

## Measuring the impact of higher education institutions on innovation (The Bulgarian answer)

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**Abstract:** *The active changes in our societies during the last decades have put the higher education systems in a basically new environment and circumstances. The students, employers and wider societies have set new challenges and requirements before the universities but also before the public authorities responsible for the system. Below, some of the actions taken in this respect at European and national level are reviewed, without claiming to be exhaustive. The Performance-based funding model, recently introduced in Bulgaria along with some basic incentives and documents which shape the European Higher Education Area and set the national framework is described.*

**Key words:** *higher education institutions, measuring the impact, innovation, Bologna process, HEInnovate, Bulgarian University Ranking System, performance-based funding model*

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In the last decades we have witnessed a rapid change in the higher education sector – with respect to both higher schools' activities and their role in the societies. The boost of new technologies, the current trends of globalization and enhanced international cooperation, as well as the pursuit of a knowledge-based society, call for rethinking of the higher education's main goal. Today, higher education institutions are working in conditions of increasing public interest and even pressure, both in terms of quality and access to education and the conditions under which it is provided. Employers, as end-users, are becoming increasingly critical and demanding for learning outcomes. Students and staff are also setting their own priorities and demands which force the higher schools to face new challenges and to become more responsible and accounting to the regions and societies they belong.

### Measuring the impact of higher education institutions on innovation

First of all: What is an impact? According to the Oxford dictionary there are two possible meanings:

- the force or action of one object hitting another;
- a powerful effect that something, especially something new, has on a situa-

tion or person.

Then we go again to the Oxford dictionary to see what an innovation is: *make changes in something established, especially by introducing new methods, ideas, or products.* The BUSINESS DICTIONARY reveals it as *"The process of translating an idea or invention into a good or service that creates value or for which customers will pay. To be called an innovation, an idea must be replicable at an economical cost and must satisfy a specific need."* And if we consult GOOGLE we will find over 300 million results with thousands of definitions.

Obviously the second definition of the word "impact", combined with both the definitions of the word "innovation" given above, outline the main goal before the higher education sector today. Below – without being complete and exhaustive – are given some aspects of the successful higher education along with some incentives and documents which shape the sector at European and national level.

### Successful higher education

- The main mission of higher education institutions – creation, preservation, evaluation and dissemination of knowledge. Main objective – training of highly qualified specialists, formation of knowledge, skills and competences for personal

realization in the conditions of intensive technical and technological development and striving to increase the competitiveness.

- It is critical for the successful development of higher education to ensure the updating of methodologies and educational strategies along with wider application of modern techniques and technologies in the training process. This would stimulate innovative and creative thinking not only for students but also for their teachers and trainers, and will furthermore help the modernization and enrichment.

- Another challenge higher education is facing today is the provision of quality training for high-tech specialists along with the related research. Efforts to ensure an adequate response to current labor market requirements and the training of competent professionals with the attitude and readiness to continually upgrade, update and expand knowledge and skills are needed.

- The competitive economy dictates its current requirements to each side in the knowledge triangle "Education – Research – Innovation". In order to meet these requirements, education must provide opportunities for innovation and successful commercialization of investment in the learning process.

- Improving the management structures of higher education institutions is necessary in order to increase their efficiency and innovative potential. This will contribute to social, cultural and economic prosperity at regional, national and global levels. One of the main factors for the knowledge society is the stable and creative attitude of higher education institutions that actively support lifelong learning, provide quality teaching and learning, develop and stimulate research and application of innovative methods and approaches.

- The need to acquire new knowledge and skills and the current labor market trends increase the interest towards the higher education not only in upper-secondary graduates but also in working-age people. This implies the creation of

combined training models along with traditional ones to meet individual needs and goals. On the other hand, this can have a negative impact on the quality of training, due to shortages of qualified academic teachers, material base and resources.

- Establishment of functional systems in order to ensure and maintain the quality and up-to-date training is critical. It is necessary to set the exact parameters and criteria to maintain the high level of education and to provide opportunities for the preservation of its traditionally strong aspects.

### ***European documents and incentives for successful higher education***

#### **Bologna process**

At their last conference in Paris in May 2018 the ministers responsible for higher education in all the 48 countries members of the Bologna process paid special attention to the higher education institutions which is reflected also in their Communiqué:

*"Since the Sorbonne and Bologna Declarations, the EHEA higher education systems as well as institutions have undergone major reforms. At a moment when Europe is facing important societal challenges – ranging from unemployment and social inequality to migration-related issues and a rise in political polarisation, radicalisation and violent extremism – higher education can and must play a decisive role in providing solutions to these issues. It must also play a key role in establishing the facts on the basis of which public debates are conducted and decisions made. By providing students and other learners with opportunities for lifelong personal development, higher education enhances their prospects of employment and stimulates them to be active citizens in democratic societies."*

Therefore, the ministers "commit to developing policies that encourage and support higher education institutions to fulfil their social responsibility and contribute to a more cohesive and inclusive society through enhancing intercultural understanding, civic engagement and ethical

awareness, as well as ensuring equitable access to higher education." The ministers also declare they "will promote and support institutional, national and European initiatives for pedagogical training, continuous professional development of higher education teachers and explore ways for better recognition of high quality and innovative teaching in their career."

Higher education institutions are seen as vitally important in supporting the economies of their locality, region or country in another Bologna document – The Bologna Policy Forum Statement of all ministers and heads of delegations who attended its fifth edition in May 2018, which brought together representatives from five continents. The Fifth Bologna Policy Forum initiated a global political dialogue focusing on two common issues: social inclusion and the wider civic role of higher education. In this aspect the Statement points out the importance "for those responsible for higher education to listen, learn and engage in common problems. This includes quality, academic freedom, student participation, social inclusion, status, autonomy, and the broader role of higher education institutions."

