



CLASS: 003-08/10-02/0004

REG.NO. 355-02-03-16-0009

## **Meta-evaluation of external quality assurance audits in 2010-2015**

Zagreb, February 2017

**Introduction**

In the Republic of Croatia, the external quality assurance in higher education and science is regulated by the Act on Quality Assurance in Science and Higher Education (Official Gazette 45/09), which requires of all public and private higher education institutions to have an established quality assurance system and to continuously develop the quality of all their activities, on the basis on internal and external evaluations. In line with the Act, the Agency for Science and Higher Education (hereinafter: the Agency or ASHE) carries out procedure of external quality assurance audit of higher education institutions (audit) in 5-year cycles. The first cycle started in 2010. Since this is the first cycle of external evaluations after the adoption of the Act on Quality Assurance in Science and Higher Education, which in addition to audit also defines the procedure of re-accreditation of higher education institutions in the Republic of Croatia, ASHE Accreditation Council decided that all polytechnics and public universities are to be evaluated in the first audit cycle. The external QA audit will additionally be carried out at those higher education institutions that show interest and/or meet the preconditions for the successful implementation of the procedure.

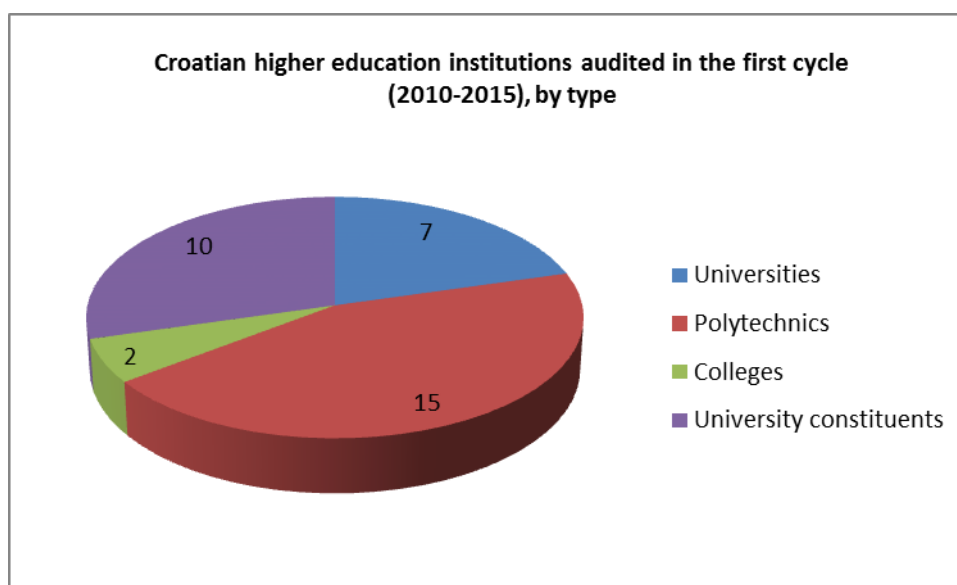
In accordance with the ESG 3.4., which calls for ENQA member agencies to analyse data collected during external evaluations - on existing conditions, trends, good practices and areas where improvements are needed - ASHE produced regular annual analyses of audit procedures carried out in the previous year. Data collected and analyses carried out form the basis for decision and policy making in terms of quality and process development of external QA audit procedure, higher education institutions, and higher education system in general.

At the end of the evaluation cycle, the collected data is used for a comprehensive analysis (meta-evaluation) of the entire first cycle.

## Methodology of external QA audit procedure

Every year the Agency surveys higher education institutions and collects information on their QA systems (QAS). Based on data collected, the Agency proposes an annual plan of external audits for the following year, which is adopted by the Accreditation Council. In selecting higher education institutions that will be subject to external QA audit, ASHE selects those that meet the prerequisites for a successful implementation of the procedure.

During the first cycle of external QA audits in the Republic of Croatia, the procedure was carried out at seven public universities, 15 polytechnics, two colleges and 10 university constituents (faculties/academies).



**Chart 1:** Croatian higher education institutions audited in the first cycle, by type

In accordance with ASHE annual plans of external audit, audit procedures were conducted at the following Croatian HEIs:

### 2010

1. Faculty of Civil Engineering, Josip Juraj Strossmayer University of Osijek
2. Faculty of Humanities and Social Sciences, Josip Juraj Strossmayer University of Osijek
3. Faculty of Metallurgy, University of Zagreb

### 2011

1. College of Agriculture in Križevci
2. Faculty of Engineering, University of Rijeka
3. Academy of Applied Arts, University of Rijeka
4. Faculty of Medicine, University of Zagreb
5. Faculty of Organization and Informatics, University of Zagreb
6. Faculty of Electrical Engineering and Computing, University of Zagreb
7. University College for Applied Computer Engineering, Zagreb
8. University of Dubrovnik
9. Polytechnic of Slavonski Brod

## 2012

1. University of Zagreb
2. University of Rijeka
3. Josip Juraj Strossmayer University of Osijek
4. University of Zadar
5. University of Split
6. Juraj Dobrila University of Pula
7. Polytechnic Velika Gorica
8. Polytechnic of Rijeka
9. Polytechnic of Požega

