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Students' attitudes on the quality of university teaching

Abstract: The quality of university education has gained attention in recent years. It has become not only the subject of research in areas closely related to education, but also the topic of interdisciplinary teaching, writing, and research around the globe. Ensuring the quality of university education has become a global trend and a priority of modern society. In light of this, our research has grown. The aim of this study was to explore students' attitudes on the quality of university teaching via its criteria, to look at elements that affect quality, and to observe differences in the attitudes of students from different faculties. The results, based on a sample of 173 students from five faculties, show that to create conditions that ensure and raise the quality of university teaching, the following criteria are important: that the faculty was students' first choice, the way the content would be presented, students' regular participation in courses, and the positive social and emotional climate.

Keywords: evaluation, criteria, quality, students' attitudes, university teaching

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Introduction

The importance of the quality of university education (QUE) has been addressed worldwide. In Croatia, QUE was mostly evaluated on the basis of students' surveys at the end of every academic year. Based on these criteria, one professor[1] was more successful than the others independently of how many students[2] participated in his evaluation. QUE cannot and should not rely solely only on the results of such surveys. Recently in Croatia, boards for quality assurance have been established, with the main purpose of following, improving, and evaluating QUE on all universities' faculties. Significant difficulties in research on QUE arise from the difference in definitions and comprehension of the quality. A huge shift in the quality assurance of higher education occurred when the pedagogical-psychological and didactic-methodological training of research assistants was introduced. The training is done by the Faculty of Teacher Education in Osijek to make meaningful improvements in QUE at the University of Osijek.

Looking globally, the trend in high education is the implementation of different systems for quality assurance with an emphasis on education, responsibility, and improvement (Kovač et al. 2002). The way in which students' education is evaluated requires the sensitive collection of quality indicators, and poor estimations can ruin otherwise fairly well-developed curricula (Dubovicki 2013; Erwin and Knight 1995). Quality assurance in higher education is called the "social game of its own surveillance" with its main purpose being that the interested parties can be satisfied with the work of high education institutions (Mencer 2005). The need to evaluate university education was recognized in Croatia, and in 1995 the national project *The Quality of Teaching in Higher Education* was started. Its main goal was to look at the internationally accepted criteria of QUE (especially at those closely related to university professors' competences), in what scale do they relate to university education in Croatia, and according to those results to develop a model for the development of university staff, which would have the task of building a "culture of quality." The first phase of this project determined that Croatia's practice is significantly different from international ones and that QUE (mainly observed from students' aspects) is not satisfying. The second phase included the development of a model for improving university education in Croatia. The basic principles used for the development of that model were: knowledge is open, ensuring a dynamic system, university staff development should be based on "reflective practitioner" practice, and continuous quality improvement based on the collegiality of university staff. Ledić et al. (1999) developed a questionnaire with 15 elements to assess students' and professors' attitudes. The research was conducted at the University of Rijeka and included the evaluation of perceptions of ideal and real forms of education at the university. The results showed that their attitudes differ significantly, but professors show a higher level of criticism and dissatisfaction. It is interesting that both have similar attitudes toward the quality of teaching. Professors have a traditional view of education quality, especially when

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1 The term "professor" considers persons of both genders teaching in university programs.
2 The term "student" presents persons of both genders attending lectures in university programs.

"respect for students' individual differences, responding to students' feedback, and asking for feedback" had the lowest ranging.

It can be concluded that professors' primary interests were themselves and their courses, while students did not typically present the main focus of their interest. On the other hand, students did not differ much in their perceptions as well. They had a high opinion of professors who are experts in their field, and those who grade them honestly and fairly. In addition, students really appreciated well-prepared professors and the availability of resources. Even more interesting was that students and professors considered the following least important: asking for feedback, responding to students' feedback, and respect for students' individual interests. These findings pointed out that students lack interest, which was confirmed by their comments throughout the whole questionnaire, in other words expressing negative and pessimistic attitudes without any sign or desire of change, in the sense that any attempt to change would be a total waste of time. The elements of this questionnaire are highly covered in ours.