### **Higher Education Expert Conference "The New Student: Flexible Learning Paths and Future Learning Environments"**

The conference was held in Vienna in September 2018 and ended up with some concrete recommendations. For the Higher Education Institution they are as follows:

- Foster a common understanding of flexible learning within the institution, develop a coherent institutional strategy and provide a common framework for implementation (e.g. IT infrastructure, processes, curricula design, and quality assurance) and involve students actively in these developments. Student-centred learning should become an integral part of HE culture.
- Involve, prepare and support the administrative and teaching staff in all processes of development and implementation of flexible learning.

- Ensure flexible learning is accompanied by adequate support measures for students (e.g. counselling) to foster their individual learning experiences.

- Monitor and evaluate measures to further enhance high-quality flexible learning, involve students in this process and make findings publicly available.

- Strive for more information about your students and their needs, and adapt your programmes and support systems according to that knowledge. This also includes the use of learning analytics.

- Provide information on the heterogeneity of the student population (e.g. on non-traditional pathways, completion-rates, study duration) and make it publicly available.

### **HEInnovate**

This is one of the most useful and practically oriented instruments of the last years and is an initiative of the European Commission and the OECD. HEInnovate is a free self-assessment tool which can be used by all types of higher education institution. Without being a benchmarking instrument, it allows assessing one institution by a number of statements related to its entrepreneurial activities, including leadership, staffing and links with business. HEInnovate can be used both by individuals and groups of people and particularly can be very useful for these higher education institutions which would like to assess themselves against a number of statements related to the entrepreneurial and innovative nature of their higher education environment. It covers eight areas for self-assessment:

- Leadership and Governance;
- Organisational Capacity: Funding, People and Incentives;
- Entrepreneurial Teaching and Learning;
- Preparing and Supporting Entrepreneurs;
- Digital Transformation and Capability;
- Knowledge Exchange and Collabo-

ration;

- *The Internationalised Institution;*
- *Measuring Impact.*

HEInnovate was first tested as an instrument within the Country Review of the Bulgarian Higher Education in 2014. Since then 7 more countries have become part of this assessment: Ireland, Poland, the Netherlands, Hungary, followed by Austria, Croatia, and Romania. A Policy Network of experts was launched in February 2018 which brings together representatives of the different stakeholders – governments, higher education institutions, and policy makers. The main aim of this initiative is to support the entrepreneurship and innovation in Higher Education and to ensure a broad base for high level and practically based expertise.

### ***The Bulgarian answer***

Two important national incentives which fostered the institutional change in the recent years are presented very briefly.

### **Bulgarian University Ranking System**

Along with all strategic and legislative documents and measures a very particular and practical instrument was introduced in 2010 – the Bulgarian University Ranking System (<http://rsvu.mon.bg/rsvu3/>). It is multidimensional and presents an enormous database, a trustable source of information and a useful tool for policy-making at different levels – national, institutional and even personal. The Ranking system compiles data on more than 100 indicators which reflect different aspects of university activities – teaching and learning, university environment, welfare and administrative services, science and research, labour market relevance and regional engagement. Data collected is fed into the performance-based funding model for public universities.

### **Performance-based funding model**

This model was introduced by the Strategy for Development of Higher Education for the period 2014-2020 and is in force since the 2016 – 2017 academic year. It seeks to improve labour market relevance and

quality so the state funding is no longer to be based primarily on the number of students, but defined according to specific criteria on quality of training and compliance to labour market needs. The simple statistical data show a significant increase of the share of the public funding distributed for good results:

- 2014 - 14.6 %;
- 2016 - 30 %;
- 2017 - 41.5 %.

The implementation of this funding is still quite short but the first results are already visible. The higher schools strive to perform better in terms of their visibility, accountability and policy-making. The Ranking System is more and more used in the process of institutional strategies design and performance.

### **Instead of conclusion**

Challenges we all face today are linked with the constant need of updating curricula and teaching methodologies, as well as incentivizing institutional strategies, imbedding education, entrepreneurship and innovation, bringing and allowing use of digital and other highly competitive technologies and data in every academic field. The higher education sector in this regard is one of the important pillars of building the secure and sustainable world we would like to live, work and create in and Higher Education Institutions themselves are the places where this change can be both shaped and further developed, supported by all the relevant stakeholders at all level of our societal lives.

## **Reference/Литература**

**Bologna Process** – <http://www.ehea.info/>

**Bulgarian University Ranking System** – <http://rsvu.mon.bg/rsvu3/>

**Higher Education Expert Conference** “The New Student: Flexible Learning Paths and Future Learning Environments” – <https://www.eu2018.at/calendar-events/political-events/thenewstudent.html>

**HEInnovate** – <https://heinnovate2018-bulgaria.eu/>

**Paris Communiqué:**

[http://www.ehea.info/media.ehea.info/file/2018\\_Paris/77/1/EHEAParis2018\\_Communique\\_final\\_952771.pdf](http://www.ehea.info/media.ehea.info/file/2018_Paris/77/1/EHEAParis2018_Communique_final_952771.pdf)

**Strategy** for Development of Higher Education in the Republic of Bulgaria for the period 2014 – 2020:

[https://www.mon.bg/upload/6539/Strategy\\_HigherEducation\\_07.04.2015.pdf](https://www.mon.bg/upload/6539/Strategy_HigherEducation_07.04.2015.pdf)