

# Defining objectives and measures for quality assurance at university

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**Abstract** — The aim of this paper is to present the approach taken by Goce Delcev University – Stip (UGD) in order to assure quality in the overall processes. The importance of the quality assurance is a main pillar of the university and here we will present the approach in defining key objectives for quality assurance. For each of the objectives, measures are defined in correlation to the university strategy for development. The objectives and measures are presented with responsible resources and departments in time frame and with means of accomplishment. Each objective includes challenges that need to be answered, so that the objective and measures are being reached.

**Index Terms** — Quality assurance, higher education, accountability, continuous improvement, satisfaction, strategy.

## 1 INTRODUCTION

The changes in the society and economy brought to attention the importance of quality assurance in higher education institutions that requires systematic monitoring and development of an internal quality assurance system that will be able to maintain the institution to a level that is recognised in Europe. That is why it is significantly important for higher education institution as UGD to recognise the importance of quality assurance and continuous improvement as fore to inspire high level of standards at all levels at the university. All of this will assure quality of work, satisfaction of students and proper answer to the needs of the industry and community.

Quality assurance has been adopted within the framework of the Bologna Process as part of the Berlin Communiqué [2] where it is emphasizes that the key responsibility for quality assurance lies on the institution itself. Higher education institutions are expected to build an internal culture of quality that contributes to the realization of their vision of development as well as better recognition at national and international level. [4]

Goce Delcev University (UGD) was founded in 2007 and in accordance with the Statute, is the “highest autonomous public higher education, scientific and art institution, which provides unity in the operation and development of higher education, science and arts and directly through its own units from different study areas transfer knowledge from several scientific, artistic areas and disciplines” [7]. The university has recognised the importance of the quality assurance and this research composed of two parts, shows the approach in defining objectives and measures for accomplishments.

## 2 QUALITY MANAGEMENT SYSTEM AND PROCESSES

The University has several processes that are of great importance in creating the quality of the products and services it offers. The ultimate goal of the organization is constant and continuous improvement of the processes. Permanent improvement of the quality management system is realized by

applying the cycle PDCA (Plan, Do, Check, Act)

UGD internal quality assurance system guarantees that the quality of a higher education institution is a systematic way with periodic check-ups that determine whether the activities and results of the ongoing activities are constitute with the quality assurance system goals and measurements and in accordance with national and ESG standards. [6] This system is responsible for continuous improvement of the quality culture of the institution. The university has defined mission, vision, strategy and development goals and the goal of the internal procedure for quality assurance evaluates the functionality and the purity of the quality assurance system of a higher education institution and his contribution to the mission's achievement and the overall development of the higher education institution and all its activities.

The Quality assurance centre and the university working groups (Self-evaluation group, ISO standards (re)certification group) are responsible for organizing and conducting of quality assurance procedures. They have organised triennial internal evaluations, certification and recertification with the newest ISO standards and European university association (EUA) Institutional Evaluation Programme evaluations.

The quality management system at the university is a system for managing all activities (teaching, scientific and research and administrative technical), which implements all applicable laws of the Republic of Macedonia, the international agreements and conventions, the requirements of the international standard as European Standards and Guidelines for Internal Quality Assurance. [3]

## 3 QUALITY ASSURANCE OBJECTIVES

Quality objectives are set by the university management and are based on the Rector's Program and analysis of the requirements and expectations of the stakeholders. Setting and achieving the quality objectives are followed by appropriate records and are updated accordingly. These are the quality assurance objectives defined at the university:

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### **1. Students / professors ratio**

Key resources to meet this goal are the number of professors and the number of students. It is measured by the ratio of the number of students to one professor and in comparison with the data from the last self-evaluation at the university. There is defined expected number to be reached in the university's strategy and timeframe for reaching it.

### **2. Scientific publications**

Key resources for meeting this goal are professors and associate staff at the university and their scientific research work. It is measured by the number of posted publications in the e-repository at the university.

There is an anticipated number of new publications expected to be published by year and in line with the university strategy. From the analysis of the situation it has been seen that there is room for new analysis and redefinition of this goal for improving this university objective.

### **3. Number of available learning resources**

Key resources for meeting this goal are professors and associate staff at the university and their creative work in their field of specialty and the number of literatures purchased. This objective is measured by the number of published textbooks, the number of new books purchased and the number of books and textbooks uploaded to the e-library.

