

Rethinking the process of the student evaluation of teaching

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Abstract. *Students are usually required to complete teacher assessment surveys (SET – student evaluation of teaching) at higher education institutions around the globe. In some countries focus is put on assessing teaching effectiveness with a view to influencing pay and promotion, but in fact such assessments are a part of broader quality management systems, with focus on enhancing teaching and as a reference for the creation of teaching practice. Within DIP2Future project in this paper some experiences and important points regarding the process of student assessment of teaching are highlighted which should be discussed and think over. The primary aim is to render such evaluations purposive (for student, staff, management of the faculty), but still practical and feasible.*

Keywords. quality of teaching, SET, student evaluation

1 Introduction

The project DIP2Future is implemented by the Faculty of Organization and Informatics Varaždin (FOI) in partnership with the Department of Informatics, University of Rijeka (OIRI). Within the project four new study programs are being developed: 1) Data systems and artificial intelligence, 2) Management of information security and privacy systems, 3) Distributed and interactive systems and 4) Management of business systems transformation and innovation.

The aim of the project is to develop new study programs in the field of ICT in which the needs for acquiring appropriate skills and competencies of ICT professionals in accordance with the requirements of the labor market and trends in technological progress will be met. One of the results of the DIP2Future project refers to the quality of teaching and the improvement of the system of student surveys on the quality of teaching and other forms of evaluation at the faculties.

2 Background

2.1 Teaching as a Service

Education/teaching is, in addition to the research and knowledge transfer/contribution to the community, the major pillar of the activities of a higher education institution.

According to the ISO 21001 (2018), management (system) principles of the institutions dealing with education should, among others, entail:

- focus on the needs of learners and other beneficiaries;
- learning-centeredness;
- engagement of learners and interested parties;
- improvement;
- evidence-based decisions.

The standard (ISO 21001, 2018) promotes “the adoption of a process approach when developing, implementing and improving the effectiveness of a quality management system, to enhance learner and other beneficiary satisfaction by meeting learner and other beneficiary requirements”.

Furthermore, according to the ISO 21001 (2018), the application of the process approach in management (system) enables:

1. “understanding and consistency in meeting requirements;
2. the consideration of processes in terms of added value;
3. the achievement of effective process performance;
4. improvement of processes based on evaluation of data and information.”

Application of assessment methodologies of the educational effectiveness and results of the assessment of the educational effectiveness are the elements of each process, including the process of teaching.

In the context of the mentioned above, it could be emphasized that:

- learners are the main beneficiary of the education /teaching process i.e. service customer;

- the needs of learners which relates to the teaching process/education as a service should be satisfied;
- the process approach in management of teaching/education and evidence-based decisions are the way to meet the needs of learners (and other stakeholders too) effectively; and finally,
- relationship with learners as the main beneficiaries/customers should be on the high level quality; learners should be engaged/involved in all processes of teaching and learning (education) management and decision making (joint decision making) to be sure that their needs are well defined and met, and educational process(es) are managed well and improved constantly, continually.

The high quality of teaching (process) is one the main indicators that a (higher) education institution is near to fulfil the needs of learners/students. This is the reason that Student Evaluation of Teaching (SET) may have in greater importance/weight than peer/expert or/and self-evaluation of teaching.

According Uttl, White and Gonzalez (2017), “Student Evaluation of Teaching (SET) ratings are used to evaluate faculty teaching effectiveness based on an assumption that students learn more from highly rated professors”. In (Scheepers, 2019) it is stated that “when SETs are used, it often serves not only as an instrument in the quality control cycle, but also as instrument for teachers’ individual performance review”.

For many years, student evaluation of teaching has been in the focus of many studies dealing with different factors which may influence the SET ratings/results. For example, based on those studies Pounder (2007) discusses factors which relates to student (Gender effect, Student’s academic level and maturity, Students punishing their teachers via SET scores), teacher (Gender, Age, experience, rank, Teachers’ influencing tactics, Teachers’ behavioral traits) and course (Grading, Class size, Course content, Class timing).

Many factors affecting SET as well as many doubts and issues connected with SET in different educational systems/environments where motivation to start the research and discuss teacher/teaching evaluation in this paper.

2.2 The Quality of Teaching

According to the ISO 21001 (2018), tools for evaluation in Educational Organizations in general may include: Cost Analysis; Satisfaction Surveys; Suggestion Schemes; Complaint and Appeal Systems; Impact Evaluation; Needs Analysis; Statistical Data Analysis; Focus Groups; Self-Assessment; Peer Assessment; Boards and Committees to analyze performance; SWOT; Brainstorming; Quality Methodologies: TQM, Lean Six Sigma, Kaizen.

