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## BENCHMARKING IN UNIVERSITY TOOLBOX

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**Abstract.** In the face of global competition and rising challenges that higher education institutions (HEIs) meet, it is imperative to increase innovativeness and efficiency of their management. Benchmarking can be the appropriate tool to search for a point of reference necessary to assess institution's competitive position and learn from the best in order to improve. The primary purpose of the paper is to present in-depth analysis of benchmarking application in HEIs worldwide. The study involves indicating premises of using benchmarking in HEIs. It also contains detailed examination of types, approaches and scope of benchmarking initiatives. The thorough insight of benchmarking applications enabled developing classification of benchmarking undertakings in HEIs. The paper includes review of the most recent benchmarking projects and relating them to the classification according to the elaborated criteria (geographical range, scope, type of data, subject, support and continuity). The presented examples were chosen in order to exemplify different approaches to benchmarking in higher education setting. The study was performed on the basis of the published reports from benchmarking projects, scientific literature and the experience of the author from the active participation in benchmarking projects. The paper concludes with recommendations for university managers undertaking benchmarking, derived on the basis of the conducted analysis.

**Keywords:** benchmarking, higher education institution (HEI), university management, benchmarking initiatives, benchmarking classification.

**JEL Classification:** I200.

### 1. Introduction

Competition on educational market triggers actions oriented on improvement and increase of higher education services quality. Dynamic technological, economic and social changes foster advanced research. Modern higher education institutions (HEIs) need to meet expectations of students and their future employers, transfer knowledge into economy, answer the needs of the region and from the other hand function in a way that will satisfy its employees. In order to meet these challenges HEIs undergo an intensive process of modernisation.

There is an urgent necessity to increase innovativeness and efficiency of management. The proper action is to systematically search for a point of reference necessary to assess institution's competitive position and learn from the best in order to improve.

Just as other public institutions HEIs improve their management through adaptation of methods, techniques and tools used in enterprises. One of such tools is benchmarking.

There are numerous definitions of benchmarking in the literature. According to B. Karlöf and S. Östblom (Karlöf, Östblom 1993), benchmarking is a continuing and systematic process which involves confronting effectiveness measured by productivity, quality and experience with the results of the companies and organisations which can be seen as models of perfection. Benchmarking as a process of evaluation and best practice application is described by J. Kulmala (Kulmala 1999), and R. Pieske (Pieske 1994) claims that benchmarking is a method of comparing with the best and learning from them in a systematic, detailed and branch independent way. In European Benchmarking Initiative (EBI) benchmarking was meant as an internal organisational activity which aims to improve the organisation's performance by learning about possible improvements of its primary or support processes by looking at these processes in other, better-performing organisations (van Vught *et al.* 2008).

Most of the definitions accentuate that benchmarking should be used systematically, it should be continual and improvement oriented. Its essence is learning from the best and creative adaptation of the best practice identified. The author perceives benchmarking as a tool useful in the improvement of organisational units functioning and flexible – adapting easily in higher education setting. Numerous examples support this thesis, especially benchmarking applications in Great Britain, Germany, USA and Australia, the countries which can be seen as leaders in this field.

Benchmarking, just as other management tools, requires financial input. In the face of recession or economic crisis many HEIs can be reluctant to spend money on quality enhancement tools. However it should be noticed that benchmarking is relatively inexpensive and it relies on the natural human ability to observe others and adopt these practices to the ones needs. Finding solutions to overcome difficulties thanks to rational benchmarking can be an attractive option.

## **2. Premises of benchmarking application in higher education institutions**

Benchmarking in such institutions as universities seems natural as it is the inherent feature of the university to practice and propagate learning. Therefore HEIs should exercise and improve ability to learn from the best. It is the way to improve the whole institution itself.