Examining the work of the university library we found out that literature is obtained mostly from donations from different subjects. However, this figure does not significantly affect the total number of learning sources and is left out for further analysis in this research.

Overall the number of available learning resources as a number does not show the quality of the learning resources. There is a remark that the quantity measure of this objective must be replaced by a quality measure.

### **4. Number of scientific conferences and issued scientific journals**

Key resources for meeting this goal are professors and associate staff at the university. It is measured by the number of organized scientific conferences and the number of published scientific journals at the University.

There are measures defined in the strategy related to this objective for each year of the proposed plan.

### **5. Increased students' satisfaction**

Key resources to meet this goal are professors and associate staff at the university and their attitude toward the students. This is measured by conducting student surveys during the semester and every three years during the self-evaluation of the university. From the analysis of the situation it is seen that each of the surveys were related to different activities related to the quality assurance at the university. The first survey, in the end of the semester, is related to the evaluation of the professors during that semester and the information gathered

was used during the election period for each professor. The second survey, the triennial was done for the purpose of the self-evaluation and in the manner of the quality assurance. Thus, it is necessary to unify the criteria for assessing students' satisfaction with defining measurable single performance criteria.

### **6. Increased material-technical equipment**

This objective is measured by investments in infrastructure and equipment and the introduction of new and improved information technologies at the university. From the analysis of the situation it is seen that there is need for unifying the criteria for evaluating this goal, because some equipment is old, but in good condition and does not need frequent changes compared to some IT equipment that requires improvements, almost yearly.

Overall material-technical equipment of the university meets the legal requirements for the normal execution of the educational process and there is a room for improvement.

### **7. Number of study programs posted on the E-learning platform**

Key resources for meeting this goal are professors and associate staff at the university. It is measured by the number of study programs placed on the E-learning platform. This objective is defined in the strategy of the university and it is expected all study programmes to be part of the learning platform.

### **8. Increased visibility of the university**

Key resources to meet this objective are professors, associate staff at the university, as well as the radio, TV and web department. It is measured by the number of quoted authors, the ranking of webometrics, the attendance of content on social networks and the presence of the media. The number of quoted authors is a measure that is individual for each professor and associate staff and there are several ways to measure it. The ranking of webometrics is a visible number that is defined. The presence of university content on social networks and the presence of the media is a measure that depends on several factors. These factors are currently not measured. It is necessary to define a unified measure for the purpose of the quality assurance policy.

### **9. Number of mobility**

A key resource for achieving this goal is the Department for International Cooperation. This objective is measured by the number of realized mobility of employees and students. There is a defined measure in the university strategy related to the present number of overall university mobility. This objective highly depends on the granted grant for mobility at the university for each year that is decided by the national agency of Republic of Macedonia.

### **10. Increased position of the university in universities rankings**

This goal depends on the entire university. It is measured by the position of the University for ranking universities by

the Shanghai Jio Tong University. [5] There is a complex methodology for measuring the position of a university that is done by the Shanghai Jio Tong University and it consists of 13 elements brought together into five categories:

- Teaching – the learning environment (worth 30 per cent of the overall ranking score)
- Research – volume, income and reputation (worth 30 per cent)
- Citations – research influence (worth 30 per cent)
- Industry income – innovation (worth 2.5 per cent)
- International outlook – staff, students and research (worth 7.5 per cent). [1]

There is a possibility to improve some of the defined criteria in order to improve the position of the university on the list.

#### 11. Increased employees' competence level

This objective depends on the support by the management and employee's commitment to improve their competence. It is measured by the number of trainings conducted for increasing competency, by introducing new criteria for selection in teaching-scientific titles and establishing a training centre for employees. In order to fulfil this objective with the goals of the long-term development strategy at the university, it is necessary to define criteria for analysis of training needs, training

development and training.

#### 12. Maintain financial stability

This objective depends on the management and it is measured by the yearly financial reports, the number of open spin-off companies, and revenues from self-financing activities at the university. The annual reports for the work of the University meets the necessary legal obligations and shows the normal functioning of the university. The number of open-spin and start-up companies is seen as unsatisfactory, but there are limitations beyond the control of the university. The increase in revenues from self-financing activities is steadily increasing with room for improvement.

