Critical assessment of quality assurance system at higher education institutions from facultyY PERSPECTIVE – EVIDENCE FROM CROATIA

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CRITICAL ASSESSMENT OF QUALITY ASSURANCE SYSTEM AT HIGHER EDUCATION INSTITUTIONS FROM FACULTY PERSPECTIVE – EVIDENCE FROM CROATIA

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Abstract
As a signatory of the Bologna Declaration the Republic of Croatia has committed itself to implement a system of quality assurance (QA) for higher education, following the Standards and Guidelines for Quality Assurance in the European Higher Education Area. The implementation process has started in 2009 with the Act on Quality Assurance in Science and Higher Education (Official Gazette 45/09). The main goal was to improve the quality in higher education, respectively learning and teaching process. This paper aims to explore the perception of Croatian faculty on whether the introduction of QA system at Croatian higher education institutions (HEIs) has led to the improvement of quality in their teaching. The research was conducted using an online questionnaire in 2020, on a sample of 382 faculty members at public HEIs throughout Croatia (with 95 % of confidence level and 2,16 confidence interval). The results indicate that despite all the efforts and introduced QA system in all surveyed institutions, only a small part of surveyed faculty members, about one-third, see a positive link between the implemented QA system and raising the quality of their teaching process.

Keywords: quality assurance system, higher education, higher education institutions, higher education quality assessment, faculty's perspective

JEL classification: A20, I23

Introduction

A large number of authors have tried to answer the question of what is quality in higher education (Pirsig (1974), Tan (1986), Barnet (1992), Srikanthan and Dalrymple (2003), Mencer (2005), Sinković & Sinković (2007), Kundu (2016)). They have emphasised that quality is mostly in the eyes of the observers and that has a different meaning to different people. It is accentuated as impossible to impose a single criterion or a single measurement of quality in higher education (HE). Usually the following criteria for determining the quality in HE are mentioned: quality of faculty, curriculum standards, technological infrastructure available, research environment, accreditation regime, administrative policies, financing, evaluation and good governance (Sultana, Yousuf, Din & Rehman, 2009: 59). The most important of those factors should be the quality of faculty. This paper, therefore, is not intended to describe what quality in HE is. The key purpose is to present the views of Croatian faculty members, based on empirical research, whether their teaching process is better due to the Quality assurance (QA) system. Research for this paper was done via an online questionnaire on a sample of faculty members employed at public higher education institutions (HEIs) in the Republic of Croatia. After all the efforts and activities undertaken in the area of implementation and evaluation of QA system at Croatian HEIs, it is valid to ask whether the undertaken activities

and formalised procedures have made the teaching process any better, from the perspective of the Croatian faculty.

The questionnaire was sent to all public HEIs in the Republic of Croatia and was completely fulfilled by 382 faculty members. This kind of research is among the first in Croatia since, after a detailed analysis of the literature, no studies were found that search the overall impact of QA system on quality of the Croatian faculty teaching process. The only research in that field is one of the author regarded the correlation between QA system and quality of teaching for the faculty employed at faculties of economics and business in Croatia (Jeleč Raguž, Raguž, Štefanac, 2020). The research results presented in this paper can serve as a platform for international comparison of experiences, especially at the European level. Describing what Croatian QA system is, how it was implemented at HEIs, and what Croatian faculty members think of its realisation, gives the possibility for international comparison.

The paper is structured in five chapters. After the introductory discussion, a brief overview of the introduction of QA system in the Republic of Croatia is provided. Chapter 3 presents an overview of the literature on critical evaluation of QA system. Chapter 4 shows the methodology of the conducted research and the results of the research, while the final chapter presents the main conclusions and implications of the paper.

Ensuring quality of HEIs in the European Union (EU) and the Republic of Croatia

To monitor the quality in HE, the European Association for Quality Assurance in Higher Education has developed Standards and Guidelines for Quality Assurance in the European Higher Education Area (i.e. ESG), based on a request from the Bologna Conference in Berlin (2003) (Ivković, 2009: 21). European standards and guidelines were adopted by the Ministers responsible for HE in the European Higher Education Area (EHEA) in 2005 on the proposal of the European Association for Quality Assurance in Higher Education (in co-operation with the European Students' Union, the European Association of Higher Education Institutions and the European University Association) (ESG, 2015: 3). As significant progress has been made in QA system and all comments and suggestions for further improvement of the system have been adopted, a new proposal of the revised ESG draft has been prepared. The draft of the revised document was adopted by the Bologna Process Monitoring Group in 2014, and the Ministers of the European Higher Education Area adopted it in 2015. The content of the document is generic enough to allow it to be used at national level of all the signatories of the Bologna Declaration, regardless of the diversity of political and HE systems across countries as well as the adopted legal framework.