The paradigm change toward QUE

Authors from the field of education research have developed a number of definitions of quality, and they have different understandings of which conditions are needed to ensure QUE. As one of the main conditions for university education quality assurance, Greene (1994) stresses the change in paradigm. "Paradigm [...] is a mental model on how the real world functions – it is in some way 'the closest guessing' based on our experience and information we have got. Our beliefs, values and actions determine our paradigms. When we receive new information our paradigms can be changed, and when that happens, we will probably change the way we think and act." (Ibid., p. 13)

That is really the case. If we start teaching with an attitude that students are not sufficiently interested in our course, if we think of them as lazy and not sufficiently active, that will surely make teaching somewhat difficult and create an atmosphere in which we only do our lectures merely to do them, without finding personal satisfaction in our job. If we set high standards for students, expecting them to give their best: "[...] if students set high standards for themselves, good chances are that they will achieve these high standards [...]. When you aim for the best, 'satisfying' will be achieved on its own." (Ibid., p. 15) Therefore, it is necessary to actively include ourselves in motivating students to ensure quality will not absent. In their view on quality, Harvey and Green (1993) think that a transformation is needed in terms of the parties included in the entire education process and in terms of self-improvement by which students get more jurisdiction over the responsibility and management of education process. Students' feedback can greatly affect QUE. "Placing a learner at the center shifts the emphasis from the value-added measures of enhancement to empowerment." (Ibid., p. 25) Students should get control over their education by being able to choose program suitable for them, as well as elective courses that would suit their interests and needs.

Quality assurance of university education should be one of the most important permanent goals, not a one-time event. Harvey and Green (1993) suggested that quality is used in five ways in the higher education debate: excellence, perfection, fitness for purpose, value for money, and transformation. They defined quality as a traditional notion of quality, quality as perfection or consistency, and quality as fitness for purpose. The *Traditional Notion of Quality* is related to a term "high class," something special, excellent, but without determining the guidelines by which QUE should be evaluated. The *Quality as Perfection or Consistency* approach sees quality as consistent, intolerable, and asking to set up things according to teaching outcomes; it is closely related to a culture of quality that sets up equal responsibility of all parties for QUE. *Quality as Fitness for Purpose* is an approach suggesting that quality has meaning only if the product or service has a purpose. Still, around world as well as in Croatia, no firm criteria have been defined by which quality should be evaluated. "If we want to find core criteria for assessing quality in higher education it is essential that we understand the different conceptions of quality that inform the preferences of different stakeholders." (Ibid., p. 29)

Maguire and Gibbs (2013) attempt to clarify the meaning of quality: "Quality assessment can be culture or context bound, discriminatory, subjective, based on prejudice as much and as often as it can be seen to be objective and ethical." (Ibid., p. 42) The authors emphasize the importance of clarifying the term. Members of the academic community are invited to define clear criteria by which QUE should be evaluated, considering all specific and different environmental influences between countries (ibid.). That would improve collaboration in terms of encouragement, improvement, and evaluation of quality among faculties around the world (ibid.).

Kramar (2006) says that didactic analysis has a significant role in terms of developing QUE and defines it as an "important activity of the teacher related to the whole teaching process and encompasses all its aspects, points and phases. Broader, it relates to constant knowing of teaching characteristics to get a clear insight in its structure, flow, quality and efficacy. This is all inevitably needed for a successful performance of the educational process." (Ibid., p. 107)

The importance of didactic analysis was emphasized long ago by Klafki (1958). Didactic analysis is directed toward knowing, clarifying, and evaluating the overall educational-teaching process, and in its individual didactic components. In addition, the didactic analysis of teaching includes diagnostic-prognostic, aimed-correctional, evaluation, motivational, and developmental functions that the teaching process approaches from different aspects. Kramar (2006) notes that the didactic analysis of teaching should aim at a school's vision development contributing to a new QUE and the professional development of teachers and students. This can be adopted in the context of university teaching, where didactic analysis could give better basic guidelines in further planning and as a function to improve the quality, as well as to support the professional development of both students and professors.

On the other hand, authors from the United Kingdom (Nahai and Österberg 2012) note that the change in perspective in terms of putting students in professors' position, and professors in a position of the one helping would result in multiple gains for both groups, as well as society. These authors describe in detail how to

implement Students' Quality Circles (SQCs) in universities, originating from the production sector in Japan. In 2009, a SQC was initiated at the Kingston University London, seeing education as currency, as a democratic process that strengthens a bottom-up approach to innovations and problem-solving practice.