Benchmarking in higher education is conducted in order to improve quality of teaching and research, support rational allocation of financial funds from public sources and trigger competition among HEIs, make them more open to the market and, more

flexible in cooperation with other entities (Nazarko *et al.* 2009b). The primary purpose of benchmarking in higher education is to improve national or international competitive position of the HEI. The practical effect of which is to identify best practices of leaders and especially reasons of their advantage over others. Benchmarking enables HEIs to use these practices in order to limit the distance from the leaders (Nazarko *et al.* 2009a).

Especially process benchmarking increases transparency of functioning through careful observation of the processes taking place at a HEI. It requires a detailed description of the processes enabling possibility to share this description it with partners and make mutual learning possible.

Benchmarking in higher education can be perceived as a tool for self-assessment and self-evaluation. The primary aims of self-evaluation in higher education were pointed out by N. Jackson. They embrace facilitating improvement, making changes and meeting expectations and requirements connected with accountability (Jackson 2001). The author presented the definition of benchmarking in British HEIs describing benchmarking as a process facilitating systematic comparisons and evaluation of practices, processes and outcomes conducted in order to support improvement and self-regulation (Jackson 2001). On the basis of this definition two dimensions of benchmarking can be indicated: focus on accountability and self-evaluation against the standards and focus on development and gaining competitive advantage (Fig. 1).

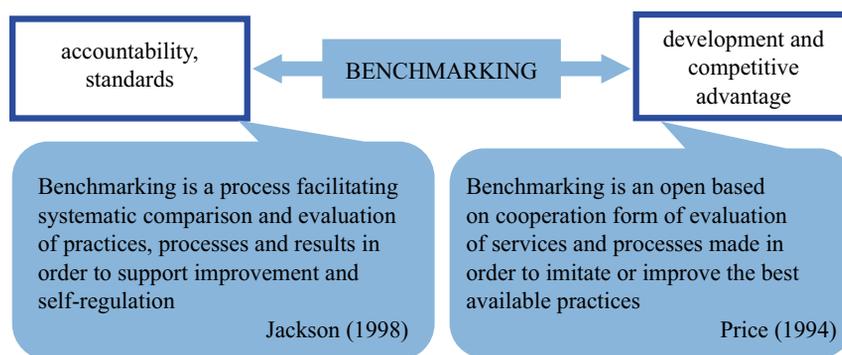


Fig. 1. Benchmarking dimensions (source: created by the author on the basis of Jackson 2001)

Benchmarking in higher education should be perceived as a tool enhancing competitiveness and self-evaluation. Through systematic comparisons HEI reviews knowledge about itself and increases transparency of its activity. Realising the idea of benchmarking which is constant improvement through learning, university increases quality and improves its competitive position. Benchmarking based on cooperation with partners enables making relations with other institutions which can be realised on different levels and different areas of activity of the university. Benchmarking may be perceived as a form of self-evaluation and as a part of quality assurance system.

### **3. Types of benchmarking applied in HEIs**

The outstanding researcher of benchmarking in higher education N. Jackson (Jackson 2001) notes, that first benchmarking initiatives were conducted in the early 90s in USA (Alstete 1995; Farquhar 1998). They were followed in Australia (Massaro 1998), and since the half of the 90s in Great Britain (Jackson, Lund 2000) and in continental Europe (Schreiterer 1998). At the beginning benchmarking in higher education was applied in the field of management of libraries, fixed assets, campus, energy and finance (Jackson, Lund 2000).

The most recent practical benchmarking initiatives embrace all aspects of university functioning: research (Tijssen *et al.* 2009; ACU 2014), teaching (CSWE 2012), administrative activity (Manzini, Lazzarotti 2006) and managerial processes (Freeman 2010). The definite majority of the benchmarking initiatives concerns processes connected with teaching students. Most of them concentrate on priorities indicated by the European Union such as teaching with the usage of computer networks and Internet (e-learning) (Council Resolution... 2001) and lifelong learning (Bolonia Declaration 1999; Decision No. 1720/2006/EC). Initiatives in this field also tackle the issues of study programmes. Many of benchmarking projects concern students affairs, internationalisation of studies and matters concerning employability of graduates.