To enhance quality in HE the ESG have been divided into three parts (according to ESG, 2015: 7):

- Standards and Guidelines for Internal Quality Assurance of HEIs,
- Standards and Guidelines for External Quality Assurance of HEIs,
- Standards and Guidelines for Quality Assurance Agencies.

These three parts are interconnected and together form the basis of the European Quality Assurance Framework (ESG, 2015: 7). The standards include quality assurance practices in HE that are accepted throughout the EHEA, while the Guidelines explain why a particular standard is important and describes how it can be implemented (ESG, 2015: 7).

The purpose of the ESG standards is to (ESG, 2015: 6):

- constitute a common framework for the QA of teaching and learning at European, national and institutional levels,
- enable the provision and improvement of the quality of HE in the EHEA,
- encourage mutual trust, facilitating mobility within and across national borders,
- provide information on QA in the EHEA.

The purposes mentioned above constitute a framework within which various HEIs, agencies, and states can use and implement the ESG in a variety of ways.

As a signatory to the Bologna Declaration since 2001, the Republic of Croatia has undertaken to implement the Standards and Guidelines for Quality Assurance in Higher Education (ESG). Standards and Guidelines for Securing Higher Education Quality in the Republic of Croatia were introduced in 2009 by adopting the Quality Assurance in Science and Higher Education Act. By adopting the mentioned Act, the QA system of HEIs has been established in the Republic of Croatia following the ESG. Standards and guidelines envision that HEIs will independently conduct internal quality assurance procedures, while external evaluations of HEIs will be carried out by the Agency for Science and Higher Education (ASHE).

The QA system in Croatia includes a legal, institutional and strategic framework that enables the design and implementation of QA in HE, and includes an external and internal system of QA and improvement. According to the Agency for Science and Higher Education, it is an all-embracing term referring to an ongoing, continuous process of evaluating (assessing, monitoring, guaranteeing, maintaining, and improving) the quality of a HE system, institutions, or programmes.

The Agency for Science and Higher Education is the public institution responsible for ensuring and improving the quality of science and HE in the Republic of Croatia, and it conducts periodic **external evaluation** procedures, while internal quality assurance procedures are conducted by HEIs. The purpose of external evaluation is to protect the quality and credibility of Croatian higher education qualifications at the national and international level and to encourage the further development of HEIs and higher education as a whole (The Act on Quality Assurance in Science and Higher Education (Official Gazette 45/09).

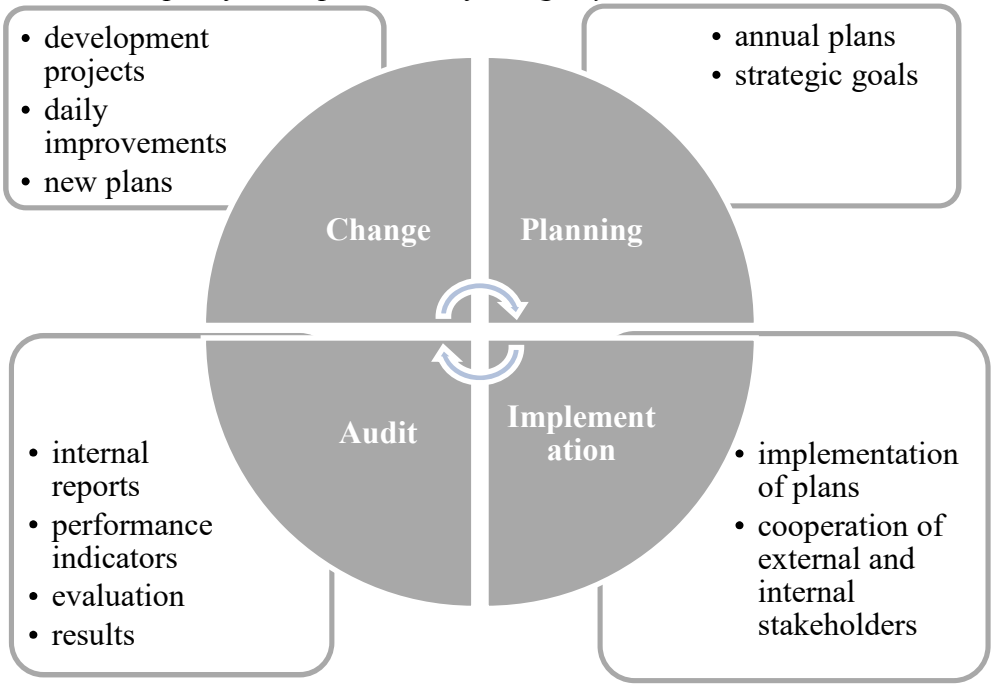
The responsibility for **internal QA** lies within HEIs. Each institution of HE should develop its QA system based on legal regulations, ESG standards, follow-up on good practice examples of other HEIs, and the experience of the HEI in the implementation of the QA system. The establishment of the QA system is a complex and demanding process that involves continuous research, monitoring, evaluation, supervising, and improvement of the activities at HEIs (Budimir, Idlbek & Jeleč Raguž, 2014).