## 2013

1. University of Applied Health Studies in Zagreb
2. Polytechnic "Marko Marulić" in Knin
3. Polytechnic "Nikola Tesla" in Gospić
4. Polytechnic of Šibenik
5. Polytechnic of Varaždin
6. VERN Polytechnic

## 2014

1. Polytechnic of Zagreb
2. Polytechnic "Lavoslav Ružička" in Vukovar
3. Polytechnic Hrvatsko Zagorje in Krapina
4. Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb
5. Faculty of Civil Engineering, University of Rijeka
6. Faculty of Metallurgy, University of Zagreb\*

## 2015

1. Polytechnic of Međimurje in Čakovec
2. Velika Gorica Polytechnic\*
3. Polytechnic of Karlovac
4. Polytechnic of Slavonski Brod\*
5. Academy of Applied Arts, University of Rijeka\*
6. Faculty of Humanities and Social Sciences, Josip Juraj Strossmayer University of Osijek\*

In addition to the procedures conducted in the Republic of Croatia, in 2015-2016 ASHE carried out a pilot audit of the *International School for Social and Business Studies - ISSBS*, Celje, Slovenia, using the same methodology. The procedure was initiated upon the request of the higher education institution. This was the first external evaluation by ASHE carried out abroad. The experience gained will be used to improve the procedure in the second cycle and to develop the Agency's procedures and regulations related to cross-border quality assurance.

---

\* Re-audit

The audit procedures were carried out in accordance with the Ordinance on External Audit of Quality Assurance Systems at Higher Education Institutions in the Republic of Croatia, CLASS: 003-08/10-02/0004, REG.NO.: 355-02-03-10-2). HEIs' quality assurance systems were assessed according to the Criteria for assessing the level of development and efficiency of QA systems at higher education institutions in the Republic of Croatia, which follow ESG, Part 1. The Criteria are published separately on ASHE website, but are also an integral part of the Manual for Audit of Higher Education Institutions in the Republic of Croatia (2nd edition, CLASS:003-08/10-02/0004, REG.No.:355-01-10-5).

According to the audit criteria, the evaluated QAS can be in one of four stages of development (directly correlated with the level of implementation of ESG Part 1):

- Preliminary phase - preliminary quality assurance activities are underway (agreements have been made at the level of HEI, documentation is being drafted)
- Initial phase - Quality assurance system is defined but not fully functional (basic documents are drafted)
- Developed phase - Quality assurance system is functional, internal audit is implemented and system is improved on the basis of internal audit results
- Advanced phase - Quality assurance system is continuously developed on the basis of results of both internal and external audit.

All documents and criteria are published on ASHE website, and were consistently used in all external QA audit procedures (ESG 2.2, 2.3 and 2.5). Since the documents that define the external QA audit procedure (which underwent a public review and were adopted by the Croatian Rectors' Conference) have been tested through a pilot-project (CARDS 2003 „Furtherance of the Agency for Science and Higher Education in its Quality Assurance Role and Development of a Supporting Information System"), there was no need to additionally revise/amend them. Only a few minor updates were introduced during the first cycle: The structure of both audit reports was defined within the Audit Manual, to serve as a help to audit committees in drafting of reports, but also to ensure the uniformity of reports; a report summary was introduced in the final audit report (also to be published separately, in English); finally, given the length of the procedure, a possibility of a deadline extension for the follow-up phase was included in Audit Manual, in cases where the follow-up phase covers the periods from July 15th to August 31st, and December 24th to January 6th.

The external quality assurance procedure (ESG 2.3) includes the following elements: adoption of annual audit plan; informing HEI on the upcoming evaluation procedure; appointing of procedure coordinators (HEI and ASHE coordinator); review of HEI's submitted documentation (the base of which is the adopted internal QA audit report, ESG 2.1); preparatory work of the Audit Committee; site visit (tour of HEI, meetings with representatives of stakeholders, gathering additional evidence); drafting of the first audit report containing recommendations for improvement (ESG 2.5.); the follow-up phase resulting in an analysis of the efficiency of activities carried out and drafting of the final audit report (ESG 2.6); including a final assessment of the degree of development and efficiency of the evaluated QAS and recommendations for the

following period (ESG 2.3). Final audit reports are adopted by ASHE Accreditation Council, after which they are submitted to the evaluated HEI and published on Agency website.

Quality assurance systems that have met the set criteria and provided evidence of being functional, efficient and fit for purpose, in accordance with national and ESG standards, are awarded with a 5-year certificate by ASHE Accreditation Council, based on expert panel recommendation. In the first audit cycle, certificates were awarded to 17 Croatian and one foreign HEI.

### **Seminars and workshops for HEIs**

One of the most important tasks of the Agency is to carry out trainings for all the stakeholders involved in audit procedure (HEIs and audit panels), to continuously develop and improve the procedure based on experience and data collected, as well as to ensure a strong link between external and internal quality assurance.