The scope of the recent benchmarking initiatives in the field of research focuses on cooperation between universities and enterprises, transfer of research into industry and common publications. It should be noted it is the area where benchmarking is rarely employed although the results of such initiatives would be highly useful and interesting to the stakeholders of HEIs (Kuźmicz 2015).

More and more often the subject of benchmarking become practices that support the core mission of the university (research and teaching). These practices involve administration and management of the university for instance risk management, sustainable development, resources and supply.

The examples of benchmarking initiatives quoted in this paper embrace initiatives based on cooperation of universities. Higher Education institutions create a benchmarking group in the framework of which they learn through making comparisons. Sometimes they engage specialists in benchmarking universities such as HIS – Hochschulentwicklung im Deutschen Zentrum für Hochschul- und Wissenschaftsforschung (HIS-HE im DZHW) or Centrum für Hochschulentwicklung (Centre for Higher Education Development – CHE) in Germany, Association for Commonwealth Universities (ACU), Higher Education Academy (HEA) in UK. Often universities decide on one-to-one benchmarking, which means that they make use of the services of companies specialised in benchmarking which offer a possibility to compare with other HEIs with the usage of a database.

Universities that systematically and periodically practice benchmarking (for instance University of Adelaide (University of Adelaide 2011) or University of Sydney (University of Sydney 2014) in Australia), publish on their websites guidelines concerning benchmarking directed to their internal units. They include the adopted definition of benchmarking, procedure of managing benchmarking projects, procedures concerning undertaking new benchmarking projects, list of strategic documents that benchmarking initiatives should be compliant with, list of potential benchmarking partners, information concerning former benchmarking undertakings, repository of the conducted projects, proposals of the potential sources of data, indicators and literature.

Analysing international experience it can be stated that benchmarking is a systematically used managerial practice in higher education. Carried out on a university level, national, international and transcontinental level benchmarking embraces new areas of university activity.

A. Kelly (Kelly 2005) propagates comparative benchmarking as an opposite to statistical benchmarking. It involves comparing processes not only their outcomes. Different units also from the outside of higher education sector can become benchmarking partners. Partnership is promoted, often mentor relation is needed. A better partner helps the weaker and does not perceive sharing knowledge as a threat to its competition position. Statistical benchmarking is associated with individuality. It assumes that university is an organic entity which is difficult to accept by many stakeholders of HEIs. In comparative benchmarking universities are perceived as a complex of collaborating or conflicted sides which much better reflects reality. Contrary to statistical benchmarking which may be not sufficiently efficient and may persist inertia, comparative benchmarking encourages changes and looking for new ways to success. In other words comparative benchmarking offers quality assurance while statistical kind only quality control.

Lack of systematised knowledge about benchmarking in higher education environment often causes misinterpretation of this term with the polarisation towards the field of study the persons involved in benchmarking are specialised in (Nazarko *et al.* 2009b). Limiting benchmarking only to comparisons of effects or indicators concerning HEI's activity regardless of the analysis of the ways these results had been gained, contributed to the domination of statistical benchmarking. Positioning of universities means ranking and it should not be aliased with benchmarking.

According to the terminology of European Network for Quality Assurance in Higher Education (ENQA) (Hämäläinen *et al.* 2002), the real benchmarking is always improvement oriented. From this point of view ranking of universities can be treated as an initial step in benchmarking. Rankings point out benchmarks and benchmarking gap but they do not reveal ways of improvement (Nazarko *et al.* 2009b). Therefore university rankings can be called false benchmarking.

In the Figure 2 classification of benchmarking initiatives in which universities cooperate in a benchmarking group is presented. The opposite of cooperative benchmarking

is individual or one-to-one benchmarking embracing comparisons with the data made available by institutions specialised in benchmarking. This type of benchmarking can be classed to statistical benchmarking.