Overview of earlier studies

The aim of the study overview is to determine factors that have been found to significantly affect students' attitudes on the quality of university teaching (QUT), as well as those that should be included as QUT characteristics. Fernández and Mateo (1992) in the early 90s intensified the need to follow and evaluate the QUT, conducting a series of large-scale studies on students and professors from Spanish universities. They developed a questionnaire of 39 elements that covers some of the basic variables related to QUT. Further on it was adapted to test teaching competence and teachers' motivation. The development of such instruments was justified with intensive research on QUT from the late 80s when "the opinions of university students are becoming a key and necessity, although by no means sufficient, in the evaluation of teaching excellence. Students have shown themselves as capable of identifying significant dimensions of effective and efficient teaching. Their opinions seem to correlate to a high degree with those of other important agents involved in the same teaching/learning settings, while remaining relatively constant over time. Moreover, students' evaluation of teaching they receive seems to bear some relation to a degree of learning achieved." (Ibid., p. 676)

Research by Zerihun et al. (2011) on two Ethiopian universities showed that teachers' performance represents one of the main determinants in QUT, by both students and professors. Moreover, both groups predominantly see teaching as knowledge transfer and estimation based on the recall of factual knowledge. It should be stressed that institutional practice in Ethiopia is teacher-dominated and content-oriented, and the system is supported by the current practice of evaluating successful teaching. The teacher-oriented approach to learning is related to students' reproducing orientation (Trigwell et al. 1999), which involves the recall of firm facts, without interpreting them or correlating them to earlier adopted knowledge (Zerihun et al. 2011). The same group of authors stressed troubling information that the majority of students (71%) consider their role in the learning process to be exclusively passive, and the recommendation is to encourage students to gain feedback. Practice in Ethiopia involves getting feedback at the end of a course. The same group of authors developed a questionnaire to enable students to evaluate learning from aspects of the personal learning process (Zerihun et al. 2012).

Experience in examining students' attitudes on QUT

Earlier studies on QUT (Hill et al. 2003; Lagrosen et al. 2004; Voss and Gruber 2006) reported that students evaluate content as the least important and focus more on other aspects such as their relationship with their professor (in terms

of his/her accessibility, enthusiasm, and good mood) and how much teaching helps them to pass exams and to find employment. The heterogenic approach to these issues involves the whole sphere of examining QUT, and it is called the "discourse of quality" claiming that: "[...] changes should be made in a wide range of operational aspects of educational institutions, including structural changes (such as the establishment of organizational units that cut across traditional frontiers, such as quality committees), the introduction of tools to improve the management of both teaching and administrative tasks (such as management by processes), the establishment of procedures for the assessment and control of quality and information systems by which they can be operated (such as staff assessment programs) and the promotion of cultural change among academics to improve the attitude of teaching staff towards the renewal of teaching methods and catering for the needs of their students." (Barandiaran-Galdós et al. 2012, pp. 93–94)

Furnham and McManus (2004) conducted a study on 1033 students, examining their attitudes toward QUT. Students completed a questionnaire consisting of 32 questions based on a Likert scale (1-definitely no, 2-probably no, 3-probably yes, 4-definitely yes). The results showed that students highly agree on the following:

– social and life skills gained on the faculty are of great importance,
– the reputation of the university is an important factor in the final choice of faculty,
– higher education is seen as enhancing their possibility of getting a better paid job,
– their higher education will be useful for society,
– social aspects of faculties are equally important as academic development, and
– gaining a "good reputation" for a specific faculty is still under the influence of students' evaluation on QUT (ibid.).

Students' responses were equal in their attitude that they should not pay more for a prestigious faculty and that faculties should not have the right to decide on scholarships by criteria of prestige or a kind of ranging. Many students (68.7%, definitely no + probably no) reported that their families' expectations of their decision to choose a certain faculty did not significantly influence their decision.

Professors' research experience influencing attitudes on QUE

Barandiaran-Galdós et al. (2012) were one of the first group of authors in Spain studying attitudes of university professors on university teaching determinations. They believe that the conditions with which students enter and carry on after higher education have a significant influence on the results, which we also considered an extremely important factor and addressed in the first part of our study. Based on the ten most important factors for QUT from

the students' perspective, motivation is highly positioned. Motivation should be promoted more since it is the most important condition needed to accomplish all other conditions, and to achieve the final result. Importantly, professors think that the most important factor related to QUT is their competence and ability to approach students on content, while students think that the most important factor is their relationship with professors. Students also address QUT from the aspect of future employment. Different points of view on education are obvious, but just as important is the fact that both parties really appreciate and nourish the QUE process itself.

