


*Study Visit with Coordination Meetings*  
*University of Twente, Enschede, Netherlands*  
10th - 14th June 2018



**Half-way through the PESHES project  
eligibility period: Developments and  
Results**

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*Development and Implementation of System for Performance Evaluation for Serbian HEIs and System*  
573820-EPP-1-2016-1-RS-EPPKA2-CBHE-SP

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**Erasmus+ CBHE Project PESHES  
Overview**




**Started in December 2016, ending in 2019**

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 PESHES PROJECT CONSORTIUM

University of Belgrade, UBG (Grant Holder)  
 University of Novi Sad, UNS  
 University of Niš, UNI  
 University of Kragujevac, UKG  
 State University of Novi Pazar, SUNP  
 Singidunum University, SUB  
 Ministry of Education, Science and Technological Development, Republic of Serbia, MEST  
 National Council for Higher Education, NCHE  
 Conference of academies for applied studies in Serbia, CAASS  
 Statistical Office of the Republic of Serbia, SORS  
 National Employment Service of Serbia, NES  
 Center for the Promotion of Science, CPN  
 University of Twente, UT  
 University of Rijeka, UoR  
 Politecnico di Torino, POLITO  
 Universitat Politècnica de València, UPV

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 Prof. Hans Vossensteyn **WE USED AS A BASIS (Inspiration)**

“Compare universities **your way!**”  
 Idea to use U-Multirank for institutional management in Serbian HE launched at Information Day on HE Performance Indicators – Toward a New Model of Financing and Ranking of Study Programs, Belgrade, Serbia, 24 November 2015


Also “Quality-related funding, performance agreements and profiling in higher education”; many other **CHEPS documents** ([www.utwente.nl/en/bms/cheps/](http://www.utwente.nl/en/bms/cheps/) and [www.umultirank.org](http://www.umultirank.org))

Many other documents and attempts used as well: EU Eurydice system, indicators of UNESCO, OECD, EUROPEAN UNIVERSITY ASSOCIATION (EUA), etc.

**Ministry of Education, Science and Technological Development of the Republic of Serbia** formed working groups to prepare the model of performance evaluation and new model of financing in HE in Serbia, expected in 2019.  
 The first documents of the working group are more or less non-adapted borrowings of the U-Multirank results  
 The Ministry wants to take advantage of the PESHES project  
 Chance that PESHES can strongly affect future legislative solutions in Serbia





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## ABOUT THE PROJECT 1/3

The project „Development and implementation of system for performance evaluation for Serbian HEIs and system – PESHES“ had a **wider objective to Improve the management, operation and quality of higher education institutions and system in Serbia**, but now also **to affect legislation** in those matters.

The idea of the project, as well as goals and outcomes, are **connected with two most important documents** in Republic of Serbia HE:

- The first one is “Strategy for Education Development in Serbia until 2020” ([http://www.mpn.gov.rs/wp-content/uploads/2015/08/strategija\\_obrazovanja\\_do\\_2020.pdf](http://www.mpn.gov.rs/wp-content/uploads/2015/08/strategija_obrazovanja_do_2020.pdf)) and
- The second one “Action Plan for Implementation of the Strategy for Development of Education in Serbia by 2020” ([http://www.mpn.gov.rs/wp-content/uploads/2015/08/Akcioni\\_plan.pdf](http://www.mpn.gov.rs/wp-content/uploads/2015/08/Akcioni_plan.pdf))
  - Action HE-GF09 Establishment of the indicators in HE (BO-3D09 Увођење индикатора квалитета у ВО)
  - Action HE-AS05 Ranking of the study programmes (BO-AC05 Увођење рангирања студијских програма)
  - Action FE-HE14 Development of the funding model with incorporated set of indicators for education quality evaluation (FO-BO14 Развијање модела финансирања и уграђивање у модел индикатора којима се мери квалитет образовног процеса)
- The next one is “Strategy for Education Development in Serbia 2020-2030”, expected to implement PESHES results

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## ABOUT THE PROJECT 2/3

Actual “**Strategy for Education Development in Serbia 2020**” – **TWO MAIN MANTRAS:**

### PART THREE HIGHER EDUCATION DEVELOPMENT STRATEGY

#### I. COMMON FRAMEWORK FOR HIGHER EDUCATION DEVELOPMENT

##### 1. Development Goals in Higher Education: 2012 – 2020 +

6) **The new funding system** shall simultaneously and explicitly support (a) the high-quality outcomes, relevance and efficiency in the utilization of resources and time of study; (b)... The elements that will be introduced on the basis of overall indicators

of competence allow the HEIs to access additional funding;

##### 7.) **Quality Assurance and Control - measuring quality and performance evaluation**

11) To develop and supplement information systems in HEIs and in the relevant government authorities, which will support the defined objectives, especially the continuous monitoring of quality indicators and competencies, a greater degree of electronic administration and the tracking of student achievement and opportunities for employment.