As part of preparations for carrying out audit procedures, the Agency organises annual workshops for representatives of HEIs (management and quality assurance unit representatives) included in the annual plan for the following calendar year. Representatives of HEIs were informed on audit procedure and outcomes, standards, criteria, good national and international practice, and were provided with guidelines for preparing the necessary audit documentation. These workshops were also attended by the representatives of audited HEIs, who presented their experiences with audit procedure (from the perspective of the object of evaluation), as well as their own practice of implementing and developing internal QA system. The participants assessed the quality of workshops organised during the first audit cycle with an average grade of 4.49/5.

**Table 1:** Analysis of questionnaires on satisfaction with the education and training organised for representatives of HEIs included in the annual audit plans

Assessed area	Plan of external QA audits in 2010	Plan of external QA audits in 2011	Plan of external QA audits in 2012	Plan of external QA audits in 2013	Plan of external QA audits in 2014	Plan of external QA audits in 2015	Average grade
Quality of topics	5.00	4.00	4.75	4.50	4.50	4.31	<b>4.51</b>
Type, quantity and clarity of information presented	4.50	3.90	4.68	4.22	4.42	4.56	<b>4.38</b>
Possibility to participate in discussion	5.00	4.60	5.00	5.00	4.75	4.56	<b>4.82</b>
Actual participation in discussion	4.75	4.00	4.00	4.67	3.83	4.06	<b>4.22</b>
Contribution to development of personal competencies	4.22	3.90	4.37	4.44	4.25	4.13	<b>4.22</b>
Organisation of workshop (length, materials, venue, etc.)	4.55	4.30	4.43	4.78	4.67	4.44	<b>4.53</b>
<b>Overall assessment</b>	<b>4.75</b>	<b>4.00</b>	<b>4.62</b>	<b>4.44</b>	<b>4.67</b>	<b>4.44</b>	<b>4.49</b>

At the request of individual HEIs, additional workshops were organised by ASHE as a part of institutional preparations for upcoming audits, to inform the stakeholders on ESG and discuss the manner of its implementation in national and international context. These workshops took place at HEIs all across Croatia. Using examples of specific institutional documents, procedures and existing practices, the goal of these workshops was to discuss the ways in which internal quality culture, QA mechanisms and involvement of stakeholders can be improved, as well as to identify the additional value of an effective QAS and its correlation with external quality assurance. It was a direct contribution to building of a culture of dialogue and trust between higher education institutions and the Agency, while promoting the values and principles in quality assurance. The workshops also provided opportunity to discuss responsibilities for QA development, especially with regard to capacity building and improvement of the existing practices.

## Training of audit panel members

External QA audits are carried out by panels of trained and certified audit experts, selected from ASHE audit expert database (ESG 2.4).

Credibility and quality of QA audit directly depends on the selection of competent panel members and their training. Since 2006, the Agency periodically organises training of new audit experts, and also offers the possibility of an online training for foreign experts. Candidates were proposed by the Croatian HEIs and foreign QA agencies, some candidates applied out of their own interest and some were suggested by already certified ASHE auditors. After completing the training, the participants are awarded with a certificate and are included in ASHE audit expert database, from which panel members are selected, in accordance with the criteria for the selection of audit panel members, as defined by the Ordinance on External Audit of Quality Assurance Systems at Higher Education Institutions in the Republic of Croatia. Higher education institutions have the possibility to ask for a replacement of individual panel members, providing a valid reason is given. By the end of 2015, ASHE trained a total of 182 auditors.

In order to provide for further development of certified auditors' competencies, ASHE periodically organized additional workshops and continuously stimulated its auditors to use their knowledge and skills to actively contribute to the improvement of internal quality culture at higher education institutions.

ASHE auditors database represents a significant contribution to development of ASHE resources. At the request of other European QA agencies listed in EQAR, ASHE encouraged its auditors for cooperation in other European countries as well, thus strengthening internationalisation and association with EHEA. Auditors were also encouraged to broaden their knowledge and participate in various events within EHEA, such as the European Forum on Quality Assurance and conferences organized by EUA and EURASHE.

**Table 2:** *Number of certified audit experts*

Five-member audit panels comprise 1 Croatian and 1 foreign representative of HEIs, 1 student representative, 1 representative of the industry/business sector and 1 representative of ASHE.

<b>Experts</b>	<b>No.</b>
Foreign experts	39
Representatives of Croatian HEIs	81
Representatives of the business sector	24
Student representatives	38
<b>Total</b>	<b>182</b>

The experience so far shows that such a composition of panel provides for an objective implementation of the procedure, encourages synergy and stimulates discussion - both among the panel members and stakeholders at HEIs. Different perspectives brought in by representatives of various groups of stakeholders in expert panels provide a valuable contribution to objectivity and development of external evaluation model. It should be noted that decisions regarding the final assessment of HEI's QAS, as well as recommendations for its improvement, are always reached by consensus and active contribution of all panel members at all stages of the procedure. Members of the audit panel examine all the received and available



documentation of the HEI, and ask for additional documents if necessary. They actively participate in the preparation for the site visit, collecting of the evidence during the visit to HEI, as well as in the preparation of audit reports that contain recommendations for further development of the evaluated QAS. Selection of the adequate panel chair is also important for the quality work of the audit committee.

ASHE coordinator provides continuous support to the audit committee during the procedure and serves as a liaison between the audit committee, ASHE and the evaluated institution.