A review of the studies from Latvia suggests that students' evaluation is determined by subjective impression, and the most of negative comments relate to the knowledge evaluation (Vevere and Kozlinskis 2011). In addition, a lecturer's personal traits have a strong influence on students' motivation and learning process. The authors emphasize the need to use validated questionnaires to ensure the standardized evaluation of students. These questionnaires should include: knowledge transfer, knowledge evaluation (learned), the availability of professors, and their personal features. The professor-student relationship was unexpectedly shown as a key component, shown to be a key driver in students' motivation influencing specific studies, research, and their research interests.

Self-evaluation of QUT

QUT should be one of the basic factors by which students decide what faculty they will choose. After studying students who participated in the evaluation of teaching in different ways, Ntombela (2013) showed that students evaluate QUT on the basis of previous experience they bring from earlier education. University professors should determine the interests and needs of today's students, and based on that combine different styles of teaching. Still, the majority of professors are led by a personal formula of what they believe students should know/learn, and it is not rare for lectures to be done using a uniform style of learning that is dominant and characteristic (well-known) of a specific faculty, course, or professor (ibid.).

Authors from Spain emphasize that students' one-way evaluation of professors is not appropriate (Díaz-Méndez and Gummesson 2012), and the reason lies in the fact that the complexity of the entire university education system includes all its parties: students, professors, and other staff. They found that students consider themselves incompetent to evaluate the knowledge of professors, and they do not agree with the idea that professors should be paid according to their success with students (ibid.). Students also think that this could lead to fewer demands by professors, which would present a threat to their professional skills and reputation, causatively influencing their future (ibid.). Earlier research, also conducted in Spain by Gallifa and Batallé (2010), shows how important is to consider service quality while evaluating university education. It could also distinguish some dimensions in branding the university. Their research integrated all five aspects of service quality determined by Parasuraman et al. (1991). This

enabled the separate evaluation of campuses in relation to the whole university. Important insights were gained for the quality of service, which could be used for branding and overall better evaluation by students. Gallifa and Batallé (2010) note that this is an interesting approach on how to address the student population's perception of quality, particularly in the case of a multi-campus system.

The self-evaluation of teaching (independently on that which side is doing it) is undoubtedly important for quality improvement since often these results are the first source of information on the quality of teaching. Different methods are used to collect these data: diaries, evaluation charts, students' questionnaires, taping course, debates, arguments, numerical scoring, and others. The more different evaluation activities we use in our teaching, the more objective the results will be. Still, continuous feedback from students is important for the (self)evaluation of university teaching.

Empirical research

In this section, we will present the main findings of the empirical research conducted in the academic year 2012/2013. The main research aims were to examine students' attitudes on QUT, to examine criteria for QUT, and to look at the differences in attitudes of students coming from different faculties.

Research question and hypothesis

According to the stated research aims, the main research question was: What are the attitudes of students from different faculties on QUT? We made four hypotheses:

– H1: Students study on the faculty that was their first choice.
– H2: The majority of students regularly attend courses.
– H3: For students, content is one of the main criteria by which they evaluate QUT.
– H4: Students consider social climate an important criterion for the improvement of QUT.

Sample

Students included in the study were from five faculties of the University of Osijek: the Faculty of Civil Engineering (GF), the Faculty of Food Technology (PTF), the Faculty of Law (PFO), the Faculty of Agriculture (PFOS), and the Academy of Arts (UA). All participating students came from different cultural, educational, sociological, and economic backgrounds, and these confounding factors are challenging to eliminate. On the other hand, these factors ensured a randomized sample of the entire university's student population. Basic characteristics of the

participating students (including demographic and individual data on gender, and age) are shown in Table 1. The overall number of students that filled in the questionnaire was 173, with a higher prevalence of female students (66.5%, Table 1). The average age was 20.3 years with a range of 18 to 29 years, and one student from the Academy of Arts with 42 years of age. Regarding the distribution between faculties, the largest number of students comes from the Faculty of Civil Engineering (GF) and the Faculty of Food Technology (PTF), while fewer students from the Faculty of Law (PFO), Faculty of Agriculture (PFOS), and the Academy of Arts (UA) participated (Table 1).