At the HEIs level, the 'organisational units' responsible for implementing the QA system are defined. Somewhere those are separate organisational units, somewhere committees for improvement and QA, and somewhere one person or vice-dean. Each institution organises the system in its way. Such organisational units unify and coordinate all the activities related to the QA and have the freedom to adapt the QA system procedures. They plan, organise, coordinate and implement QA system evaluation procedures, develop internal quality improvement mechanisms, collect and systematise feedback, collect stakeholders' proposals, analyse strategic documents, and the like. At the head of such 'bodies' are mainly quality coordinators.

They prepare a draft annual activity plan for the improvement and assurance of quality, prepare a draft annual report on the implementation of the plan, inform, submit reports, and the like.

After the person/body that coordinates the QA system at an institutional level, the QA system Internal Audit Committees are defined. Internal audit is the process by which the degree of development of established QA system at an institution is analysed and evaluated following the ESG standards and Audit criteria (defined by the Agency). The core processes of QA system are planning, implementation, audit and change, as presented in Figure 1.

Figure 1: The example of basic processes of the QA system at HEIs in Croatia



Source: Budimir, 2017: 28.

Literature review

The impact of the Quality assurance (QA) systems on HE is gaining more and more attention lately, both in practice and in academic literature. There are a lot of theoretical and empirical papers that have been concerned with the research of correlation between QA system and quality enhancement in HE. The literature can mainly be divided into three categories of papers that are described below.

The first category of papers outlines **positive aspects of the impact of QA system on HE** (Brennan & Shah, 2000; Weber, 2007; Smidt, 2015). According to Smidt (2015), the implementation of the Bologna Process and QA as one of the pillars on which Bologna is based, was designed to create a competitive and flexible European Higher Education Area (EHEA). That is through, e.g. introducing three-cycle systems, curriculum development, learning outcomes linked to qualification frameworks, ECTS for transfer and accumulation, and the diploma supplement, all to increase transparency and flexibility. These very ambitious goals may not have been achieved in all 48 countries, but they have supported and highlighted the importance of HE for the future of Europe in all countries. Weber (2007) highlights two arguments in describing a need for QA at HEIs. The first is related to the autonomy of

universities, and the second argument is related to the lack of financial resources, which further emphasizes the importance of managing the universities, which means that it is necessary to ensure that they respond as effectively as possible to the most pressing needs (Weber, 2007: 19).

In addition to the papers that have highlighted positive aspects of QA system impact on HE, there are also empirical researches that have explored both **positive and negative effects of QA system on the HE system** (Baldwin, 1997; Stensaker, 2003; Banta, 2010; Cheng, 2010; Williams, 2016; Beerkens, 2018). Stensaker (2003). An example of positive aspects are increased attention towards teaching (and learning), and signs of a cultural change in attitudes of faculty staff. Some negative effects of the system are greater centralisation, more "bureaucratisation" and faculty's feeling scrutinised and inspected. Banta (2010) found that QA processes had been improved pedagogical techniques, curricula, and student support programmes in the United States (US) like advising and learning communities and measurement instruments. But there is limited evidence supporting that student learning had improved, which is one of the main outcomes we expect from QA system (Banta, 2010). The results of Cheng's study (2010) indicate that quality audits remain a source of controversy. Two-thirds of the respondents considered audit and QA mechanisms as an ineffective bureaucratic practice that had little impact on their work. The remaining one-third of respondents found the audit useful for improving teaching practice, particularly increasing academic's awareness of the importance of good teaching (Cheng, 2010: 269). Williams (2016) has highlighted a variety of perspectives on the relationship between QA and quality enhancement. He provided a brief overview of papers that positively value the relationship between QA and quality management. While, on the other hand, he also provided an overview of papers in which this positive bond is missing. The main question in Beerkens' paper (2018) is whether all this - stronger leadership, management, new units, and formalised procedures - has made education any better? (Beerkens, 2018: 274). The conclusion is that there is quite a lot of evidence on positive (and some negative) effects of external QA on universities, but the question of whether graduates now walk out with better knowledge and skills as a result of all the quality reforms is still hard to counter (Beerkens, 2018: 273-274).