**GOAL: TWO NEW LAWS – Law on quality measuring and Law of financing in HE**

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 ABOUT THE PROJECT 3/3

## PART FOUR: PERVADING STRATEGIES OF EDUCATION DEVELOPMENT (“Strategy 2020”)

## “II. EDUCATION FUNDING

**3. Higher Education Funding**

*Model of Improvement of Higher Education Funding at State Universities*

5) To develop and **incorporate in the funding model the indicators of the quality** of the education process and encourage excellence of the teaching staff. In doing so, special attention should be paid to making the conditions for the selection of teachers more stringent, and to the existence and implementation of a real assessment of their educational work...”

**COMPLICATED DUE TO SPECIFIC SITUATION IN SERBIA - state and private univ.** (not in CROATIA, e.g.):  
NOTA BENE: do not compare it with private universities in Western Europe, different in Eastern Europe, even in EU countries (Romania, Bulgaria) – plenty of predominantly profit oriented private universities not funded by the state.

Should the model be related only to the state-run universities or it should be the same for the private ones? Could it be universal? Should the indicators be same?

**WE NEED COMPARATIVE EXPERIENCE AND WISDOM**

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**PESHES Developments  
Key Performance Indicators (KPI)  
Overview**



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## SELECTION OF KEY PERFORMANCE INDICATORS REASONABLE AND ADJUSTED TRANSPLANTS

It is important to provide an analysis of **needs, priorities and demands of local economy, and Serbian society** in order to provide set of goals that will be connected with performances.

The demands of students and academic community will be analyzed. The dialogue between different parties will be established in order to have complete picture.

Developing indicators regarding the inputs and outputs of higher education institutions in Serbia need to address (most of) the following criteria: national higher education priorities; regional engagement, economical priorities.

### SELECTION OF KEY PERFORMANCE INDICATORS

1. Indicators that can be harvested from **independent sources**:  
DOSITEJ, SORS, NES, WoS, FINVO, GOMES-INFOVO, KOBSON... (still not sufficient)
2. Indicators that assess teaching, research, third mission and financial aspects

### MUST BE ACCOMPANIED BY

- Compliance to existing requirements on providing information to the MEST
- Adequate institutional information systems
- Transfer of data to existing and functional DOSITEJ, GOMES-INFOVO, FINVO or other database

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## INDICATORS BY U-MULTIRANK 1/2

Using this conceptual framework U-Multirank Project team has selected the following five dimensions as the major content categories of U-Multirank :

- Teaching & Learning
- Research
- Knowledge Transfer
- International Orientation
- Regional Engagement

For each indicator they add a number of comments that relate to the criteria (relevance, validity, reliability, comparability, feasibility) used for the selection of the indicator.

Indicators for all dimension presented for Institutional and Field-based Rankings, as well as Student satisfaction indicators.

Stages	Enabling		Performance	
	Input	Process	Output	Impact
Functions & Audiences				
	Functions			
Teaching & Learning				
Research				
Knowledge Transfer				
	Audiences			
International Orientation				
Regional Engagement				

Table-2-1: Conceptual grid U-Multirank

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**INDICATORS BY U-MULTIRANK 2/2**

Teaching & Learning		Research		Knowledge Transfer (KT)		International Orientation		Regional Engagement	
Institutional	Field-based	Institutional	Field-based	Institutional	Field-based	Institutional	Field-based	Institutional	Field-based
Expenditure on teaching	Student-staff ratio	Expenditure on research	Doctorate productivity	Third Party Funding	Co-patents	International academic staff	International academic staff	Joint research publications	Student internships
Graduation rate	Graduation rate	Field-normalized citation rate	Field normalized citation rate	Incentives for Knowledge Exchange	Annual income from licensing	Programs in foreign language	Incoming and outgoing students	Graduates working in the region	Graduates working in the region
Interdisciplinarity of programs	Interdisciplinarity of programs	Research publication output	Research publication output	University-industry joint publications	Number of license agreements	Joint research publications	Joint international publications	Income from regional/local sources	Participation in continuing education
Relative rate of graduate employment	Relative rate of graduate employment	Research income from competitive sources	External research income	Size of Technology Transfer Office	Joint research contracts with private sector	International doctorate graduation rate	International graduate employment rate	Student internships in local/regional enterprises	Degree theses in cooperation with regional enterprises
Time to degree	Qualification of academic staff	Interdisciplinary research activities	Highly cited research publications	Patents and Co-patents	Patents awarded	Number of joint degree programs	International research grants	Research contracts with reg. business	Summer school/ courses
	Investment in laboratories	Share of highly cited research publications		CPD courses offered	University-industry joint publications		Percentage of international students		
	Inclusion of issues relevant for employability in curricula	Number of international awards and prizes for research		Number of Spin-offs	Academic staff with work experience outside higher education		Internationalization of programs		