Cooperative benchmarking initiatives are differentiated according to the criteria: geographical range, scope, type of data, subject, support and continuity. Geographical criterion divides initiatives according to the participation of the partners from different continents, from one region of the world (Europe, Baltic Sea region) or from just one country. The criterion of scope includes division into the core areas of university activity that can be benchmarked: research, teaching, administrative processes and management processes. According to the type of data involved in comparison there can be distinguished statistical benchmarking – using quantitative data (indicators) and comparative benchmarking – using mostly qualitative data. Criteria of scope and type of data are closely related with the criterion of subject. The scope of the project determines whether the subject of comparison will be outcomes or processes (the author narrowed the typology in this area, because these are the types used in higher education). The type of the data used is dependent on the subject of benchmarking. According to the criterion of support initiatives are divided into those with the participation of external moderator (specialised in benchmarking) ensuring professional organisation of the undertaking and those in which universities make a benchmarking club alone. According to the criterion of continuity the initiatives can be divided into those incidental and continued, that is those in which it was decided to broaden the scope of benchmarking or in case of which it was decided to deepen the analysis of the outcomes.

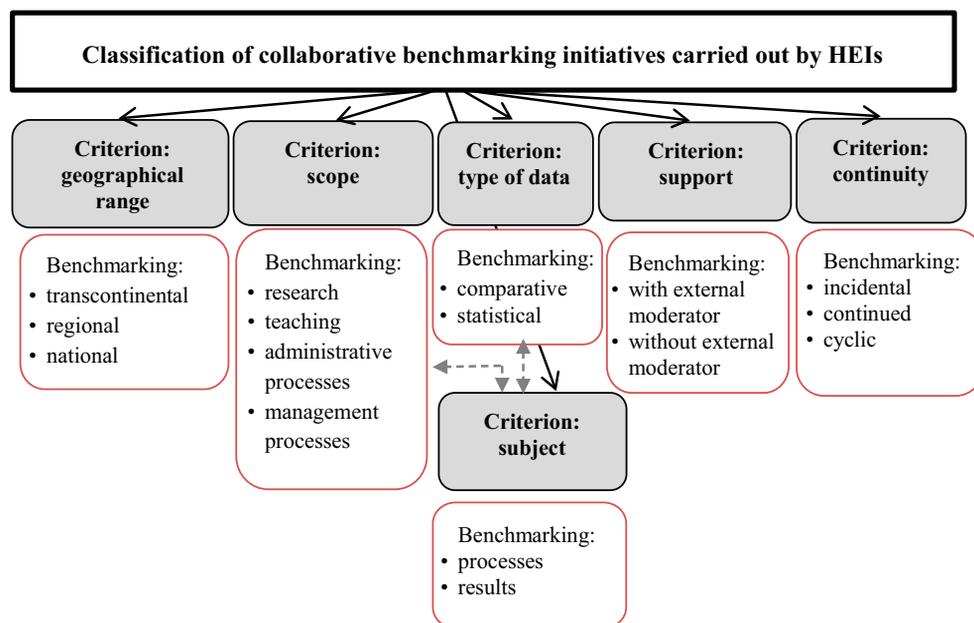


Fig. 2. Classification of benchmarking initiatives in HEIs (source: on the basis of Kuźmicz 2015)

Within benchmarking with the participation of external moderator, association sponsored benchmarking can be classified. The term has been coined by J.W. Alstete, who gave this name to benchmarking initiatives organised and conducted by professional associations for the sake of its members (for example in USA National Association of College and University Business Officers (NCUBO), Association of Continuing Higher Education (ACHE), International Association for Management Education (AACSB) and American Accounting Association (AAA)) (Alstete 2000).

#### 4. Benchmarking in HEIs of the world

In-depth analysis of benchmarking projects in universities is a troublesome task because of difficulties in access to information about benchmarking undertakings. The published results of benchmarking projects include information agreed by the parties participating in the project. Therefore comparison of the projects is difficult. The presented projects illustrate different approaches to benchmarking in higher education.

The examples are referred to the classification of collaborative benchmarking initiatives presented above (Table 1).