By signing the Confidentiality and Conflict of Interest Statement, panel members agree to work in line with the ethical principles of ASHE. This has been consistently carried out throughout the first cycle.

Assessment of audit committee's work was carried out by satisfaction survey of committee members (self-evaluation) and of HEI that was subject to external QA audit procedure (see: Tables 5, 6 and 7). In addition, during the first cycle the Agency introduced the internal assessment of the quality of audit panel members, which is conducted by the ASHE coordinator upon the completion of each procedure.

### **Outcomes of audit procedures in the first cycle**

All the audit procedures in the first cycle were carried out in accordance with the adopted plans and agreed deadlines, with the exception of the audit of the University of Split (Annual Plan of Audits for 2012), which had requested and was approved a deferment (with the site visit being conducted the following year, 2013), and the audit of the Polytechnic of Varaždin (Annual Plan of Audits for 2013), which was discontinued due to HEI's merger with the University North.

All the procedures in the first cycle were carried out without appeals. Final audit reports were adopted by the Accreditation Council and published on ASHE website (full version in Croatian and a summary in English). In accordance with recommendations included in final reports, Accreditation Council issued decisions on certification or re-audit.

Final assessments of the evaluated QAS are presented in Table 3.

**Table 3:** Efficiency assessment of the evaluated QAS at HEIs audited in the first cycle**Plan of external QA audits in 2010**

Higher education institution	ESG 1.1.	ESG 1.2.1.	ESG 1.2.2.	ESG 1.3.	ESG 1.4.	ESG 1.5.	ESG 1.6.	ESG 1.7.	Overall assessment of QA system
Faculty of Civil Engineering, Josip Juraj Strossmayer University of Osijek	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	DEVELOPED PHASE	ADVANCED PHASE	DEVELOPED PHASE-CERTIFICATE
Faculty of Humanities and Social Sciences, Josip Juraj Strossmayer University of Osijek	INITIAL PHASE	INITIAL/DEVELOPED PHASE	INITIAL PHASE	INITIAL PHASE	INITIAL PHASE	DEVELOPED PHASE	INITIAL PHASE	DEVELOPED PHASE	INITIAL PHASE
Faculty of Metallurgy, University of Zagreb	INITIAL PHASE	INITIAL PHASE	INITIAL PHASE	INITIAL/DEVELOPED PHASE	DEVELOPED PHASE	INITIAL PHASE	INITIAL/DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	INITIAL PHASE

*Plan of external QA audits in 2011*

Higher education institution	ESG 1.1.	ESG 1.2.1.	ESG 1.2.2.	ESG 1.3.	ESG 1.4.	ESG 1.5.	ESG 1.6.	ESG 1.7.	Overall assessment of QA system
University of Dubrovnik	INITIAL/DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE-CERTIFICATE
Faculty of Electrical Engineering and Computing, University of Zagreb	INITIAL/DEVELOPED PHASE	ADVANCED PHASE	DEVELOPED/ADVANCED PHASE	ADVANCED PHASE	DEVELOPED/ADVANCED PHASE	ADVANCED PHASE	DEVELOPED PHASE	ADVANCED PHASE	DEVELOPED/ADVANCED PHASE-CERTIFICATE
College of Agriculture in Križevci	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE-CERTIFICATE
Faculty of Organization and Informatics, University of Zagreb	INITIAL/DEVELOPED PHASE	ADVANCED PHASE	DEVELOPED PHASE	ADVANCED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED/ADVANCED PHASE	DEVELOPED PHASE-CERTIFICATE
Academy of Applied Arts, University of Rijeka	INITIAL/DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	INITIAL PHASE	DEVELOPED/ADVANCED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	ADVANCED PHASE	INITIAL/DEVELOPED PHASE
Faculty of Engineering, University of Rijeka	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED/ADVANCED PHASE	DEVELOPED PHASE	ADVANCED PHASE	DEVELOPED PHASE-CERTIFICATE
Algebra University College for Applied Computer Engineering	DEVELOPED PHASE	ADVANCED PHASE	-	ADVANCED PHASE	DEVELOPED/ADVANCED PHASE	DEVELOPED/ADVANCED PHASE	DEVELOPED/ADVANCED PHASE	ADVANCED PHASE	DEVELOPED/ADVANCED PHASE-CERTIFICATE
Faculty of Medicine, University of Zagreb	DEVELOPED PHASE	DEVELOPED PHASE	ADVANCED PHASE	DEVELOPED PHASE	ADVANCED PHASE	DEVELOPED/ADVANCED PHASE	DEVELOPED/ADVANCED PHASE	DEVELOPED/ADVANCED PHASE	DEVELOPED/ADVANCED PHASE-CERTIFICATE
Polytechnic of Slavonski Brod	INITIAL PHASE	INITIAL/DEVELOPED PHASE	-	INITIAL/DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	INITIAL PHASE	INITIAL/DEVELOPED PHASE	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE

