

Management of Quality of Higher Education

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Abstract

Background/Objectives: Available education quality management models are not efficient due to the rapid development of science and technology. Implementation of a mixed evaluation system, involvement of all members of the educational process into competition formation will allow establishing competitive conditions for the trainers. **Methods/Statistical Analysis:** The ability to choose a subject and a teacher is a natural way of screening out weak research assistants and, consequently, is a way to improve the quality of education. The combination of autonomous and external regulators for managing the quality of education is possible only in the case when there will be no boundary between them. For the purposes of our experiment we used anonymous evaluation by collecting subjective opinions of the students who are direct recipients of educational services. We also assessed the recipients themselves and indirectly the trainers using the method of analysis of final creative works. The analysis was performed by an independent expert commission of a public regulator. **Findings:** Group evaluation of results: Teaching of less successful students by the leaders, strive for leadership is an important aspect which is actively implemented within Bologna system of education and that is an essential part of modern teaching philosophy. Integrated approach to obtaining knowledge of high quality will enable to provide basic training for future specialists that is in full compliance with labor markets requirements. Our experiment may serve as an empirical part of the given research. We applied the system of competitive loyal management of the higher education quality. Our experiment proved the efficiency and validity of the offered theory about organization of the system of managing the quality of education. Significant improvement of students' performance, better motivation of both the trainers and the students are the critical factors for developing modern science. **Applications/Improvements:** The proposed model is based on Bologna educational system and implies the ways of modernization which are not costly and do not require changes in education. It justifies flexibility and efficiency of the model not only on the stage of implementation but also in the process of its application.

Keywords: Accreditation, Competitiveness, Evaluating Criteria, Higher Education, Quality of Education

1. Introduction

International requirements to education quality management are formally consolidated in the document describing the standards ISO 9000. Each higher educational institution, the state and ministries propose their own criteria, that are why the main disadvantage of any existing system of education quality management is their difference while science requires regularity and conformity¹.

Institutional and program-based accreditation remains the major control levers. In the first case, a governing element is the state regulator evaluating criteria

for compliance of educational institution to the level of accreditation while in the second case, certain educational programs and courses are evaluated and differentiated approach is pronounced.

External and internal evaluating models are universally acknowledged. External model is adopted in Norway, Finland, France, Denmark, Russia and Germany. The main characteristic of this method is the presence of a state regulator, namely commission, council or ministry checking compliance with the level of accreditation, availability of documentation. These regulators also analyze the results of students' testing. Major drawback is one-sided view of educational problems without an opportunity to

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have at least indirect communication with students².

Internal evaluating system is a regulator located in the educational institution. Typically, it is a university council which develops requirements and criteria for evaluating the quality of education. Major drawback is lack of objectivity due to the fact that often the trainers themselves are the members of the council as it is costly to sustain a full-time staff from the point of view of budget saving in the institution of higher education².

The main aim of the new model of education quality management is to establish a system which allows objectively evaluate the trainer's job and include in it the recipient of educational services, i.e., the student. An important task here is simplicity of model implementation and low costs on its maintaining.

2. Competitiveness is a Critical Component for the Progress, Consequently for Quality Improvement as well

Theoretical and practical aspects of teaching are the 2 facets that need to be assessed. Bologna system which is being introduced in many institutions of higher education is efficient if apply it correctly. The opportunity to choose a trainer for some courses and courses themselves is the critical foundation of forming a competitive environment among the teaching staff. Thus, labor market dictates very strict rules for surviving: Those who can deliver services of the highest quality hold the top place on the iceberg. This approach has been used for many years in business environment where the students find themselves after graduation³.

If to develop this idea, we may offer an option when academic load of a trainer will be an indicator of the quality. This indicator will be based on the fact how many students want to enroll in the course which is taught by a particular trainer.

Thus, if 90% of the students of one specialty are enrolled to the trainer A, it may be an indicator that this trainer offers the most innovative methods of teaching, approves unconventional approaches and increases the interest of the students in a certain scientific problem. A great advantage of a trainer in the 21-st century is his or her own base of intellectual work and ability to provide

the students with these materials in accessible formats: Electronic notes, reference books, additional problems, unsolved scientific problem stimulating the students to take up the course.

At the same time, the trainer B who has fewer students is the problematic element of the system of education. What can teach an academician who is not even able to interest his students? The question is rhetorical. Such low level of involvement will inevitably lead to a low students' response, to their reluctance to use creative approaches, to copying other works with the aim to get a high grade.

The system of "competitiveness" among the teaching staff must be bounded to the academic load and, consequently, to the wages. Competitive approach may lead to a predictable result: Research scholar with 30 years of teaching experience may be less popular than a young professional. Thus, if the trainer does not confirm to the high competitive requirements, he will have to either improve his teaching methods or to cease his or her activity, leaving the advantage of working with students to more competent professionals, including young professionals.