Table 1. Classification of the reviewed benchmarking initiatives in HEIs  
(source: created by the author)

Name of the project (coordinator)	Criteria					
	geographical range	scope	type of data	support	subject	continuity
<i>Benchmarking Programme</i> (Association of Commonwealth Universities)	regional (Commonwealth)	teaching, management processes	comparative	with the participation of external moderator	processes	cyclical
<i>Development Research Uptake in Sub Saharan Africa (DRUSSA)</i> (Association of Commonwealth Universities)	regional (East, Southern and West Africa)	research	comparative	with the participation of external moderator	processes and results	cyclical
<i>Global Research Benchmarking System (GRBS)</i> (Global Alliance for Measuring University Performance)	regional (USA, Canada, Asia and Pacific region, ultimately trans-continental)	research	statistical	with the participation of external moderator (Internet tool)	results	cyclical

Name of the project (coordinator)	Criteria					
	geographical range	scope	type of data	support	subject	continuity
<i>Benchmarking and Pathfinder Programme</i> (Higher Education Academy & Joint Information Systems Committee)	regional (England, Wales, Scotland)	teaching	comparative	with the participation of external moderator	processes	incidental
<i>The University Policy Benchmarking Project</i> (benchmarking club of universities from Australia and New Zealand)	regional (Australia, New Zealand)	management processes, administrative processes	comparative	without the participation of external moderator	results, processes	incidental
<i>Benchmarking university –industry research cooperation worldwide</i> (Leiden University)	national (Holland)	research	statistical	without the participation of external moderator	results	incidental
<i>Australian National Higher Education Procurement Benchmarking Programme</i> (ANHEPBP) (University of New Castle)	national (Australia)	administrative processes	statistical	with the participation of external moderator	processes	incidental

Since 1996 Association of Commonwealth Universities (ACU) has systematically run *Benchmarking Programme* (ACU 2013). The participants of the programme included universities from the Commonwealth. Each year ACU defined fields of benchmarking. The scope of ACU Benchmarking Programme in the years 2010–2012 is presented in Table 2.

According to the ACU methodology a questionnaire with open questions grouped in five sub subjects in each field was used. They concerned policy, strategy, implementation, monitoring and communication. The universities were instructed to answer the questions according to the documentation and the solutions that were functioning in the university at the moment and not according to the plans made for the future. After gathering and verifying the complementary data the practices were assessed in the

framework of three pillars *approach* – applied policy or technique, *application* – to what extend policy or technique is applied at the university and *outcome* with regard to the extend the aims had been achieved and the needs to modify and adjust to the changing environment. The conclusions were presented in a final report. Each participant was encouraged to evaluate in 5-point scale with respect to each good practice, which is later used by the universities to find partners for cooperation. In the course of the programme there were workshops organised during which participants received a report with good practices analysis.

Table 2. Scope of ACU benchmarking (source: created by the author on the basis of the Association of Commonwealth Universities website)

Year	Scope of benchmarking
2010	strategic alliances
	student experience
	managing IT
2011	management the university of the future
	branding and marketing
	HR management – new forms of HR service delivery
2012	financial management
	managing league tables
	managing graduate outcomes

Since October 2014 the ACU has launched a new online tool ACU Measures. It is going to enable its members to benchmark their performance in a range of non-academic areas (ACU 2014). Initially three focus areas were chosen for benchmarking: academic salaries, research management, and gender mainstreaming. In the course of this programme participants responded to a survey encompassing the following aspects: institutional priorities, policies for research, staffing for research management and uptake, and current research and research uptake activities. The benefits of the tool indicated by ACU include among others: opportunity to benchmark performance over time and demonstrate the impact of managerial changes; individualised reports, possibility to use it as a case for reallocation of resources.