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## SPECIFIC FEATURES OF HE IN SERBIA AND ITS CONSEQUENCES TO SELECTION OF INDICATORS

- Some usual indicators are problematic (graduation rate, time to degree, student's average marks) due to a number of profit oriented universities, with lower demands and criteria
- Many indicators are suitable to be artificially manufactured (false data) – e.g. relationship between number of teaching staff and students (temporarily engagement of professors during accreditation process)
- Law on Qualification framework for HE was missing, just appeared about a month ago (employability as an indicator vulnerable, also due to frequent short term, part-time employment)
- Sources (existing once not so rich, problems in *ad hoc* created data basis)
- Total number of indicators not to big, but precise and accurate (less than 15)
- Not easy to find comparative safe indicators to be applied in Serbia
- Possibility of two types of indicators: general indicators and optional indicators selected by HE institutions themselves (Croatian model) - vulnerable



## ACTUAL QUANDARY AND POSSIBLE SOLUTIONS

- Performance indicators have to be combined within the complex parameters, in order to avoid misleading conclusions if particular KPI are used alone and out of context
- Evading sources coming from polls and questionnaires
- Relax tough correlation between quality measuring and financing (in order to minimize false inputs)
- Consequences in financing have to be rather simulative, than punitive

EXPECTED OUTCOME: although inspired by Twente U-Ranking, our project will probably bring something new, suitable for specific situation in Serbia

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## WHERE ARE WE NOW: WORK PACKAGES 1/2

**PREPARATION: Establishment of infrastructure for the development of system for performance based evaluation**

- 1.1 Report on analysis of the needs and priorities society and local economy ✓
- 1.2 Report on Students' and academics' needs and priorities ✓
- 1.3 Improved Universities capacity **Public Call for the procurement of the equipment and software launched**  
**Equipment will be delivered till July 15th.**



- 1.4 Report on analysis of performance based evaluation in EU ✓ **COMING SOON!**
- All 3 report will be published as a parts of one PESHES publication.**

**DEVELOPMENT: Development of system for performance evaluation, profiling and multi-raking**

- 2.1 Report on key processes and selected fields at HEI in Serbia ✓
- 2.2 Set of KPI at selected fields ✓
- 2.3 Report on optimization of the set of performance indicators – **National Working group working on optimization**
- 2.4 Model for profiling and multi-ranking

**All Reports will be published soon**

**DEVELOPMENT: Development of ICT for support**

- 3.1 ICT solution for data acquisition and multidimensional ranking of study programs and institutions
- 3.2 Training, organization and implementation of the ICT system at national level
- 3.3 Presentation of the tools that will meet needs of students, labour market and society
- 3.4 Report on pilot testing, verification and validation of the system

**DEVELOPMENT: Institutionalisation of results and development of basis for value based management**

- 4.1 Report on development and adoption of results at institutional and national level
- 4.2 Changed accreditation standards
- 4.3 Developed input to the funding system
- 4.4 Networked system with stakeholders



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**WHERE ARE WE NOW: WORK PACKAGES 2/2**

**QUALITY PLAN: Quality planning, control and monitoring**

5.1 [Established working group for quality assurance](#) ✓

5.2 Report on external quality audit

5.3 Reports on regular quality control and monitoring ✓

**Quality Control and Monitoring Plan**

5.4 Inter-project coaching activities

**DISSEMINATION & EXPLOITATION: Dissemination and exploitation of results**

6.1 Organized of seminars, meetings and symposia –

[Dissemination and Exploitation Plan published](#) ✓

[Presentation of the project PESHES presentation at the Workshop “Global University Rankings and their Impact”, 7 November 2017, Belgrade, organized by Serbian HERE Team](#) ✓

6.2 Realized promotional activities

6.3 Developed project web-site – [Web site redesigned and will be available till the end of June 2018](#) ✓

6.4 Awareness campaign realized

**MANAGEMENT: Project management**

7.1 Reports on daily management –


[Institutional and Financial Sustainability Plan published](#) ✓

[Project Management and Risk Plan published](#)

7.2 [SC meetings organized](#) ✓

7.3 [Prepared reporting](#) and audit control – [Progress Report on the action's implementation prepared](#) ✓

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**WE WANT TO LEARN FROM YOU – HOPE THAT THIS VISIT  
WILL HELP US TO FIND BEST SOLUTIONS  
AND SPEED UP THE PROJECT**

 **THANK YOU**