### 4 DETAILED MEASURES FOR ACHIEVING OBJECTIVES

All before-mentioned objectives have been analysed and detailed plan for following their accomplishment has been defined. The measures were related to the resources. Responsible department and detailed indicators were defined. All of them were put in time frame and level of accomplishments, but this is not presented in this analysis due to confidentiality of some of the information.

TABLE 1.  
Quality assurance objectives with defined measures, resources, departments and indicators

Objective	Resources	Department	Indicators	Means
Better ratio of students / teacher	•professors •students	•Management •Faculties and Academies	•Measured by the relative number of students per teacher •Self-evaluation document	•New approvals for employment •New employment advertisements •Increased number of students
Publication of scientific reference publications	•professors •assistants	Faculties and Academies	•Measured by the number of publications is set repository University •Self-evaluation document	•Stimulating motivation •Legal obligations for professor promotion
Increased learning resources	•professors •assistants	•Management •Faculties and Academies	•Number of issued textbooks •Number of books purchased •Number of uploaded textbooks E-library	•Stimulating motivation •Legal obligations for professor promotion
Number of scientific conferences and issued scientific journals	•professors •assistants	•Management •Faculties and Academies	•Number of organized scientific conferences •Number of published scientific journals	To introduce additional criteria for faculties and academies
Increasing the level of student satisfaction of teaching staff	•professors •assistants	•Management •Faculties and Academies	It is measured by conducting surveys of students	Improving weaknesses Poll
Increased material-technical equipment	•University	Management	Measured by investment in infrastructure and equipment and the introduction of new and improvement of existing IT.	•Infrastructure required by law •Monitoring the needs for new information technologies
Number of study programs posted on the E-learning platform	•professors •assistants	Faculties and Academies	Measured by the number of study programs placed on the platform	•Stimulating motivation •Additional criteria for word title
Increased visibility of the university	•professors •assistants •Department for Radio, TV and Web	•Management •Faculties and Academies	•Measured by the number of cited authors •position of ranking webometrics, •attendance content on social networks •the presence of media	•Action Plan for stimulation for publication in reputable journals •Stimulation of visits to Internet sites and social networks

Number of mobility	Department for International Cooperation	Management	Measured by the number of realized mobility of staff and students	<ul style="list-style-type: none"> <li>•Convergence programs to students</li> <li>•promotional activities</li> </ul>
Increased position of the university in universities rankings	University	Management	Measured by the position of the university ranking of universities by the Shanghai Jiao Tong University.	<ul style="list-style-type: none"> <li>•Analysis of current situation</li> <li>•Making a plan for increasing position</li> </ul>
Increased employees' competence level	employees	Management	<ul style="list-style-type: none"> <li>•Measured by the number of completed trainings to increase the competency</li> <li>•Establishment of a centre for staff training</li> </ul>	<ul style="list-style-type: none"> <li>•Analysis of the need and preparation of training plan</li> <li>•New selection criteria</li> <li>•New criteria for promotion</li> </ul>
Maintain financial stability	University	<ul style="list-style-type: none"> <li>•Management</li> <li>•The financial and accounting operations</li> </ul>	Weigh to the final annual accounts of the work of the University.	<ul style="list-style-type: none"> <li>•Increased number of new spinoffs and start-up companies;</li> <li>•Increasing revenues from self-financing activities only.</li> </ul>

Source: developed by the authours

## 5 CONCLUSION

The importance of quality assurance at Goce Delcev university has been implemented since the beginning of the university. There have been two external evaluations done by the European university association (EUA) for their Institutional Evaluation Programme and three self-evaluations. All of this increased the quality policy at the university and challenged many improvements. The present situation at the university was presented in this research and recommendations were defined for the quality assurance objectives.

University's continuous improvement approach in work means continual checking of the results in comparison with the defined measures, where all the new challenges and problems had to be answered in timely manner. From all the objectives presented here and the analysis done, some challenges have been defined that need to be put into consideration. One of them is the quantity measures for increasing published study materials with quality measure. Another is about the students' satisfaction surveys where measurable single performance criteria must be defined that will evaluate the professor and the overall work of the faculty/university. Visibility of the university remains challenge and it is necessary to define a unified measure for the purpose of the quality assurance policy.

The analysed objectives and defined measures are part of the quality policy defined at the university and should be able to give an answer to the external challenges the university faces, in its constant pursuit of higher quality assurance measures. The overall strategy of the university and the serious approach in quality assurance, at the moment, will help the university to be prepared for what is coming in the upcoming years.

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