An interesting new initiative by ACU is *Development Research Uptake in Sub-Saharan Africa* (DRUSSA). Conducted initially in 2012 it was followed in 2014 to check the degree of change brought by the previous benchmarking. It is planned as a five-year programme and engages 24 African universities. It focuses on how research and research uptake are approached at the institutional level and what are the constraints in bringing research finding to end users (Falk *et al.* 2014). Research uptake is defined by ACU as an emerging field in university management which focuses on practical,

cost-effective and sustainable approach to getting research into use (ACU 2014). The project includes three major phases (Falk *et al.* 2014):

- the survey based on quantitative data concerning institutional priorities, policies of research, staffing for research management and uptake, and current research and research uptake activities;
- the 2014 Leadership and Benchmarking Conference, as an occasion to discuss in greater detail ways in which institutional change has been achieved and is being developed;
- the final benchmarking report.

On the basis of the review of available publications about benchmarking initiatives in HEIs it can be observed that universities participating in ACU projects also take part in other benchmarking initiatives, for instance in European Benchmarking Initiative (EBI). It means that they are satisfied from benchmarking and their appreciate the benefits they receive from such activity.

Global Research Benchmarking System (GRBS) undertaken by the partnership Global Alliance for Measuring University Performance: was started in October 2010. The members of the partnership are universities from the whole world, Center for Measuring University Performance, the United Nations University's International Institute for Software Technology (UNU-IIST) and Elsevier publishing.

The published materials should serve university managers to increase management efficiency. According to the project's coordinators reliable data can contribute to the improvement of many areas of university activity, such as: teaching, research, local environment engagement and social dimension of university functioning.

The idea of the project was to create an alternative to university rankings, because according to the authors of the project, the diversity and richness of university functions cannot be reflected by only one number in the ranking table. The aim of the project is to develop a new system measuring effects and evaluating university functioning and at the same time reflecting university complexity. The first undertaking in this project was benchmarking research activity with division into scientific domains and disciplines.

Benchmarking is supported by the Internet tool, which enables to compare according to different criteria (indicators) among the registered universities. In 2011 there were 729 HEIs registers from Asia and Pacific region, USA and Canada. The first step was to create benchmarking group. This choice was valid for the next edition. The user chose category and subcategory (in 2011 23 disciplines and 251 sub disciplines according to All Science Journal Classification (ASJC) were considered, including interdisciplinary publications). The next step was the choice of indicators. The system includes two types of indicators: primary and normalized by affiliated authors. As a result of benchmarking the user obtains graphs reflecting data concerning publications, citations, among others: 4-year Hirsch index, number of publications in journals in 10% and 25 of the most

valued journals in the certain discipline on the basis of Source-Normalized Impact per Paper (SNIP) from 2010; number of citations in journals that are in top 10% and 25% of the highest SNIP value; number of publications written in cooperation with at least one researcher from abroad etc. The following undertakings in the framework of GRBS were planned to include: finance, commercialisation and social impact of research. It was also planned to broaden the scope of the project to European countries. Unfortunately to date no information has been published about the outcomes of this actions. It should be noted that this project is based on statistical benchmarking, and does not allow universities to learn from each other through gaining knowledge about best practices. It would be highly beneficial if this project would be continued in a way fulfilling the premises of real benchmarking.

Another example of an interesting benchmarking project is the initiative *Benchmarking and Pathfinder Programme* conducted by the Higher Education Academy and Joint Information Systems Committee (HEA & Jisc 2008). It was initiated in 2005 and till July 2008 77 universities from England, Wales and Scotland took part in it. The defined purpose of the project embraced enhancing e-learning capability and introducing it into practice. Because of the lack of the defined methodology of benchmarking e-learning and the complexity of higher education sector Higher Education Academy decided to use five methodologies: ELTI (*Embedding Learning Technologies Institutionally*), MIT90s (designed by Massachusetts Institute of Technology in the 90s), OBHE/ACU (Observatory for Borderless Higher Education/Association of Commonwealth Universities), Pic&Mix (designed by P. Bacsich, consultant of the project) and eMM (*e-learning Maturity Model*). The project was divided into phases and the participants could decide which methodology was the most appropriate for them (Table 3).