When it comes to the quality of teaching it could be evaluated by student (student evaluation), by

peers/experts (peer/expert evaluation) or by the teacher/educator himself/herself (self-assessment) among which a student evaluation of teaching/teacher work is the most common.

According to the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG, 2015) “quality, whilst not easy to define, is mainly a result of the interaction between teachers, students and the institutional learning environment”. Furthermore, “quality assurance should ensure a learning environment in which the content of programs, learning opportunities and facilities are fit for purpose”. In the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG, 2015) it is stated that “the heart of all quality assurance activities are the twin purposes of accountability and enhancement” which together “create trust in the higher education institution’s performance”.

“A successfully implemented quality assurance system will provide information to assure the higher education institution and the public of the quality of the higher education institution’s activities (accountability) as well as provide advice and recommendations on how it might improve what it is doing (enhancement)” (ESG, 2015).

In the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG, 2015), standard 1.3 Student-centered learning, teaching and assessment refers the most to the content of student evaluation of the quality of teaching (and learning), stressing that “the implementation of student-centered learning and teaching

- respects and attends to the diversity of students and their needs, enabling flexible learning paths;
- considers and uses different modes of delivery, where appropriate;
- flexibly uses a variety of pedagogical methods;
- regularly evaluates and adjusts the modes of delivery and pedagogical methods;
- encourages a sense of autonomy in the learner, while ensuring adequate guidance and support from the teacher;
- promotes mutual respect within the learner-teacher relationship;
- has appropriate procedures for dealing with students’ complaints”.

So, student evaluation of the teaching/teachers’ is the best way to get insight into the teaching process/teachers performance and to identify possible improvements.

2.3 Evaluation of the Quality of Teaching in the Higher Education in Croatia

Evaluation methods are used at higher education institutions in the Republic of Croatia to assess the work of teachers. These evaluation methods belong to

the area of quality assurance system within which quality assurance measures and activities are carried out. The area of quality assurance and improvement is regulated by rules and procedures, including the procedure of evaluation and assessment of teachers' work.

In the Republic of Croatia, the regulation covering the area of quality assurance is the Quality Assurance in Science and Higher Education Act. The said Act regulates quality assurance and improvement in science and higher education through initial accreditation, re-accreditation, thematic evaluation and external independent periodic evaluation of the internal quality assurance system (audit). It also defines status, activity and organization of the Agency for Science and Higher Education as public institutions in the Republic Croatia, which takes care of quality assurance and improvement in science and higher education, and the role of other bodies in the Republic of Croatia that take care of quality assurance and improvement in science and higher education. The provisions of the Act apply to public and private higher education institutions, public scientific institutes and other scientific organizations founded by the Republic of Croatia, as well as private scientific institutes and other legal entities registered in the Register of Scientific Organizations.

At the level of universities in the Republic of Croatia, related to the evaluation of the quality of teachers' work are:

- the Ordinance on the quality assurance system at the University of Zagreb,
- the Ordinance on the quality assurance and improvement system of the University of Rijeka,
- the Manual on Quality Assurance at the University of Zagreb, University of Rijeka,
- Ordinance on quality assurance of the Faculty of Organization and Informatics and
- Ordinance on the quality assurance and improvement system of the Department of Informatics of the University of Rijeka.

The Ordinance on the Quality Assurance System at the University of Zagreb regulates the goal, purpose, areas of evaluation and organization of the quality assurance system at the University of Zagreb. The goal of quality assurance is to build mechanisms to promote quality and achieve its highest level in educational, scientific and artistic activities, and administrative activities at the University.

The Ordinance on the quality assurance and improvement system of the University of Rijeka prescribes the area of evaluation, structure and operation of the quality assurance and improvement system of the University of Rijeka. The goal of the quality system is to promote a culture of quality and development of institutional mechanisms for systematic evaluation, with the permanent purpose of ensuring and improving quality and promoting high

standards of professional and vocational development of participants in all areas of the University.

The evaluation of teachers' work is based on the results of the student assessment of the teaching process, and the procedure is prescribed at the level of each university. Student surveys examine students' opinions about the work of individual teachers. The purpose of these surveys is to improve the quality of teaching and analysis of results, which should be aimed at highlighting good examples.

The evaluation of the quality of teaching work of teachers and associates of a certain subject as well as the engagement of students in a certain subject takes place in order to improve the work of teachers and teaching in each individual subject on the basis of evaluation. The goals of conducting a student survey are to identify areas and activities that need to be improved or changed.

Universities in the Republic of Croatia conduct surveys as an evaluation method by which students evaluate the work of their teachers and surveys by which they assess their overall study experience. This gives students the opportunity to give feedback and their opinions.