***Plan of external QA audits in 2012***

Higher education institution	ESG 1.1.	ESG 1.2.1.	ESG 1.2.2.	ESG 1.3.	ESG 1.4.	ESG 1.5.	ESG 1.6.	ESG 1.7.	Overall assessment of QA system
University of J. J. Strossmayer in Osijek	INITIAL PHASE	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE
Juraj Dobrila University of Pula	DEVELOPED PHASE	INITIAL PHASE	INITIAL PHASE	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE
University of Rijeka	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED/ADVANCED PHASE	DEVELOPED PHASE	ADVANCED PHASE	DEVELOPED PHASE-CERTIFICATE
University of Split	PRELIMINARY/INITIAL PHASE	INITIAL PHASE	DEVELOPED PHASE	PRELIMINARY/INITIAL PHASE	INITIAL/DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE
University of Zadar	INITIAL/DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	DEVELOPED/ADVANCED PHASE	INITIAL/DEVELOPED PHASE
University of Zagreb	INITIAL PHASE	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE
Polytechnic of Požega	INITIAL/DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	-	INITIAL/DEVELOPED PHASE	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE
Polytechnic of Rijeka	DEVELOPED PHASE	DEVELOPED PHASE	-	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE CERTIFICATE
Velika Gorica Polytechnic	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	-	INITIAL PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	ADVANCED PHASE	INITIAL/DEVELOPED PHASE

***Plan of external QA audits in 2013***

Higher education institution	ESG 1.1.	ESG 1.2.1.	ESG 1.2.2.	ESG 1.3.	ESG 1.4.	ESG 1.5.	ESG 1.6.	ESG 1.7.	Overall assessment of QA system
Polytechnic of Šibenik	PRELIMINARY/INITIAL PHASE	PRELIMINARY/INITIAL PHASE	-	INITIAL PHASE	INITIAL/DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	INITIAL PHASE	INITIAL PHASE	INITIAL PHASE
VERN Polytechnic	DEVELOPED/ADVANCED PHASE	DEVELOPED PHASE	-	DEVELOPED PHASE	DEVELOPED/ADVANCED PHASE	ADVANCED PHASE	ADVANCED PHASE	DEVELOPED/ADVANCED PHASE	DEVELOPED/ADVANCED PHASE-CERTIFICATE
Polytechnic "Marko Marulić" in Knin	INITIAL PHASE	INITIAL PHASE	-	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	INITIAL PHASE	INITIAL/DEVELOPED PHASE	INITIAL PHASE
Polytechnic "Nikola Tesla" in Gospić	INITIAL/DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	-	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	INITIAL/DEVELOPED PHASE	DEVELOPED PHASE	INITIAL/DEVELOPED PHASE
University of Applied Health Studies in Zagreb	INITIAL PHASE	INITIAL PHASE	INITIAL PHASE	INITIAL PHASE	INITIAL PHASE	INITIAL PHASE	DEVELOPED PHASE	DEVELOPED PHASE	INITIAL PHASE
Polytechnic of Varaždin	-	-	-	-	-	-	-	-	-

*\*Audit of Polytechnic of Varaždin was discontinued due to HEI's merger with the University North.*

***Plan of external QA audits in 2014***

<b>Higher education institution</b>	<b>ESG 1.1.</b>	<b>ESG 1.2.1.</b>	<b>ESG 1.2.2.</b>	<b>ESG 1.3.</b>	<b>ESG 1.4.</b>	<b>ESG 1.5.</b>	<b>ESG 1.6.</b>	<b>ESG 1.7.</b>	<b>Overall assessment of QA system</b>
Faculty of Metallurgy, University of Zagreb	INITIAL/ DEVELOPED PHASE	INITIAL/ DEVELOPED PHASE	INITIAL/ DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	INITIAL/ DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	INITIAL/ DEVELOPED PHASE
Polytechnic of Zagreb	DEVELOPED PHASE	DEVELOPED PHASE	-	INITIAL/ DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED/ ADVANCED PHASE	DEVELOPED PHASE CERTIFICATE
Faculty of Civil Engineering, University of Rijeka	DEVELOPED PHASE	DEVELOPED/ ADVANCED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	ADVANCED PHASE	DEVELOPED PHASE CERTIFICATE
Polytechnic "Lavoslav Ružička" in Vukovar	INITIAL/ DEVELOPED PHASE	PRELIMINARY/INITIAL PHASE	-	INITIAL/ DEVELOPED PHASE	INITIAL/ DEVELOPED PHASE	DEVELOPED/ ADVANCED PHASE	INITIAL/ DEVELOPED PHASE	DEVELOPED PHASE	INITIAL/ DEVELOPED PHASE
Polytechnic Hrvatsko Zagorje in Krapina	PRELIMINARY/INITIAL PHASE	PRELIMINARY/INITIAL PHASE	-	INITIAL PHASE	INITIAL PHASE	INITIAL PHASE	INITIAL PHASE	INITIAL PHASE	INITIAL PHASE
Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb	DEVELOPED PHASE	DEVELOPED PHASE	INITIAL/ DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED/ ADVANCED PHASE	DEVELOPED PHASE	ADVANCED PHASE	DEVELOPED PHASE CERTIFICATE