Characteristics		f	f%
Gender	Males	58	33.5
	Females	115	**66.5**
Faculty	GF	54	**31.2**
	PTF	61	**35.5**
	PFOS	21	12.1
	PFO	22	12.7
	UA	15	8.7
Living conditions	With a roommate	78	**45.1**
	With parents	57	**32.9**
	Alone	34	19.7
	Married	4	2.3
Student's status	Full support of the MSES	135	**77.9**
	Partial subvention of the MSES	32	18.6
	Self-financing in full	6	3.5

Table 1: General characteristics of all students participating in the study (N=173)

According to their living conditions, most of the participating students live with a roommate (45.1%), and a large number also live with their parents (32.9%). Students' studying status show that 77.9% are under the full support of the Ministry of Science, Education, and Sports (MSES), 18.6% of students are under the partial subvention of the MSES, while 3.5% of students are financing their studies in full (Table 1).

Data collection

The research consisted of an independent fill of an anonymous questionnaire. The questionnaire was developed specifically for the study and consisted of 12 questions, 11 of which had multiple choice answers. The last question was directly related to QUT and resulted from the initial status on the University of Osijek. Students evaluated these criteria on the basis of Likert's scale, giving 1 for do not agree at all, 2 partially agree, 3 neither yes nor no, 4 partially do not agree, 5 do not agree at all. In the selection of criteria that were included in the questionnaire, we took care to cover the aims of teaching, its organization, content, methods of

work, didactic material, social climate (professor-student relationship), outcomes of teaching, and economic aspects of teaching.

The research protocol included primary contact and the arrangement of the exact date and time with several professors. Professors were contacted randomly and based on their decision to allow or not allow investigators to approach students, and exact dates were set. On the arranged date, investigators came before the lecture of a particular course, gave questionnaires to all students that came for the lectures that day, and explained the main aims and how to fill in the questionnaire. Then, 15 minutes were left for students to fill in the questionnaire. Before starting, students could ask additional questions about the questionnaire and could ask for additional explanation. All questionnaires were filled in individually, without the influence of a third party. The anonymity of all subjects was ensured at all times, and through data analysis they were all coded with numbers. The research was conducted in accordance to all ethical principles and human rights.

Research method and data analysis

The method used in the empirical part of the research was causal and non-experimental.

Statistical analysis was done with software tool Statistica 12.0, at a significance level of p=0.05. The normality of data distribution was tested by the nonparametric Kolmogorov-Smirnov test for the comparison of medians and arithmetic means as well as histogram plotting. Descriptive statistical analysis was performed with Kruskal-Wallis or Friedman's test and Spearman's rank order Correlations, since the overall data did not show a normal distribution. For categorical data, Fischer's exact test was used. MS Office Excel was used for other calculations and graphs.

Results and Discussion

QUT itself is related to the choice of faculty. It is of great relevance whether a student studies on a faculty that was his/her first choice or not. Our results show that 60% of students really do study with the faculty that was their first choice, for 30.8% it was their second choice and for 9.2% their current faculty was their third or even lower choice. Among those students, number one choices were mainly faculties of medical sciences (i.e., medicine, stomatology, and pharmacy). The majority of students (N=39) who did not get their first-choice faculty said it was because they did not satisfy entering quotes, than small quotes of that particular faculty (N=18), and bad financial status of their parents (N=8). Based on the description analysis, we can conclude that our findings confirm *H1: Students study on the faculty that was their first choice*. The reasons behind this should be analyzed in more depth via future studies. It is important to stress that these data confirm the need to look more into students' motivation at their entry level at a university, as shown by Barandiaran-Galdós et al. (2012). Low motivation in terms of students not studying with the faculty they wanted presents a starting problem in terms of QUE. If the overall QUE process remains at the traditional

level, as found by Ledić et al. (1999), improvement in students' satisfaction and motivation should be expected. Therefore, an even higher influence of students' subjective impression can be expected, consequently resulting in low evaluation scores. This is where university professors should take action and improve overall outcomes, first of their students and then of the entire university.