The aim of the survey is to evaluate the teaching work of teachers in a particular course. From the academic year 2011/2012 at the University of Zagreb, teaching evaluation is carried out according to a three-year Revised Cyclic Survey Plan. By the decision of the Senate of October 16, 2015, each faculty/department is obliged to carry out the evaluation of teaching using the paper-pencil method once in three years. The survey is conducted using the Teacher Assessment Questionnaire, which is also available in the English version, and the accompanying Control sheet. Considering that an increasing number of foreign students are studying at the University of Zagreb, from academic year 2012/2013 the English version of the Survey is also available.

In both semesters the survey is conducted during the last two to three weeks of the semester, and for courses taken alternately during the last week of teaching the course. The rules and instructions related to the implementation of the Survey are regulated by the Student Survey Implementation Plan, Instructions for Conducting the Student Survey, Instructions to the Interviewer and Recommendations for Handling University Survey Results for Systematic Reporting to Teachers and Students.

There are more methods that can be used in order to receive information about the quality of teaching: self-evaluation and peer evaluation. With the help of this methods the teacher can obtain information from a completely different perspective. Using all the above methods, information is obtained about the work of an individual teacher and what can be important for students.

In order to self-evaluate their own teaching work, teachers have the opportunity to synthesize their own findings by filling out an appropriate form that includes

three aspects of teaching: teaching skills, motivation and communication, and preparation and organization.

At the University of Rijeka, the evaluation of teachers' work is possible on the basis of different procedures or a combination of the same. Evaluation is carried out in the following forms: evaluation of teachers' work by students, self-evaluation of teachers (teacher evaluates his work independently), evaluation of teachers' work by other teachers, evaluation of assistants, postdoctoral fellows and mentors, analysis of study success, assessment of availability and suitability of teaching materials and institutionally coordinated direct regular communication with student representatives.

The evaluation of teachers' work is based on the results of the student assessment of the teaching process. It is conducted on the basis of standardized questionnaires at the University level (for the purpose of comparability), supplemented, if necessary, with the specifics of work on each faculty. Internal evaluation of teachers' work is carried out regularly, at least every three years, i.e. for teachers whose evaluation results are used in the process of election to a higher title or re-election, at least twice during the period between elections to a particular scientific-teaching or teaching title.

From all the above, it is evident that the universities in the Republic of Croatia have organized procedures for evaluating the work of teachers in accordance with the positive regulations of the Republic of Croatia.

2.4 Student Evaluation of Quality of Teaching: The Case of the Faculty of Organization and Informatics

Student evaluation of the teaching quality at the Faculty of Organization and Informatics is done, in accordance with all procedures defined by the University of Zagreb/The University Office for Quality Management, every third year as the paper-based survey. However, it has been done every year for teachers who want it because of own personal reasons (e.g. checking the effects of the new methodologies/course contents introduced), or as one of the corrective measures taken based on the results of previous student survey results to assure the quality of teaching. It should be emphasized that the student survey of teacher evaluation is anonymous and voluntary (for students-to be respondents). From the other side, the teachers should for the purpose of their academic advancement (promotion) have and provide the valid (more 50% completed survey forms out of total students involved in the, at least, one course), which sometimes could be challenging to accomplish and satisfying (the overall teacher grade greater than 3) results of the student surveys of their teaching.

At the level of the Faculty of Organization and Informatics implementation of the student evaluation survey is managed by the Vice-dean for Teaching and

Students (by its function responsible for the area of quality assurance too) and the Student Survey Implementation Committee (consisting of three members), with the help of interviewers, mostly from the ranks of assistants (which all, of course, sign the Data Confidentiality Agreement/Statement).

Upon the invitation of the University Office for Quality Management, the Vice-dean for Teaching and Students together with the Student Survey Implementation Committee prepares the Student Survey Plan and ask all the teachers for which the survey would be done to check, comment or/and change the Plan. The Plan is sent to the University Office for Quality Management for coding. A code refers to the pair "teacher-course" identifying/denoting for which teacher the survey would be done on which of his/her courses. Coding ensures data protection and privacy during the survey results handling. The Student Survey Implementation Committee asks the University Office for Quality Management for paper-based survey materials which encompass the standard teacher evaluation survey forms (the questionnaire), control sheets and envelopes for protecting/storing the filled in survey forms.

