Abstract

University education in today’s globalized economy is exposed to many challenges and increasing pressure to improve its approach to the quality assurance of all its processes. Particular situation exists in the field of university education, where candidates for study very carefully consider and finally choose their future Alma Mater. The approach of university management to quality is therefore very important. This article addresses the issue of quality in education, as well as quality measurement in national and foreign universities. Consequently, present article discusses situation in university education in Slovakia. Finally, the article describes what is the meaning of quality in the current academic environment and what are the real quality indicators for public universities.

1. Introduction

Quality is associated with almost every area of human life, and nowadays everyone has a tendency to evaluate everything. Quality is inseparably united with the evaluation process, regardless whether this evaluation is objective or subjective. In recent years, assessment of the level of universities quality is a new phenomenon in Slovakia. There are often presented a variety of evaluation rankings of universities whose aim is to highlight their quality that would attract the attention of the general public. Another reason is the possibility to present a mirror for schools themselves to determine their position in comparison with other schools, internationally. It is necessary to ask whether the monitored and then evaluated indicators are objective and to what extent they reflect the actual quality of the schools evaluated.

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To prepare well educated citizens for life in the globalized world demands the enrichment of the education system for orientation in multicultural world and it puts the emphasis on the cultivating of intercultural competencies through systematic change and integration of the problem into the curricula of formal and informal education (Csikósová, A., Teplická, K., & Šenová, A., 2012).

2. Quality and education

University education in today’s globalized economy is exposed to many challenges and increasing pressure to improve its approach to the quality assurance of all its processes. Organizations are increasingly starting to develop their own education systems (Csikósová, A., Šenová, A., & Čulková, K., 2012). Education for individuals is increasingly proving to be a strategic factor that predisposes their ability to face today’s challenges and adequately meet their needs, or even survive (Balážiková, M., 2008). The response to this pressure is a “hunger” for learning and education, which grows into global proportions. A typical result of this pressure is increasing number of education institutions, many times only with the intention to satisfy the “hunger for education” without a deeper sense of professionalism and specialization. Rapid development of higher education in recent years, in terms of the expectations of the state entails also additional features. They include: requirements to increase the autonomy of universities, requirements for greater public participation in the management of higher education, demands for more transparency in their activities, requirements for future employment of graduates in jobs, etc. Universities, on the other hand, point to the need for greater funding from the public and other external resources and greater autonomy. All these efforts, however, are strongly influenced by the natural requirement to demonstrate the quality of all activities conducted by universities, for example: scope, level and quality of education provided, the administration, the level of cooperation with the external environment, the level of its graduates, scope and results of the research and many other aspects (Markulik, Š., 2009). In Slovakia, there are 20 public universities, 3 public, 10 private universities, and one foreign university. There are several ways to measure quality in higher education. One way is evaluation according to criteria used by the Academic Ranking and Rating Agency (ARRA). Another way to evaluate a university is offered by CA F (Common Assessment Framework - Common system of evaluation). It is a self-assessment tool designed for public administration. In university practice, however, it has not found wide application. In practice, there are several other ways to evaluate a university. This is the place to ask the question which way of evaluating a university is the right one. Universities generally stand before a complex question, what is the true indicator of the quality of higher education from the point of view of a (future) student. Are that good teachers, highly qualified scientists, object curricula, environment where the learning process takes place, or catering and accommodation system? It is possible to name many more aspects.

3. Measurement of the quality of universities in Slovakia and abroad

First evaluations (rankings) have begun to appear in the nineties of the twentieth century. These were so called rankings of faculties and universities according to evaluation (qualitative) criteria. Recently, the most commonly mentioned is “Shanghai ranking”, the chart of the top 500 colleges and universities in the world. There are also other known assessments such as rankings of the journals The Times, Perspektiwy or two years ago published ranking of the top 100 universities by Cybermetrics Lab (Spain). These assessments are giving some image about universities and have found its fans, but also those who are outraged by them. The reasons for these conflicting responses are the evaluation criteria, and a subsequent interpretation of the results. It is very difficult (perhaps impossible) to find general criteria applicable to all types of universities and at the same time sufficiently sensitive to measure and mutually compare their uniqueness. The second question is whether the observed evaluation criteria are really a measurable quality characteristic. The Shanghai ranking applies as one of the criteria - the number of Nobel Prize winners working at the universities. Is the number of Nobel Prize winners a fair indicator of quality of higher education? Nobel Prize winner does not have to be the graduate of the given university. He/she could start working there after the prize was awarded to him/her. It is therefore questionable what the Nobel Prize in the hands of the teacher can really tell about the real quality of the college. The application of this criterion in the world, but with regard to the number and incidence of the holders of these prizes, may have some meaning. Evaluation by this criterion in Slovak higher education is not applicable. It is (not) meeting this criterion that significantly affects the unflattering position of Slovak universities in various world rankings. In addition to global organizations that monitor, assess and evaluate universities there exists Slovak agency whose mission is of very similar nature. Namely