*Plan of external QA audits in 2015*

Higher education institution	ESG 1.1.	ESG 1.2.1.	ESG 1.2.2.	ESG 1.3.	ESG 1.4.	ESG 1.5.	ESG 1.6.	ESG 1.7.	Overall assessment of QA system
Polytechnic of Međimurje in Čakovec	INITIAL / DEVELOPED PHASE	INITIAL / DEVELOPED PHASE	-	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED / ADVANCED PHASE	INITIAL / DEVELOPED PHASE
Velika Gorica Polytechnic	DEVELOPED / ADVANCED PHASE	DEVELOPED / ADVANCED PHASE	-	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED / ADVANCED PHASE	ADVANCED PHASE	ADVANCED PHASE	DEVELOPED / ADVANCED PHASE CERTIFICATE
Polytechnic of Karlovac	INITIAL / DEVELOPED PHASE	INITIAL / DEVELOPED PHASE	INITIAL / DEVELOPED PHASE	INITIAL / DEVELOPED PHASE	INITIAL / DEVELOPED PHASE	INITIAL / DEVELOPED PHASE	INITIAL / DEVELOPED PHASE	INITIAL / DEVELOPED PHASE	INITIAL / DEVELOPED PHASE
Polytechnic of Slavonski Brod	INITIAL / DEVELOPED PHASE	DEVELOPED PHASE	-	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED / ADVANCED PHASE	DEVELOPED / ADVANCED PHASE	DEVELOPED PHASE CERTIFICATE
Academy of Applied Arts, University of Rijeka	INITIAL PHASE	INITIAL / DEVELOPED PHASE	INITIAL / DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	INITIAL / DEVELOPED PHASE	INITIAL / DEVELOPED PHASE	DEVELOPED PHASE	INITIAL / DEVELOPED PHASE
Faculty of Humanities and Social Sciences, Josip Juraj Strossmayer University of Osijek	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	DEVELOPED PHASE	ADVANCED PHASE	DEVELOPED PHASE	DEVELOPED / ADVANCED PHASE	ADVANCED PHASE	DEVELOPED PHASE CERTIFICATE

Out of 34 HEIs included in annual audit plans 2010-2015, 17 met the requirements for certification and were awarded with ASHE certificate for a developed QA system.

In this period, the following Croatian HEIs were awarded with a certificate:

*Universities*

- University of Dubrovnik
- University of Rijeka

*University constituents*

- Faculty of Civil Engineering, Josip Juraj Strossmayer University of Osijek
- Faculty of Medicine, University of Zagreb
- Faculty of Engineering, University of Rijeka
- Faculty of Organization and Informatics, University of Zagreb
- Faculty of Electrical Engineering and Computing, University of Zagreb
- Faculty of Civil Engineering, University of Rijeka
- Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb\*
- Faculty of Humanities and Social Sciences, Josip Juraj Strossmayer University of Osijek

*Polytechnics*

- Polytechnic of Slavonski Brod
- Velika Gorica Polytechnic
- Polytechnic of Zagreb
- VERN Polytechnic
- Polytechnic of Rijeka

*Colleges*

- University College for Applied Computer Engineering
- College of Agriculture in Križevci

Out of 17 certified quality assurance systems, 5 were assessed to be in a developed/advanced phase of development (Faculty of Electrical Engineering and Computing, University of Zagreb; Algebra University College for Applied Computer Engineering; Faculty of Medicine, University of Zagreb; VERN Polytechnic; Velika Gorica Polytechnic), while the other 12 were assessed as developed (Faculty of Civil Engineering, Josip Juraj Strossmayer University of Osijek; University of Dubrovnik; College of Agriculture in Križevci; Faculty of Organization and Informatics, University of Zagreb; Faculty of Engineering, University of Rijeka; University of Rijeka; Polytechnic of Rijeka; Polytechnic of Zagreb; Faculty of Civil Engineering, University of Rijeka; Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb; Polytechnic of Slavonski Brod; Faculty of Humanities and Social Sciences, Josip Juraj Strossmayer University of Osijek.)

---

\* Although the University of Zagreb did not meet the criteria for certificate at the level of university (the main reason being a lack of adopted strategic document), it has the largest number of evaluated constituents that have met the criteria and were certified.



## **Efficiency analysis of the evaluated QAS at higher education institutions**

By signing of the Bologna Declaration, the Republic of Croatia committed to achieving common goals of countries within the EHEA. In accordance with the principle of primary responsibility of higher education institutions for quality of all their activities, improving internal quality assurance became one of the priorities of Croatian higher education institutions. HEIs were encouraged to systematically collect data on various aspects of their activities and interaction with society, and develop institutional culture of self-evaluation. Changes of legislation and the adoption of the Act on Quality Assurance further strengthened the link between internal and external quality assurance.