The teacher evaluation standard survey form is available both in Croatian (UNIZG-a) and English (UNIZG-b) language versions consists of the three parts:

1. A-part General information on the student – encompassing the student-respondent gender, regularity of the student-respondent attendance at this particular teacher's classes, the level of interest of the student-respondent in the topic of the course at the beginning, the student-respondent prior grade average, and the student-respondent expected grade in the course;
2. B-part Teacher evaluation for the given course – encompassing the ten statements (for which students are expected to use the Likert scale from *1 - I fully disagree* to *5 - I fully agree* to evaluate how well they (the statements) describe the teacher's work, or to use option *I cannot evaluate*): referring to the teachers: clearly definition of learning outcomes and what is expected of students, well-structuring of his/her classes and the rationally using available time, clarity and understandability of the material presentation, using of various teaching materials to raise the quality of teaching (e.g. e-learning, pre-prepared materials), methods, examples and exercises which facilitate the achievement of learning outcomes, possessing good communication skills and creating a pleasant working atmosphere, motivation and conscientiousness in performing his/her tasks, treating the students fairly and respectfully, regularity of holding his/her classes and beginning the classes on time, and finally, his/her overall evaluation; and
3. C-part Comments on the teacher's performance – in a form of answers to the questions: "What did

you like most about this teacher's work in this course?" and "What did you like especially about the teacher's work in this course or what improvements would you propose in order to enhance the quality of teaching?".

The control sheet (UNIZG-c, n.d.) is intended for interviewers and it encompasses ID (identification) of the teacher, ie. the code for the pair "teacher-course" which is mandatory to identify to which teacher-course the survey form(s) belong to, and more detailed data on the institution/department and (year of) study programs of the course, the teacher and who (which interviewers) and when did the survey and how many survey forms have been filled in/completed.

The Student Survey Implementation Committee prepares the student survey implementation plan (the survey schedule - exact dates, time and place of the survey for each course) and forms the group of interviewers. For the group of interviewers an education is usually organized to introduce them the survey aims, procedures and documents and to assure consistent and high-quality survey implementation.

The surveys are scheduled, according the University Office for Quality Management, during last two weeks of teaching on the course for which teachers are evaluated. Therefore, for students it could be quite demanding as in a short time period they are invited to complete many survey forms.

The Student survey implementation plan (the survey schedule) is published on the web page of the Faculty and teachers are also invited to inform and motivate their own students to participate in the survey via the e-learning platform on which each course in its online version exist.

The survey is conducted in such a way that the interviewers come to the beginning or end of the lecture and follow the prescribed procedure to get completed survey forms which are put and closed in the envelope for each teacher separately immediately in front of students. All envelopes with the completed survey forms are collected and stored safely and when the survey plan is fulfilled and finished all are delivered when requested to the University Office for Quality Management together with the short data on number of envelopes and surveys done.

The results of the student surveys are available to the responsible person (in the case of Faculty of Organization and Informatics it is the Vice-dean for Teaching and Students) which invites all teachers to take over them personally and analyze and reflect on them. It should be emphasized that the individual results of teacher evaluation are available only to the responsible persons i.e. to the Vice-dean and to the Dean and to the teachers themselves (each teacher sees only his/her survey results). The Vice-dean prepares and prepares cumulative results of the survey which are presented to the Faculty Management Board, to the Quality Management Board as well as to the Faculty Council (to all teachers). The results are discussed at the Quality Management Board, which, according the

University prescribed procedure, gives the Opinion, Recommendations and Action Plan based on the Results of the Teacher Evaluation Survey and publishes it on the Faculty web pages. In the document, the action plan refers to the poorly rated teachers with the overall scores of 3 and less (as defined in the University procedure) and usually it encompasses improvement measures as well as repeating the student survey next (each) academic year to monitor the results.

When needed, for the personal, academic enhancement/promotion, the teachers ask the responsible person (Vice dean for Teaching and Students) to issue the Certificate in Institutional Research of the Quality of Teaching in the prescribed form for each course him/her has been evaluated. Additionally, at the Faculty of Organization and Informatics the teachers are advised to ask the Faculty Quality Board for its opinion on teacher work based on the student survey results and scans of the completed survey forms which, in this case, the teacher display to the Quality Board.

In this case, the teacher voluntarily gives to the Quality Management Board insight into the results of student surveys and scanned individual completed survey forms needed to prepare and issue the Opinion. The Opinion contains an overview of the results of student surveys that have been conducted for the teacher in question in the last three years.

3 Problem Formulation and Research Methods

Based on the experiences with teacher/teaching evaluation student surveys authors gained during the last few years some initial issues may be identified:

1. dual nature of the student survey for evaluation of teacher/teaching – voluntary for students and mandatory for teachers when asking for academic enhancement/promotion;
2. motivation of students to participate in the survey and reasons for not participating;
3. implementation of the survey – in a quite short period at the end of the semester which could be very demanding, stressful and tiring for students;
4. questionable authenticity of the survey and its results (there are some evidences that in some cases – for example on the courses with many teachers'/teaching assistants, students did an evaluation of a wrong teacher);
5. questionable purpose of the survey from the perspective of students who sometimes express suspicion that something is being done/changed based on the results of the survey.