Other questions included students' attitudes on separate criteria that are important for QUT, which were grouped in eight categories based on students' opinions.
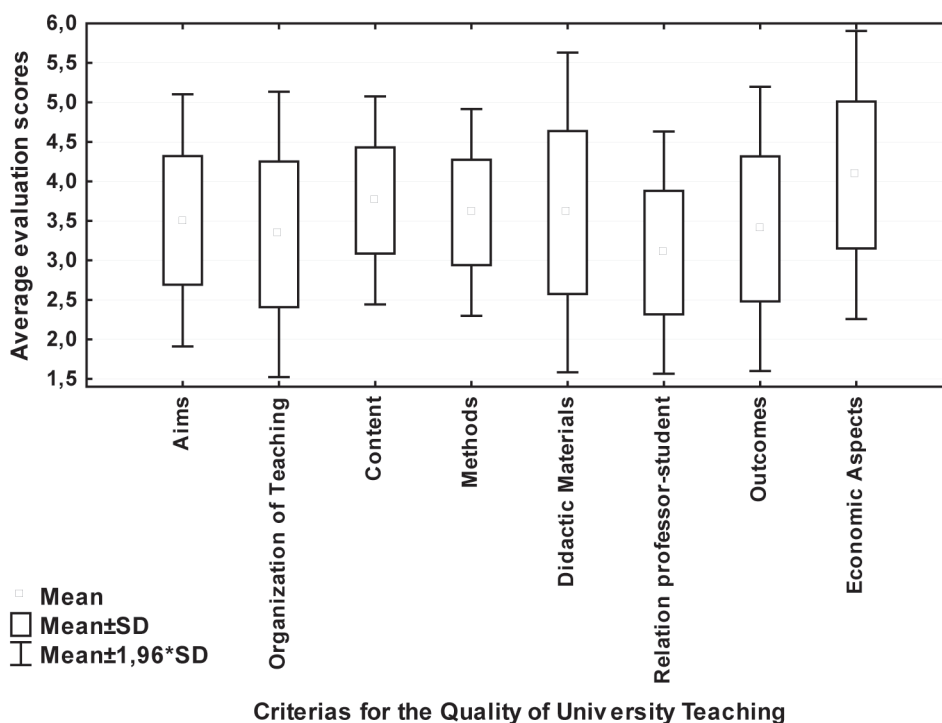

Figure 1: Average scores for all tested criteria for QUT (N=173; Friedman's test)

Figure 1 shows that generally, students (based on average scores of all students for a particular criterion) consider economic aspects (mean score 4.1±0.9) and content (3.8±0.7), followed by methods (3.6±0.7), didactic materials (3.6±1.0), aims (3.5±0.8), and outcomes (3.4±0.9) the most important criteria for evaluating QUT. Less important criteria are the organization of teaching (3.3±0.9) and the professor-student relationship (3.1±0.8), with the lowest scores (Figure 1). Based on the scores obtained for the observed criteria, we confirm *H3: Content presents one of the main criteria in QUT according to students*. Comparing the mean scores for each of the criterion by faculties, we found interesting results (Figure 2). In fact, no matter from which faculty students come, they consider content equally important. This additionally confirms *H3*. The highest statistical significance (p<0.001) was found for criteria with the lowest scores, i.e., for the professor-student relationship

and outcomes (Figure 2). Statistical significance according to faculty was found for the organization of teaching (p=0.008), aims (p=0.014), and didactic materials (p=0.015). We have to stress that for didactic materials, the greatest difference was observed among students, who considered them extremely important in overall improvement in QUT (PTF, PFOS), while students in some other faculties (UA) think of this criteria as completely irrelevant. These extremes can partially be explained by the specific aspects of particular studies, and depending on whether theoretical or practical knowledge and skills are more highlighted.
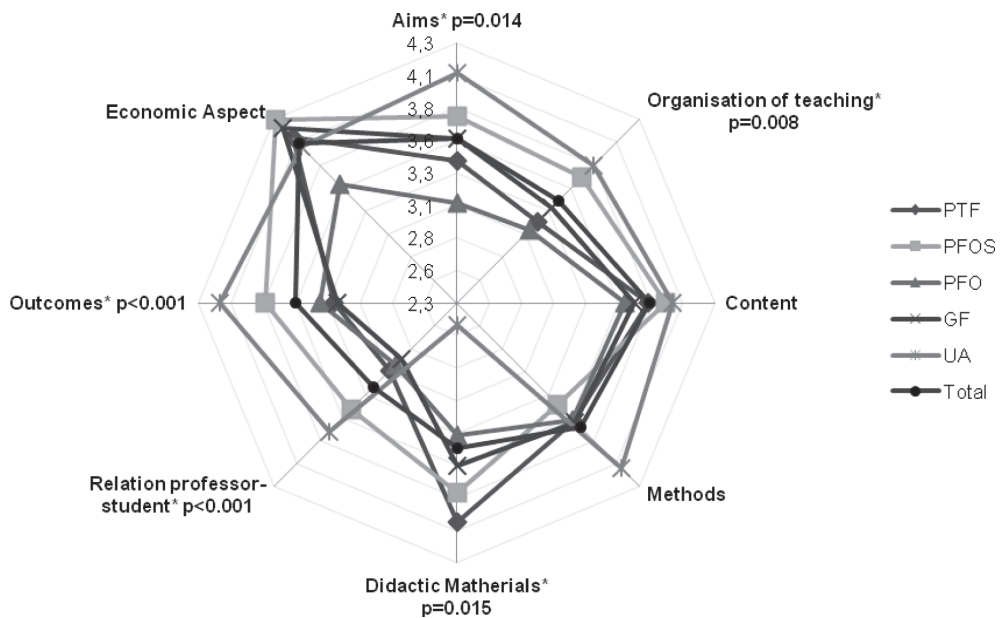