Table 3. The methodologies applied in Benchmarking and Pathfinder Programme (source: HEA & Jisc 2008)

Methodology	Pilot phase	Phase I	Phase II	The number of universities applying the methodology
ELTI	3	6	0	9
eMM	1	0	7	8
Pick&Mix	3	7	10	20
MIT90s	1	4	0	5
OBHE/ACU	4	21	10	35
Number of HEIs taking part in the phase	12	38	27	77

The descriptions of the methodologies in the available sources are very laconic. In the report of the project only a few-sentence descriptions were included.

The methodology ELTI was described in the course of the project JISC ended in 2003. It covers three research fields: culture, infrastructure and expertise. It includes 12 indicators, 4 for each field. In the methodology participants agree on up to 10 indicators described in a form of indicative sentences, which are evaluated in a 1–5 scale. They include also qualitative sentences. The indicators were adjusted to the specificity of the participants activity (Researching... 2012).

The methodology eMM was developed by S. Marshall for HEIs in New Zealand. It is based on a university model which processes in the area of e-learning mature from *ad hoc* processes to revised processes reflecting the culture of constant development (HEA & Jisc 2008).

The MIT90 concept is based on an assumption about evolutionary and revolutionary change, which source is applying the technology in education. The methodology was developed by the Massachusetts Institute of Technology (MIT) in the 90s to plan and monitor strategic change in e-learning. It is assumed that the university consists of five elements interacting with each other: strategy in the area of technology, organisational structure, units that serve special roles, management processes and technology.

The methodology OBHE/ACU is based on collaboration. The universities taking part in the project filled in *Institutional Review Document* consisting of eight part, embracing: strategy development, e-learning management, e-learning resources, issues connected with the relation of the quality to the input spent, issues connected with students using e-learning, staff, cooperation and communication of the outcomes of the evaluation.

The methodology Pick&Mix designed by P. Bacsich includes systematic monitoring of other approaches to benchmarking e-learning, looking for common parts and also new solutions. It includes a set of obligatory and additional criteria enabling adding criteria that reflect specificity of a certain HEI. The author of the methodology makes the benchmarking questionnaire available on its website.

According to the participants the added value of the undertaking was most of all making relations among institutions, progress in e-learning process understanding, increase of managers awareness, focusing attention on constantly changing teaching and learning process and facilitating communication inside the university thanks to building relations among staff members who did not cooperate with each other in the past. Benchmarking enabled management and staff to understand how important is constant improvement and confronting own activity with others and making an institutional practice out of it. The barriers in realisation of the programme appeared to be the following: time, human resources, logistics and culture. The coordinators underlined difficulties with overcoming the false belief that benchmarking should lead to university ranking.

This proves that it is highly needed to explain the idea of benchmarking in higher education and propagate its proper definition in the academic environment.

The next example of a benchmarking project realised in higher education sector is the initiative *The University Policy Benchmarking Project* (Report on the University... 2010; Kuźmicz 2012). The purpose was to examine the extent to which university policy is reflected in its website, identification of good practices, quality resources supporting the cycle of university policy development and creating models of university policy management.

In the project since February till April 2010 16 systems of conducting university policy was examined. The participants were universities from Australia and New Zealand. The sample included 132 HEIS from USA and Australia dependent territories (excluding Tasmania), 33 HEIs from New Zealand (north and south islands), institutions of higher education sector and of vocational sector, metropolitan universities and regional universities and one private university (Bond University).

On the basis of the available information on the websites of the HEIs taking part in the project the exercise embraced (Freeman 2010):

- *University Policy Frameworks* and *Policy on Policy Statements* comparative analysis;
- Comparative analysis of the methods of presentation of the repository of university policy and websites presenting university policy;
- Study of the available resources supporting the cycle of university policy development;
- The complex benchmarking carried out on a sample of four areas of university policy (plagiarism policy, environmental sustainability policy, leave without pay and credit policy);
- Dissemination of undertakings with the participation of enterprises and traditional vs. new areas of activity or interests of the university;
- Development of the models *University Policy Frameworks* and *Policy on Policy Statements*;
- Development of the concept of the website presenting university policy;
- Identification of good practices.