3. Loyalty is the Foundation of Creative Development

Introduction of such a system implies loyalty of the training program towards the student. It is not enough to teach well, it is also important to create favorable conditions for teaching which is a priority in Great Britain and Germany, for instance^{4,5}.

Under favorable conditions we imply a shift away from the stiff grading scale, expulsion and regular checks in the form of written tests. What can lead controls on behalf of head of university, attestations and state exams to? They lead to the students desire to get a good grade by any means (cheating, corruption etc.) and to have a material benefit in a form of a monthly scholarship.

The students who are creative and strive to diverge from the requirements given in workbooks, lectures, as well as from deadlines will be given a low grade unlike those who use someone else's works. Total control causes that the only aim of studying the subject is to get a good grade but not to obtain knowledge and this leads to the low quality of education.

4. European Assessing Practices: Collective Responsibility - Strive to Leadership

The European approach which implies collective evaluation is adequate. Quality indicator is ability to work in a team, to bear responsibility for the overall result but not for one's one area of research⁶. What is important, the quality is assessed as a collective but not a personal indicator. The advantage is the opportunity to learn constantly even during practical work. More successful students will gladly demonstrate their qualities of a leader and less successful students will constantly learn and adopt practical experience.

5. Loyalty: Modern Philosophy of Education or a Way to Worsen its Quality

Despite universal tendency to ensure creative freedom, the situation is possible which can bring us to the source of the problem of educational services quality assessment. We speak about abuse of evaluation criteria by trainers' manipulations. Thus, the choice of a student may be justified not by knowledge but by the simplicity of obtaining a degree. For example, a trainer may cancel his lectures, practical classes and, of course, he or she will be highly rated among the students. In this case, we need a mechanism of resistance against the system regress.

A principle of openness of education may become an innovative aspect in the system. It is based on providing commercial services when the client has a right to get a test version of a product and use all its functions during a certain period for free.

In educational context, such test period may be an interval of 14 days at the beginning of each term. A student will be given a right to attend or to watch lectures, practical classes, master-classes in a classroom or online in the context of one discipline in accordance with curriculum. During 14 days a student may evaluate the quality of education of one and the same subject but taught by different trainers. After 14 days of introductory classes, a student may make a final choice of the trainer. Openness is a critical factor which gives access to testing materials of each lecturer. Further participation in exclusive training course is possible only after enrollment.

Another key element of the evaluating principle and the principle of openness is an independent system of opinions. The system should be controlled by impartial third party. For instance, public authorities and state accreditation bodies. The main goal of the system of opinions is a collective estimate after the completion of 14 days introductory courses as well as open access to qualitative rating indicators of the trainers.

Thus, each trainer will be interested in providing his or her students with exclusive research materials at the beginning of the course during 14 days. After completion of the basic course the students are interviewed about the quality of educational services. The opinion must be subjective, for this reason, the result of the introductory course should be creative work performed by each individual student or by a team.

Open critical approach is critical regardless the area of research as the student may show his full commitment only under conditions of a comprehensive information field which is ensured by a training course and upon condition of a personal interest. Creative works should be checked in a complex. We do not mean accuracy of estimates, compliance with mandatory requirements but about an innovation reflected in the research, namely, in the final creative work. If there is an innovation or a social value, then academic activity of a trainer is proved as his or her main goal is to give basic knowledge and to invoke interest to a deeper studying of a scientific area. The general model of education is shown on Figure 1.



Figure 1. The model of evaluation and teaching.

6. Criteria for Evaluating: Creative Works, Collective Opinion and Resulting Coefficient of Students' Choice

The complexity of autonomous evaluation by the recipient of educational services is in not adequate level of preparedness of the recipient himself or herself. Thus, the student may have insufficient basic knowledge for further studying of a vocation-related subject. Consequently, his or her final creative work and evaluation of a trainer may be not objective enough. In this case, a principle of totality

while analyzing the quality of a creative work, commentaries and evaluations at the beginning of the course and at the end of it. A complex approach will enable to implement internal and external aspects of evaluation.

Internal approach is analysis by the state regulator a system of integrated evaluation and in case with controversial data additional control by means of independent evaluation of final creative works, the quality of given test lectures and materials for practical classes as well as thorough analysis of exclusive materials of the basic training program.

The main goal of the system of evaluation is independent notification of a regulator about low quality of services by means of 4 parameters: Basic evaluation of 14 days introductory course, the number of enrolled students, final evaluation of a trainer by the students and final creative work. Thus, the boundary between the recipient of educational services and external supervising authority is being erased and evaluation and accreditation become more objective. General evaluating criteria are shown on Figure 2.