4. Evaluation of higher education

Assessing the quality of higher education is nowadays actual and popular. It should however be borne in mind who is evaluating given university, on what basis and what is the purpose of this evaluation - assessment. In practice, it is customary that a more objective evaluation of university can be made by someone who is not active in the university structure under consideration, but has experience with academic activities. Academic experience of a referee is an advantage because of his/hers understanding of the processes at the university and as well, knowledge of customer’s requirements in general. In order to increase independence - objectivity in assessing the university, experts from abroad who have no personal ties to the university staff assessed, should take part on the assessment. Quality assessment for most universities takes place in these processes (Markulik, Š., 2009):

- educational activities,
- science, research and innovation activities,
- business activities.

Evaluation based on the criteria of the Accreditation Commission

For a successful outcome at the comprehensive accreditation it is sufficient when the university meets only 6 criteria known as “KZU”, i.e. criteria for inclusion among the universities (KZU 1 to KZU 6). After a detailed analysis of the content of the individual criteria (KZU) one may get a feeling that they are more of a quantitative than a qualitative measure, which in the particular case can have a counterproductive character. In the culture of universities as well as in terms of the accreditation criteria, there is an underlying idea that quality is achieved through top experts - professors and associate professors. Experience shows, however, that it cannot be regarded as a given. Because, scientific degree of higher rank does not automatically guarantee quality service of education - it is just one of the prerequisites. It is necessary to take into account whether a teacher with such a title is really a recognized expert in his/her field. The criteria of the Accreditation Commission are as follows:

- KZU-1 refers to the number and quality of publications, i.e. research activities (teachers, post-graduates, students),
- KZU-2 to the success of the grants acquisition,
- KZU-3 to the number of graduates - post-graduates per professor i.e. the quality of post-graduates and supervisors at the given department,
- KZU-4 refers to the quality of post-graduates outputs,
- KZU-5 to the number of post-graduates (positions are awarded according to research activities or doctorands are accepted for projects) per professor or associate professor at the department,
- KZU-6 is the number of students per creative worker, which is basically a typical quantitative indicator in the primary sense but it is also possible to talk about about the quality of the process of teaching).

Evaluation based on the criteria of the ARRA

The process of evaluation of the universities by Academic Ranking and Rating Agency consists of the following steps (Barta, J., et al., 2011):

- distribution of the faculties into eleven characteristic groups according to specialization, so that only faculties with similar orientation and working conditions are compared,
- selection of criteria related to the quality of education and research at individual universities and assignment of a certain number of points to each faculty for performance in the relevant criterion. The criteria are organized into groups and faculty gets points in each group. The number of points the faculty is given for each criterion is a relative percentage of the point value of given performance criterion to the points received for the best met criterion (i.e. the best faculty gets 100 points),
the allocation of summary score to faculties, which is calculated as the average of the scores for all criteria, i.e. the order of faculties in each specialization group is given by the average of the point gain for all of the criteria groups.

Basic principles of ranking by ARRA are:
o criteria are focused on the intensity of performance and not on the overall performance, that is, taking into account the size of the faculty,
o the basis for compiling the ranking is publicly available and verifiable information, i.e. unquestionable sources, besides reasonable and justified exceptions,
o ARRA evaluates all the faculties of public universities that have completed at least one training cycle at 1st level of education (i.e. older than three years) and the private colleges that provide their data otherwise unavailable from public sources. Faculties/schools under 10 years old are given a bonus for evaluation purposes,
o an evaluation by ARRA, as shown in steps above is based on a relative scale, with a performance of the best faculty in the group for the given year used as the benchmark. This means that a change of the position in the ranking means the change in the performance relative to the best in group, i.e. not the absolute change in performance in comparison with previous year,
o as well as other evaluations, ranking by ARRA must be also viewed in the light of the used criteria. It should be noted that each ranking provides a picture of the faculty and its position among other faculties solely through the lens of the used criteria, which means that using other criteria, the order of the faculty in the ranking could be different.