According to the participants of the project the gathered data enabled to identify good practices and reliable analysis of university policy matter. Benchmarking substantially helped the universities to improve conducting and presenting university policy. The added value of the project comprised creating of the cooperation network and enabling evaluation of the advancement of the university in certain areas of university activity being benchmarked.

The purpose of the benchmarking project carried out by Universiteit Leiden was to indicate leading universities with respect to supply enterprises with knowledge and services based on research (Tijssen *et al.* 2012). The study embraced 350 biggest research oriented universities. It was based on statistical data concerning common publications

of researchers and enterprises workers. Data was extracted from the *Web of Science* (WoS), international, multidisciplinary bibliographical database including international technical reviewed journals. The authors of the study recommend using the data to multidimensional benchmarking comparisons. However at the same time they highlight that they allow only approximate indicating of the best universities in the studied field.

They do not consider mechanisms concerning cooperation of the university with entrepreneurs, factors connected with management, organisation and financial aspects. The authors of the study contest reliability of the data. They stress that the universities should be grouped in such a way that similar institutions would be compared with each other. It should be noted that the study was more ranking oriented then involving real benchmarking. The proposed benchmarking has a statistical character, not comparative, which means that it narrowed only to comparison of indicators and it does not answer the question how are results being achieved and what practices lead to the success. Conducting comparative benchmarking with taking into consideration the way the university realises cooperation with enterprises and not only effects in a form of numbers of common publications of both environments what be surely purposeful and beneficial.

The example of applying benchmarking in university administration is the project *Australian National Higher Education Procurement Benchmarking Programme* (AN-HEPBP), financed by the Australian Government of Education, Employment and Workplace Relations (HES 2011; Kuźmicz 2012). It was initiated by the Higher Education Services (HES) and Australian Universities Procurement Network Initiative (AUPN), which with the support of a private company Purchasing Index Pty Ltd. conducted pilot benchmarking project with the participation of five universities. The subject of the undertaking was benchmarking of university spending on stationery.

Later University of Newcastle on behalf of HES and AUPN obtained research grant on continuing the project with more participants. The project was realised in the years 2007–2009. The participants were 29 Australian universities. The subject of benchmarking was procurement. 12 categories of goods and services that universities buy were identified: office procurement, laboratory procurement, partial time works, business trips, multifunctional equipment, transactional banking, telecommunication, computers, professional services, advertising and IT leasing. The participants were obliged to take part in at least three benchmarking tasks. The purpose of the project was benchmarking procurement and the anticipated outcome was the improvement of the analysed processes and indicating possibilities of savings. The second part of the project covered benchmarking of the procurement process. The data was gathered through interviews with managerial workers and questionnaires. Each of the participating HEI received individual report and the aggregated final report. Each benchmarking task were finished with workshop which was supposed to help to start cooperation and encourage knowledge sharing. Unfortunately no detail information has been published about the project. Similarly like in other benchmarking projects it is the result of the benchmarking confidentiality rule.

## 5. Conclusions

In-depth and detailed analysis and evaluation of benchmarking initiatives is troublesome because of incomparability and incompleteness of the published information. Only direct participation in benchmarking projects or gaining permission from the project coordinators for a case study enables insightful investigation of the methodologies applied. Numerous examples of successful benchmarking initiatives around the world substantiate introduction of this tool into management toolbox of the HEI. Systematic use of benchmarking by many universities means that they appreciate the benefits benchmarking offers.

University managers should decide on comparative benchmarking focusing on the good practices that contribute to the successful outcomes. Statistical benchmarking can answer to the question were we are in comparison to others, but it does not show the way to improvement. Every institution can decide on its own what approach to benchmarking would be best for them. Employing an external moderator seems to be a good option of newcomers in benchmarking. Benchmarking clubs should include comparable institutions. It is worth noting that neither a situation where there is one extreme leader or when all the institutions are very similar in the advancement of the analysed practice is desirable. Successful benchmarking needs the atmosphere where everybody wants to learn from others and everybody has something to offer (teacher-learner relation).

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