Based on the literature review it can be concluded that most papers have **critically evaluated QA system's influence on the quality of learning and teaching at HEIs** (Barrow, 1999; Newton, 2000; Harrison and Lockwood, 2001; Morley, 2003; Harvey & Newton, 2004; Anderson, 2006; Watty, 2006; Harvey & Williams, 2010; Brady and Bates, 2016; Harvey, 2016). For example, Barrow (1999) suggested that quality management in New Zealand has not led to an improvement in quality or institutional definitions of quality; rather, that dramaturgical compliance to the system has been achieved. Harrison and Lockwood (2001) argue that the QAA (Quality Assurance Agency) fails to deliver on its avowed aim of assuring the quality of teaching and learning within universities as it does not aim to enhance teaching quality. The QAA aims to enhance confidence in teaching quality, not teaching quality itself (Harrison & Lockwood, 2001). Newton (2000) examined academics' perception of QA. His study has highlighted that faculty staff has a different view from HEIs' managers and external quality monitoring bodies on the achievements of the quality system. Their view of the system, according to him, is as 'accountability led rather than improvement led', i.e. is addressing accountability requirements rather than providing a basis for quality development (Newton, 2000.). According to Morley's radical opinion, QA processes in the United Kingdom (UK) have created a compliance culture and, paradoxically, are generating mediocrity rather than improvement (Morley, 2003). Harvey and Newton (2004) argue that most of the impact studies they reviewed assert the view that quality is more about accountability and compliance and, in

some countries, control rather than improvement, and has, in itself, contributed little to any effective transformation of the student learning experience (Harvey and Newton, 2004). Harvey and Williams (2010) in their review suggest that the link between external processes, internal processes, and improvements in teaching and learning seem to be tenuous and patchy (Harvey & Williams, 2010: 107). QA fails to be a part of the everyday activity of academics because they perceive no real link between the quality of their teaching, and performance embodied in QA processes (Harvey & Williams, 2010; Harvey, 2016). The results of the research at the University of Higher Education in the UK conducted by Brady and Bates (2016) confirm that a combination of standards and excessive institutional control may result in a decline of teaching (and learning) quality rather than a 'quality culture'.

Methodological framework and results of empirical research

Methodological framework of research

The literature review indicates that there are divided opinions regarding the effectiveness of QA systems. On the one hand, there are advocates of the system that highlight the positive aspects of QA system and its contribution to enhancing the quality of teaching. On the other hand, there is an opinion that QA system is a pointless process because it focuses on quantitative indicators rather than qualitative and does not contribute to raising the quality of teaching in HE. This paper aimed to examine the perception of Croatian faculty regarding the QA system and its contribution to the quality of their teaching process. The main deficiency of the research is in dealing with faculty's perception, i.e. it is not an objective 'exact' measurement of QA system's contribution to the quality of teaching process.

For the research purpose, the author has prepared an online questionnaire posted on the LimeSurvey online system. The questionnaire consists of nine questions related to the research topic and six general issues such as age, gender, academic degree, etc. The questionnaire was compiled after a detailed analysis of the literature and after mastering all the essential aspects of the QA system and the overall quality of HE. It was intended for all faculty employed at public HEIs in the Republic of Croatia. The research question was whether their teaching process is better due to the implemented QA system at their institution, according to their perception?

Following the question, we have one hypothesis in this paper with two possible outcomes. The null hypothesis ((H_0): Implemented QA system significantly raise the quality of teaching process according to the faculty's perception; and H_1: Implemented QA system does not significantly raise the quality of teaching process according to the faculty's perception. The null hypothesis is based on the assumption that sum of the obtained frequencies will be in line with expectations. The criterion of accepting or rejecting the null hypothesis is the share of affirmative, negative and neutral attitudes about the relation between QA system and quality of own teaching process. The values that are set as the expected ones in the paper are: affirmative answers 60%, i.e. those who believe that QA system has improved their teaching process; negative answers 30%, i.e. those who do not see that link, and neutral answers 10%, i.e. those who don't know. If the obtained frequency of positive answers is significantly below the expected level (60%), the null hypothesis will not be accepted.