Those initial issues identified have been the trigger for starting the research on the perception of the student survey for teacher evaluation and finding the way for

its possible improvement. Inductive approach (Tay & Jebb, 2016) to scale creation was used where people involved in SET were asked to describe concept and these descriptions were derived in order to form the items. To evaluate each of the items for content relevance, representativeness, and technical quality (content quality) we used evaluation by experts and evaluation by population (Boateng, Neilands, Frongillo, Melgar-Quiñonez & Young, 2018).

4 Result – SET indicators

The aim is to gather information on experiences and examples of good practice related to the treatment and evaluation of the teaching quality in order to define SET indicators for overall evaluation improvement.

4.1 Information on Experiences and Examples of Good Practice Regarding SET

A questionnaire was prepared in order to systematically collect data. The questions are organized into three parts:

1. organization of evaluation of the quality of teaching and work of teachers at the university level;
2. organization of evaluation of the quality of teaching and teacher work at the faculty level;
3. general purpose of the survey.

Organization of evaluation of the quality of teaching and work of teachers at the university level refers to current methods used to evaluate quality of teaching which are defined by the university/faculty.

There have been 16 indicators defined:

1. the ordinance defines the implementation of the evaluation of the quality of teaching and the work of teachers;
2. instructions for surveying and conducting other methods of evaluation, method of reporting and acting on the basis of survey results;
3. evaluation documents, e.g. questionnaires/ online forms, instructions for interviewers, survey plans, instructions for handling survey results;
4. forms of evaluation of the quality of teaching and work of teachers are defined/prescribed and used (student surveys, peer-evaluation, self-evaluation);
5. the assessment of the quality of teaching identified as one of the criteria for promotion /selection to a certain scientific-teaching title;
6. completing the survey on the quality of teaching and teacher work is mandatory for students or is it voluntary;
7. forms of the evaluation (e.g. paper based survey or online);

8. the frequency of evaluation - every year or cyclically (every 2, 3 years);
9. the autonomy of the faculty/department in organizing/defining and conducting evaluations;
10. way and the extent of publishing the results of evaluation of individual faculties/ departments;
11. the average results of the entire university and the results of other faculties/departments;
12. ranking lists of faculties/departments according to the summary results;
13. procedures for poorly rated teachers and for excellently rated teachers;
14. the range of grades and the minimum acceptable level of quality of teaching/ teaching work;
15. publishing evaluation results to students;
16. access to detailed evaluation data.

Organization of evaluation of the quality of teaching and teacher work at the faculty level refers to the practices that departments or faculties prescribe with the purpose of improving the quality of teaching.

The third group of questions General purpose of the survey refers to the perception of the purposefulness of the survey. Here, it is examined whether a particular department or faculty conducts the survey of students and teachers about the purposefulness and effectiveness of conducting evaluations and improvement activities based on evaluation results. It should be determined:

1. whether individual evaluation results are monitored (for each teacher) continuously and at what level (at the level of subjects, departments/faculties);
2. whether and what corrective measures are being taken for poorly graded teachers;
3. whether and how excellently rated teachers are rewarded;
4. are corrective measures being taken to improve the identified poor elements of teaching quality at the faculty level;
5. whether the results of the corrective measures taken are checked and evaluated. Are students informed about the corrective measures taken and their results.

5 Conclusion

There is a range of literature that defines the advantages or lacks of SET, and discuss if it is necessary to change or present the reasons why such research should be abandoned. Jones et al. (Jones, Gaffney-Rhys & Jones, 2014) provide a review of previous ideas on student evaluation of teaching (SET) outcomes in higher education institutions (HEIs), with special emphasis on possible validity problems and concerns that should be discussed by HEI decision-

makers before evaluating and summarizing survey findings. Some recommendation regarding SET data collection includes:

- to attend the workshop on SET to get insights the reason for SET, its application and their obligations regarding it;
- avoid utilizing mixed SET data collection approaches (e.g. online / offline);
- use various tools / methods to get input, use focus groups or peer-review;
- ensure that the students who complete the SETs can be identified and their anonymity preserved.

This paper introduces as part of the DIP2Future project's initiative of the planning of improvements in student content evaluation of the teaching. The primary aim is to render such evaluations more purposive (for pupils, staff, management of the faculty), but still practical and feasible.

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