Figure 2: Evaluation of all tested criteria for QUT overall and by faculties (N = 173)
* marks statistical significance at p<0.05, Kruskal-Wallis test

Another criteria in QUT is course attendance. The results indicate that 49.4% of students attend more than 75% of all courses[3], and 29.1% of students would attend all courses even if they were not mandatory. It is interesting that 7.6% of students do not want to attend any courses, but they are since it is one of the conditions required to get professors' signature and gain access to complete a course's exam; 2.3% of students would attend courses only of taught by specific professors. According to the above descriptive analysis, we confirm *H2: The majority of students regularly attend courses.* Still, it is interesting to note that Fischer's analysis did not show any statistical significance between years of study and level of course attendance. In addition, no significant correlation was found between course attendance by faculty, except in the cases of UA and PTF (p=0.033), and GF where it reaches a level of significance (p=0.056). This is understandable

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3 The term includes all forms of teaching: lectures, seminars and practical work.

considering the major differences among these faculties. It should be noted that all students from UA (100%) said they would attend all courses even if the courses were not mandatory. These results confirm earlier findings by Bognar and Dubovicki (2012) stressing the importance of the social and emotional climate in creating positive reinforcement for learning, as well as for the development of creativity of both students and professors.

On the other hand, even though students from UA confirm the importance of social climate, the average score for the professor-student relationship is the lowest (Figure 1) at merely 3.10 ± 0.8. Based on the average scores and statistical significance found for the observed criteria, we conclude that students do not recognize the importance of this relation, and do not consider it a relevant factor that would influence the overall QUT (GF, PFO, PTF); therefore, we have to dismiss *H4: Students consider social climate an important criterion for the improvement of QUT*. These findings are in contrast to those reported by Barandiaran-Galdós et al. (2012), ,who found that students from Spanish universities really appreciate their relationship with their professors and consider it an important factor in overall QUE (ibid.). Moreover, low scores show that professors currently still tend to think of university education in a traditional way, as was shown by Ledić et al. (1999). That is where action should be taken, encouraging and helping professors in making more effort in terms of making their courses more appealing, more interesting and provoking for students, provoking their curiosity and interest in their courses, which would finally result in higher interest for the faculty as well. Courses need to be focused on the development of personality through satisfying the interests and needs of students; otherwise some form of repression needs to be used, which is in conflict with the professor-student relationship (Bognar and Kragulj 2011, p. 59; Dubovicki 2013). This is in line with the humanistic approach, which has been emphasized by many (Maslow 1968, 1976; Rogers 1969).

Therefore, students who did not have the chance to study on their first-choice faculty still find themselves and enhance their motivation. After all, students' eventual success is the real measure of a faculty's success.

Interestingly, students who attend 75–100% of courses have significantly higher scores than students who attend up to 50% of courses or those who regularly attend courses because they are mandatory. A statistically significant difference between these two groups of students was found for criteria methods and didactic materials, while the greatest differences were found for content (3.9 vs 3.1, p<0.001), the organization of teaching (3.4 vs 2.7, p<0.001), professor-student relationship (3.2 vs 2.4, p<0.001), and outcomes (3.5 vs 2.7, p<0.001). The results indicate that insisting on course attendance, highlighting that they are mandatory and/ or a condition to access the course's exam, leads to a worse outcome. This results in students' worse subjective impression, leading to a worse overall outcome for them, dissatisfaction, and in lower evaluation scores for QUT. Earlier findings are in favor of such conclusion that the social and emotional climate (Bognar and Dubovicki 2012) and students' subjective impression (Fernandez and Mateo 1992; Vevere and Kozlinskis 2011) play an extremely important role in the overall evaluation of QUT.