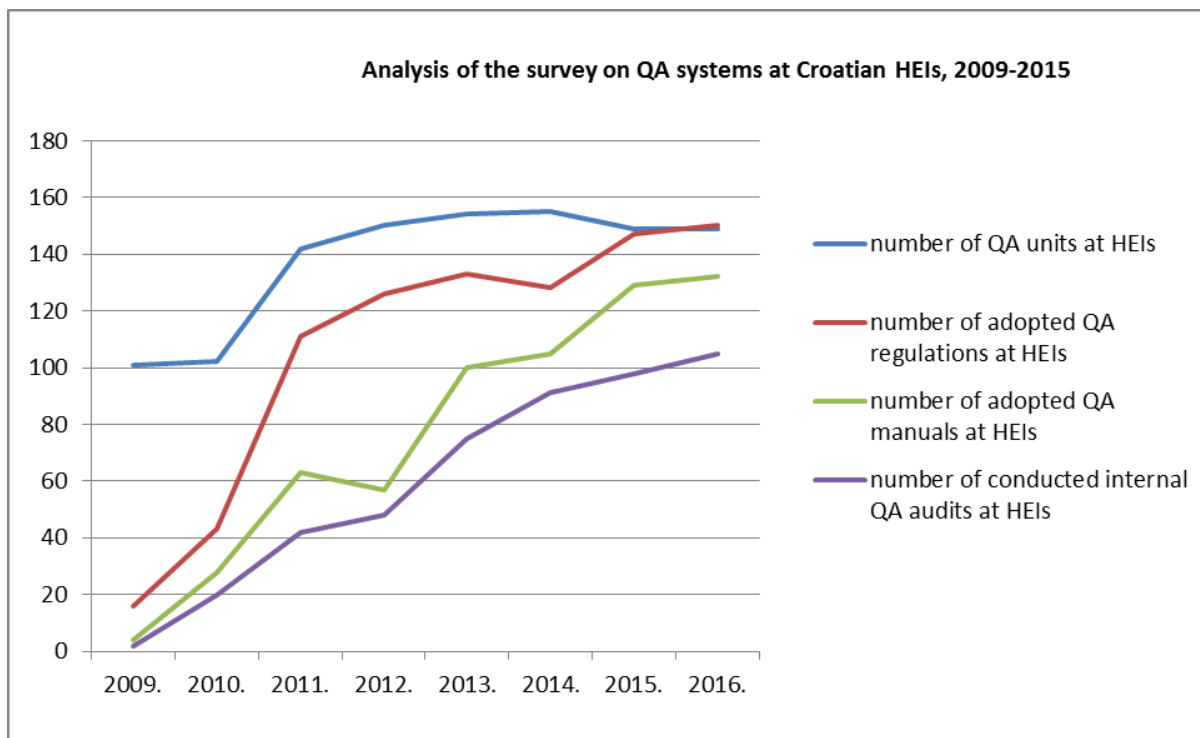
Pursuant to Article 18, paragraph 5 of the Act on Quality Assurance in Science and Higher Education, higher education institutions are required to establish internal quality assurance systems. The implementation of this Article required the adoption of new policies, strategic documents, regulations and manuals, the introduction of new practices (e.g. defining the procedure of internal quality assurance audit), and brought about certain innovations with regard to organizational structure and staffing at HEIs. The appointment of new vice-rectors/vice-deans for quality additionally strengthened the assumed responsibility for internal quality culture at HEIs. This period was also characterized by the search for answers on what is the quality assurance at higher education institutions, and how can it contribute to the sustainable development of HEI.

QA committees were established at HEIs to further contribute to the development of internal quality assurance, in line with the adopted European, national and institutional policies and goals. Support to these committees was provided by newly established QA offices, which involved changes in the organizational structure and finding solutions for problems regarding staffing. In a period marked by the economic crisis, this was particularly challenging for the public higher education institutions, which are predominantly dependent on state budget. There is a need for people with new competencies, and also for clearly defining the position and scope of work of QA officers, and their role in the overall development of quality culture at HEIs.

Considering the lack of trained experts for quality assurance in higher education in Croatia (quality management of HEIs in particular), the demand for QA professionals specialised in this area should only grow in the future. The initiated process of reform and modernisation of higher education, which aims to ensure the competitiveness of Croatian HEIs at both national and international levels and alignment with the needs of society, continues to this day, identifying a real need for additional investment in higher education and science.

Further development of quality assurance in higher education and science is directly correlated with investment in human resources development. This was one of the main reasons behind ASHE joining the Higher Education Initiative for Southeastern Europe (HEISEE) in 2012. This developmental project is carried out jointly by the Zagreb Institute for Social Research, Institute of Higher Education of the University of Georgia, Agency for Science and Higher Education and Institute for Development of Education, with the support of the US Embassy in the Republic of Croatia. The aim of this initiative is to strengthen the capacity of regional institutions involved in higher education, by bringing together national and international experts in development projects in higher education. The projects aim to promote excellence in higher education institutions through professional development programmes and appropriate study programmes, as well as the collection and analysis of institutional data needed for informed decision-making in higher education.

Since one of the main tasks of ASHE is to collect data on the system of higher education and science for the purpose of creating development policies, since 2009 the Agency conducts an annual survey collecting information about established internal quality assurance systems at Croatian HEIs. The analysis of data indicates a trend of continuous development in this area, as shown in Chart 2.



**Chart 2:** Analysis of the survey on QA systems at Croatian HEIs, 2009-2015

During the first cycle, ASHE proposed annual audit plans for the following year based on the information gathered with this survey, by selecting those HEIs that met the necessary conditions for a successful implementation of the procedure.

All evaluated higher education institutions have established quality assurance systems and appointed bodies (QA committees/centres) that provide advisory support to the management and are tasked with improving the institutional quality culture. Some HEIs have also established separate QA offices to serve as professional-administrative support to institutional QA bodies.