Table 1 Evaluation criteria according to ARRA (in 2012)

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<tr>
<th>Process</th>
<th>Evaluation criteria</th>
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<tr>
<td>EDUCATION</td>
<td>SV1 - Number of teachers per hundred full-time and part-time students in the reporting year.</td>
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<td>SV2 - Number of professors and associate professors per hundred of full-time and part-time students in the reporting year.</td>
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<td>SV3 - The proportion of professors, associate professors and teachers with PhD. to the number of all teachers in the reporting year.</td>
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<td>SV4 - The proportion of professors and associate professors to the number of all teachers in the reporting year.</td>
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<td>SV5 - The average age of professors. The criterion was excluded in 2007 as the Ministry of Education stopped the collection of the data.</td>
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<td>SV6 - The ratio of the number of registered candidates (applicants for study) to the planned number of available places in the reporting year.</td>
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<td>SV7 - The ratio of enrolled students to the number admitted in the reporting period.</td>
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<td>SV8 - The proportion of foreign students to the total number of full-time students in the reporting year.</td>
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<td>SV9 - Percentage of students sent abroad within the ERASMUS program.</td>
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<td>SV10 - The proportion of employed graduates to the total number of graduates who have obtained a degree in the reporting year.</td>
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<td>RESEARCH</td>
<td>VV1 - Number of publications in the database Web of Knowledge (WoK) in the years 2001-2012 per creative worker (plus publications from the database of Central Registry of Publications Records (CRPR) for selected groups of faculties).</td>
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<td>VV2 - The number of citations of publications in the database WoK in the years 2001-2012 per creative worker (plus citations of publications from database CRPR for selected groups of faculties).</td>
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<td>VV2a - The average number of citations per publication in the database WoK in the years 2001-2012 (plus CRPR database for selected groups of faculties).</td>
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<td>VV4a - The ratio of the average number of PhD. graduates in the years 2008-2012 to the average number of all students in the first year of doctoral study in the years 2003-2007.</td>
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<td>VV4b - Proportion of total scientific output of the faculty in the years 2008-2012 (WoK or CRPR) per PhD. student.</td>
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<td>VV4c - Proportion of total citations of scientific production of the faculty in the years 2008-2012 (WoK or CRPR) per PhD. student.</td>
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<td></td>
<td>VV5 - The ratio of the average number of full-time doctoral graduates for 2008-2012, to the number of professors and associate professors.</td>
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</table>
5. Discussion: What is the true indicator of the quality of public university?

The overall level of education is as high, as high is the level of its weakest aspect. For educational institutions, particularly faculties and universities, the quality assurance of the education process is a bit more complex than that of the material product. An education in a sense of a product that is the subject of the exchange was never given much attention. The quality characteristics of the educational process from the perspective of the customer - the student are seen through the following main aspects:

- the acquisition of skills and knowledge at the present state of knowledge in the industry and thus the possibility of immediate employment of the graduates on the labor market,
- curriculum,
- learning processes,
- availability of teachers and information,
- administration and organization (study department, etc.),
- environment (classrooms, ergonomics).

From the above mentioned it follows that the quality of the educational process should be viewed comprehensively. This means that the main task is the systematic and continuous measurement, monitoring and evaluation of different aspects that affect the quality of the process. The tool for improving the quality of the product are different systems based on the evaluation of quality of education and increasing human potential. By applying systematic measurement and monitoring we can get an overview of what has been achieved and what is to be achieved.

6. Conclusion

The quality of universities is a hot topic. The educational process can essentially be seen as a preparation of human resources for various areas of human activity. The quality of this process is therefore of paramount importance to the future development of any society. It is not easy, however, to measure and compare the quality of universities. On the one hand, there are criteria that are not properly designed, on the other hand, there are criteria, the performance of which is not fully in the hands of the university. The ideas presented in this paper should serve as an inspiration for a more thorough thinking about whether that, which is now monitored as a quality of universities really is what actually describes quality.

References