There are nine (9) public universities in the Republic of Croatia with their eighty-two (82) faculties and art academies; eleven (11) public polytechnics and three (3) colleges (Science and

Higher Education Agency, 2021). The link to access the online questionnaire was emailed to all HEIs. The request was sent only once. The questionnaire was completely fulfilled by 382 faculty members. According to the official statistics (Croatian Bureau of Statistics) in Croatia, in the 2019/2020 academic year, 11550 teachers and associates were employed on the basis of employment contracts at Croatian public HEIs (Croatian Bureau of Statistics, 2020). It means that our sample size is 3,3% of the total searched population (faculty staff who teaches in Croatian public HEIs), respectively 95% of confidence level and 1.68 confidence interval (also called margin of error). The research was conducted during February 2020.

The structure of the respondents according to their affiliation corresponds to the structure of faculty in Croatia, with the largest number of faculty employed at universities' constituents (82% in Croatia; 81% in our sample), then at polytechnics (12% in Croatia; 13% in the sample) and then colleges (6% in Croatia and 6% in the sample). The highest proportion of respondents belongs to the age group of 31-40 years (N = 145), followed by 41 to 50 years (N = 120). Regarding the gender structure of the respondents, 59% of respondents were female, while 41% were male. According to an academic degree, the largest number of respondents are assistant professors (30%), followed by associate professors (17%), 13% assistants, 10% senior lecturers, 5% tenured professors, etc.

Results of empirical research

The first question in the questionnaire was related to the assessment of the self-improvement in certain domains of the HE process, exclusively due to the QA system. The faculty had to eliminate their progress due to some other parameters and assess their progress solely due to the implemented QA system.

Table 1: Respondents' attitude towards the given statements

	Statements	Attitude			Respondents
	Rate contribution of QA system to:	Negative (degree 1 and 2)	Neutral (degree 3)	Positive (degree 4 and 5)	TOTAL
1	Quality of Your teaching process and teaching methods	153	123	106	382
2	Quality of curriculum at Your courses (regarding the content, not aesthetic corrections)	187	99	96	382
3	Quality of learning outcomes at Your courses (not aesthetic corrections)	164	114	104	382
4	Correspondence of Your courses with labour market's needs	168	112	102	382
5	Quality of your methods for assessing students' knowledge (more innovative methods)	170	111	101	382
6	Your responsibility towards your teaching process	157	100	125	382
	Average	166.5	109.8	105.7	382
	Share	43.59%	28.74%	27.67%	100%

Source: Results of empirical research.

Note: Degree of agreement: 1 - not at all, 2 - mostly no, 3 - neither yes nor no, 4 - mostly yes, 5 - completely yes.

According to survey results the highest number of respondents value the offered statements with rank 3 (28.74% of responses), followed by rank 1 and 2 (together 43.59%). Only 27.67%

of the respondents positively assessed (grades 4 and 5) the analysed contribution. So it can be concluded that less than one third of the examined faculty has positively assessed the relationship between QA system and given parameters of quality of their teaching process. The average degree of all parameters is 2.69, i.e. the respondents graded the majority of parameters on average with ratings between 2 (mostly no) and 3 (neither yes nor no). From this, an indifferent, i.e. neutral attitude toward the QA system can be observed. The best average rate gets the responsibility towards the teaching process, while the lowest rate gets the quality of curriculum.

In order to examine the credibility of the respondents' answers to the above questions, a Spearman correlation test was performed. Correlations between the answers to all 6 questions were tested. The statistical value of the correlation test can be between -1 and +1. The closer the obtained values are to +1, the higher degree of correlation exist.

Table 2: Results of the Spearman correlation test (Q1 = statement 1)

	Q1	Q2	Q3	Q4	Q5	Q6
Q1	1	0.785381	0.760974	0.647941	0.723779	0.678614
Q2	0.785381	1	0.824362	0.701447	0.754961	0.681891
Q3	0.760974	0.824362	1	0.705873	0.75093	0.644307
Q4	0.647941	0.701447	0.705873	1	0.785735	0.607984
Q5	0.723779	0.754961	0.75093	0.785735	1	0.691348
Q6	0.678614	0.681891	0.644307	0.607984	0.691348	1

Source: Results of empirical research.