Considering the most common grade in their index, students having the most enough (2) grades have, statistically significantly, the lowest scores than other students. This trend is the most obvious between students with the grades enough (2) and very good (4). As expected, no significant difference in the scores for any of the tested criteria was found between students having very good (5) and excellent (5) grades. When the overall influence of grades in every tested criterion is observed, a statistically significant correlation was found only for the professor-student relationship (p=0.006). These results confirm the strong influence of students' subjective impression on professors' evaluation, and again point out the need to control this confounding factor in the overall evaluation of professors, as emphasized by many others (Díaz-Méndez and Gummesson 2012; Fernández and Mateo 1992; Verve and Kozlinskis 2011). The outcomes of teaching in terms of the final grade represents one of the main, if not the most important factor that influences overall professors' evaluation, as shown in Figure 1, and which was confirmed by others (Stehle et al. 2012; Tsai and Lin 2012). Stehle et al. (2012) found that students' subjective perception of learning significantly correlates with their practical examination score. In favor of these conclusions, Spanish authors Díaz-Méndez and Gummesson (2012) found that students think their subjective impression has a strong influence on their overall evaluation of professors and that it should not be taken as the one and only criterion in a professor's evaluation.

	Aims	Organization of teaching	Content	Methods	Didactic Materials	Professor-student relationship	Outcomes
Organization of teaching	0.566						
Content	0.484	0.424					
Methods	**0.520**	0.350	**0.461**				
Didactic materials	0.340	0.223	**0.407**	0.239			
Professor-student relationship	0.445	0.345	**0.563**	0.368	0.245		
Outcomes	0.308	0.262	**0.493**	0.353	0.125	**0.512**	
Economic Aspects	0.268	0.213	**0.417**	0.287	0.132	0.195	0.351

Table 2: Spearman's rank of correlation for all tested criteria for QUT
Note: all values are showing statistical significance at p<0.05, but only values that show moderate correlation are marked.

Spearman's test of correlation between all scores and tested criteria show that the content and aims are correlated with most of the tested criteria (Table 2). The highest correlation was found between the aims and organization of teaching (r=0.566), the aims and methods (r=0.520), and the content and professor-student relationship (r=0.563). The professor-student relationship shows a statistically significant correlation with outcomes (r=0.512). These results confirm the need to create a positive social and emotional climate to benefit both parties (Bognar and Dubovicki 2012; Fernandez and Mateo 1992; Vevere and Kozlinskis 2011),

confirming our first statement that the highest responsibility lies with professors and their engagement with students.

Conclusions

This paper deals with QUT. Criteria on which it was based resulted from a broad review of domestic and foreign literature that dealt with this issue. Having in mind the complexity of this phenomenon, objectivity was maintained to the extent possible.

Considering the fact that 40% of students said they study on a faculty that was not their first choice, university professors are tasked with enrolling and motivating our students for the work for which they are being prepared. Participation in courses is another important segment in QUT. Our results show that students still do not participate in courses as much as they should, perceiving them as not sufficiently stimulating. Courses that students gladly attend are those where every student can develop him or herself to the level of his/her full potential, which is one of the main assumptions for improving QUT.

The aim of this study was not only to determine the current conditions, but after gaining insight to create a teaching environment that would take care to develop a democratic climate and encourage positive emotions—teaching in which students would be equal partners in the creation of teaching activities, and teaching that would be motivating for all students, particularly those who are studying with faculties that were not their first choice. Considering the fact that students perceive content as an important criteria in QUT, activities by which it is presented to them are very important. Data on 50% of courses attendance are not in our favor. Therefore, we should improve teaching at the level of motivating and stimulating students. We did not forget to address the importance of subjective impressions by both parties, which present not only limiting factors in the development and improvement of university teaching, but on the other hand can be a motivator for such activities. Subjective impressions are important for any research that cannot diminish all confounding factors, but it is important to limit them to the extent possible.

Our research has led to numerous questions that should be addressed in the future on other faculties as well. Future researchers could consider other possible ways QUT and criteria could be analyzed. Quality teaching should go hand in hand with needs and interests of all included parties, while serving as the basis for creating new roles for students and professors.

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