7. Practical Implementation of a New Approach at the Technical University

Testing of the results of theoretical basis was carried out within the training program of the second course students specializing in the area “Software engineering”. Thirty students from three groups volunteered to participate in the experiment. The students from the second course were chosen for testing as they are aware of basic principles of teaching, evaluating and organizational activity of the institution of higher education. Our experiment enabled us to obtain more objective results with a minimal risk of an error to get empirical data due to the absence of stress factor in a new environment.

At the beginning of the term 6 research associates taught 3 vocation-related subjects to the participants, alternately. Within 14 days the training was conducted within curriculum, and the only difference was that each other class there was a new trainer. Such approach is justified as Bologna process, which is the basis of teaching in this institution, implies the use of modules. For this reason, modular training with different trainers did not have a negative impact on the quality of lectures and materials for practical classes.

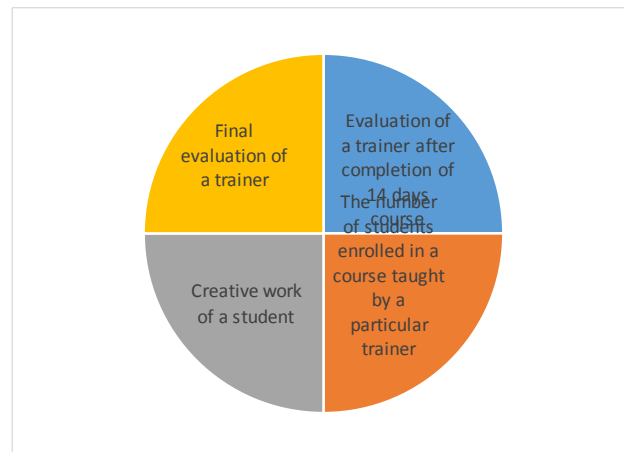


Figure 2. Evaluating criteria.

After completion of a 14 days introductory course, the students were asked to assess the quality of teaching for each trainer by the following criteria:

- Availability of material presentation.
- Exclusiveness of the content of the course.
- Motivation to study the subject further after completion of a 14 days course.
- Expert knowledge of a trainer.
- Motivation of a trainer to have discussions, answer the students' questions.

This evaluating system enables us to assess each trainer anonymously. The results were recorded into a general evaluating system in a digital format. The trainers were evaluated through a questionnaire located on an independent server. The system is protected against multiple responses and evaluation by the users who do not belong to the given educational environment by using a password which becomes known to the participants on the last day of a 14 days period.

The next stage is a digital enrollment of the students into virtual classrooms of the trainers. The distribution turned out to be differentiated. However, later comparison of final creative works and the results of end-of-year exams showed significant increase of motivation among the participants of the experiment to further study of problematic issues in different scientific areas. The students demonstrated a non-standard approach to solving the task.

The final evaluation of the trainers was, primarily, positive. Differential distribution of work load caused

alteration in academic load and, consequently, led to material interest in the outcome. This approach is aimed at improving and systematizing the teaching approach of the trainers who took the last places in the rating based on the four criteria.

8. Conclusions

The ability to choose a subject and a teacher is a natural way of screening out weak research assistants and, consequently, is a way to improve the quality of education. The combination of autonomous and external regulators for managing the quality of education is possible only in the case when there will be no boundary between them. For the purposes of our experiment we used anonymous evaluation by collecting subjective opinions of the students who are direct recipients of educational services. We also assessed the recipients themselves and indirectly the trainers using the method of analysis of final creative works. The analysis was performed by an independent expert commission of a public regulator.

Loyalty to creative approach, elimination of a regular control by means of attestations and personal works will allow initiate a new approach to training young scientists and this makes the process of science development even more rapid.

The element of “control” is the motivation of a student but not his or her ability to solve a certain task. If the student is motivated enough, he will find the question to the answer or ask the trainer to explain it to him. This cooperation is a very important indicator for evaluating the student’s work. The principle of openness in evaluation enables to increase the motivation of a teaching staff to initiate a qualitative study of a scientific problem.

The system of evaluation of the quality of education consists of four criteria: Basic evaluation of 14 days introductory course, the number of enrolled students, final evaluation of a trainer by the students and final creative

work. This method ensures the most objective rating of the trainers.

Group evaluation of results: Teaching of less successful students by the leaders, strive for leadership is an important aspect which is actively implemented within Bologna system of education and that is an essential part of modern teaching philosophy. Integrated approach to obtaining knowledge of high quality will enable to provide basic training for future specialists that are in full compliance with labor markets requirements.

Our experiment may serve as an empirical part of the given research. We applied the system of competitive loyal management of the higher education quality.

Our experiment proved the efficiency and validity of the offered theory about organization of the system of managing the quality of education. Significant improvement of students’ performance, better motivation of both the trainers and the students are the critical factors for developing modern science.

9. References

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