Results of the Spearman's correlation test indicate that all the answers of the respondents were highly correlated (connected), i.e. the respondents answered consistently to all 6 questions (statements from Table 1). In other words, the respondents who chose degrees 4 and 5, chose mainly 4 and 5 in all 6 statements. It can be concluded that attitudes of the respondents were not obtained by chance, they are a reflection of their attitudes towards the QA process.

In the methodological framework of the research, we have set one hypothesis with two possible outcomes. The null hypothesis (H_0): Implemented QA system significantly raise the quality of teaching process according to the faculty's perception; and H_1: Implemented QA system does not significantly raise the quality of teaching process according to the faculty's perception. The criterion of accepting or rejecting the null hypothesis is the share of affirmative, negative and neutral attitudes about the analysed relation. The expected response distribution was: 60% of positive answers, 30% of negative and 10% of those who do not know (neutral attitudes). Hypothesis testing was performed using the chi square test.

Table 3: Results of the chi square test

	Obtained distribution (F0)	Expected distribution (Ft)	(F0-Ft)	(F0-Ft)^2	((F0-Ft)^2)/Ft
Yes	127	229	-102	10404	45.4
No	179	115	64	4096	35.6
I do not know	76	38	38	1444	38.0
Total	382	382			
				$\chi 2=$	119.0

Source: Results of empirical research.

Before the analysis of the chi square test results, one note is needed. Namely, if there were no difference between the obtained and expected frequencies, the value of $\chi 2$ would be 0. The greater the difference between the obtained and expected frequencies, the greater the $\chi 2$ is. Thus, the higher the value of $\chi 2$ is, it is more likely that the obtained data do not support the null hypothesis. The value of $\chi 2$ in our research is 119. At a given level of a significance 0.05, the lowest value of $\chi 2$ for rejecting the hypothesis is 5.99, and at level 0.01 it is 9.2. Since the empirical $\chi 2$ value (119) is significantly larger than the theoretical one, the null hypothesis is rejected. It means that at a given level of significance (5%, 1%), we do not have enough evidence to accept the null hypothesis. Hence, we accept the alternative hypothesis, H_1: Implemented QA system does not significantly raise the quality of the teaching process according to the faculty's perception.

Conclusion and implications

The main goal of this paper was to get an insight into the views and opinions of the Croatian faculty regarding the quality assurance (QA) system and its impact on the quality of their teaching. The paper did not intend to objectively measure the influence of the QA system on raising the quality of higher education (HE), nor there is a consensus on how to assess it.

This paper presents an overview of academic literature on critical evaluation of QA system, and it has been found that literature can be divided into three groups. The first group is (1) those who positively regard QA system's contribution to the quality of teaching, (2) literature that has a twofold stance on QA system, i.e. mention its advantages and disadvantages, and (3) literature that negatively assesses that impact. A review of Croatian literature points to the lack of research on that matter.

The research for this paper was conducted through an online questionnaire sent to all public HEIs in the Republic of Croatia. The survey was fully completed by 382 respondents. Results of the research indicate that only 27.67% of the respondents evaluate positively (grades 4 and 5, mostly yes and absolutely yes) the contribution of QA system to the analysed indicators of the quality of their teaching. 43.59% of them do not see such a contribution, while 28.74% of respondents have indicated an indifferent attitude towards it. Therefore, approximately one-third of the respondents evaluate the relationship between QA system and quality of their own teaching process as a positive process.

For testing the hypothesis a Chi square test was conducted. The results indicate that at a given level of significance (5%, 1%) we do not have enough evidence to accept the null hypothesis, ie. the research failed to prove a positive correlation between the implemented QA system and the quality of own teaching process, according to the faculty's perception.

The main disadvantage of the paper is the inability to objectively evaluate QA system's contribution to the quality of teaching, since there is no consensus at the national or supranational level, as well as there is no consensus on what quality of HE is. Therefore, this paper is based solely on the research of subjective evaluations of Croatian faculty, i.e. their perception.

Based on the empirical analysis in this paper, it can be concluded that QA system has not yet produced an effective contribution to the quality of teaching in HE, according to the faculty's

perception. The reason may be found in the fact that QA system is a relatively recent topic in the Republic of Croatia and thus the expected results are yet to be achieved; or QA system is being implemented in the wrong way, more guided by quantity indicators, and not really by quality. In that sense, it is necessary to do some further research to reveal more about the Croatian faculty's opinion and ideas for improving the QA system in Croatia.

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