even employment contracts of the teaching staff are based in teaching and do not include a research component as part of the job description. As a result, the current situation and conditions were not conducive for the implementation of the two initiatives: eScience Magazine and Impact Point System.

2.5 Long-term perspectives of R&D at the UP

One of the biggest outcomes of this process was development of "The Strategy on Scientific / Artistic Research and Development Activities 2011-2015" for the UP. This resulted from a process with broad participation of experts coming from various academic fields.

Priorities identified in the National Research Program 2010 – 2015 were taken as a starting point for drafting the Strategy. University of Prishtina decided to consider these priorities as its own

and is committed to offer special support to its academic units, research groups and individuals engaged in research and studies in the respective fields. The University is also aware of the pressing need to focus its scientific and artistic research efforts in areas that bear more significance and contribute directly to the social and economic development of the country (Alija et al. 2011).

The first step in the process of development of the strategic paper was the status quo analysis, which focused in four fields (Alija et al. 2011):

- Human resources
- Infrastructure
- International cooperation
- Links with economy and society

The analysis has been conducted for each of the abovementioned fields to identify strengths, weaknesses, opportunities and threats (SWOT), as well as a scanning of the external environment in order to identify possible factors which might influence the process. Based on the analysis carried out there are four objectives set to support the

Objective 1: Development of human capacity for scientific / artistic research activities in the University of Prishtina.

Objective 2: Improve and enhance infrastructure for scientific / artistic research work and for provision of services

Objective 3: Internationalization of scientific / artistic research activities by promoting excellence in research

Objective 4: Cooperation with the public and private sector for implementation of research projects serving for economic and social development.

For implementation of the set objectives, the document describes in details the activities, which are necessary to be conducted for accomplishing the set objectives. Furthermore, it includes an indication of the needed budget and gives a special attention to the requirement of building management capacities in the area of scientific research activities. Additionally, the administrative regulations that are needed to be introduced and approved are given in the list, which would enable successful strategy implementation.

3 Conclusions

This paper has presented implementation of the initiative, which has contributed to the establishment from zero of the R&D system and instruments. During the three year project implementation, the team successfully accomplished: an analytical assessment of the R&D situation at the UP; Establishment of a Research & Development Centre at the University of Prishtina; Capacity building measures and development of the Strategy on Scientific / Artistic Research and Development Activities 2011-2015. However, objectives to establish development of R&D services and IT instruments for the UP were only partly achieved. We learnt later, our objectives were too ambitious for such an environment and the available time. Thus, development of eScience Magazine and Impact Point System were more complex tasks which needed a more R&D friendly environment, effort, a longer time and higher budget in comparison to the available one.

However, inclusion of the component in the project for development of “Strategy on Scientific / Artistic Research and Development Activities 2011-2015” was a very smart step which has contributed greatly to the sustainability of the measures of the entire project. This way among many activities included in the Strategy a space was given also to the development of eScience Magazine and Impact Point System in the set period.

This paper may be used as an example for other higher education institutions in the region and wider engaging in efforts to develop an R&D system, to learn from the difficulties encountered and avoid possible ambitious objectives and tasks.

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