The audit has established that the majority of evaluated institutions developed and adopted their QA documentation (QA policy, strategic documents, regulations, manuals) after the adoption of the Act on Quality Assurance in Science and Higher Education. In some cases, basic QA documents were adopted during the audit procedure.

Evaluated HEIs are mostly aware of the need to include all the stakeholders in QA system. Following the Agency guidelines, main QA bodies - comprising representatives of teaching staff, associate teachers and students - often also include representatives of non-teaching staff, and external stakeholders. An example of good practice at some higher education institutions is the establishment of permanent advisory bodies comprising representatives of employers (e.g. economic councils that primarily contribute to the continuous improvement of the existing, and development of new study programmes), and their inclusion in the quality assurance system for the purpose of initiating positive changes and establishing better links with the business/industry sector.

Evaluated HEIs recognize the need for systematic development of quality culture, in line with the ESG and principle that HEIs are primarily responsible for quality of all their activities. HEIs mostly have a positive attitude toward external evaluation procedures and acknowledge the fact that internal and external evaluations combined improve the quality assurance system and all institutional activities.

The findings have shown that ESG 1.1 and 1.2 present the greatest challenge for the institutions evaluated in the first cycle. However, the historical development of Croatian higher education institutions should be taken into account in this regard, as well as the lack of staff, tradition or experience in the area of quality assurance, coupled with the insufficient investment in the system of higher education, which is considerably lower than the European average. Croatian public universities have structured their quality assurance systems in the period from 2004 to 2009. It should be noted that the considerable number of universities and their constituents have delayed the development of their strategic documents, waiting for the Ministry of Science, Education and Sports to adopt a national strategy and define national objectives in this sector. The majority of HEIs thus developed and adopted the first versions of their QA documents only upon the adoption of the Act on Quality Assurance in Science and Higher Education. The launch of the first cycle of external evaluations by ASHE was an additional impetus to these changes, and it reflected on the quality of said documents and the level of their implementation.

In order to provide support to HEIs and help them meet the external evaluation criteria, ASHE organised a workshop on the topic of strategic planning ("Strategic planning for higher education institutions - universities and their constituents, polytechnics and colleges"), held on 9 February 2011 at the University of Osijek, on 15 February 2011 at the University of Zagreb, on 18 February 2011 at the University of Split, and on 22 February 2011 in Zagreb for the Council of Polytechnics and Colleges.

External quality assurance audit prompted the evaluated HEIs to consider the ways in which they implement their quality policy in everyday activities, and whether there is a need for a policy revision.

The evaluated institutions mostly have development strategies with defined strategic goals, however, it was noted that some institutions do not adequately or systematically plan, monitor or report on the implementation of strategic goals. The procedures identified the need for defining/re-defining QA indicators and mechanisms. In the following period, the majority of higher education institutions will need to develop and implement a strategy of internationalization, as an integral part of their mission and vision of development within the EHEA. Strategic management should also be extended to risk management; in the coming period Croatian HEIs are expected to implement their own of risk management strategies.

Development of the institutional culture of self-evaluation through internal quality assurance audit also presented an innovation for the majority of Croatian HEIs. A new procedure needed to be established, all the stakeholders informed, and appropriate trainings of the staff tasked with its implementation ensured. The first cycle of external audit identified some significant areas for improvement regarding the internal audit procedure at higher education institutions, particularly with the definition of the procedure, the objectivity and expertise behind its implementation, the structure of audit report, its contribution to the overall effectiveness of the quality assurance system and the development of an institutional quality culture.

Approving, monitoring and periodical revision of programmes is closely related to the monitoring of relevant national legislation, and adhering to minimum quality requirements as a prerequisite for further quality improvement of study programmes.

Collecting data and monitoring the quality of accredited study programmes is not carried out systematically at some evaluated HEIs. Properly defining and implementing learning outcomes

also presents a challenge, hindering in many cases the implementation of outcome-based assessment. All of this indicates that a revision of curricula is needed, the one which would also include students and representatives of external stakeholders / employers. The aim is to provide students with competencies that will improve their opportunities for employment, and are a solid foundation for the future development of their careers.

The participation of students in the work of higher education institutions is regulated by statutes and relevant regulations.

In accordance with the legislation, the students are included in decision-making process and QAS activities, but the role of alumni and external stakeholders needs to be strengthened, particularly in revisions of study programmes and learning outcomes. For professional studies, cooperation with the regional business/industry sector carries a special importance, but is still not adequately developed at the majority of HEIs.

Students are included in the evaluation of teachers, although they are not always informed of the results of student surveys, or the implemented changes. Some higher education institutions need to further motivate students for participation in student survey, considering that the students are prepared for active future participation in civil society and various quality systems in the labour market.

Some higher education institutions require greater transparency of QAS (system structure, activities and responsibilities, collecting and providing feedback to stakeholders on results, analyses, reports, plans, improvements, etc.).

Formal quality review of teaching staff is carried out within the process of election to teaching/scientific grade (in line with the national legislation), in which the assessment of the quality of their work (via student survey) is taken into account. Higher education institutions are increasingly introducing peer-review in teaching process, and encouraging self-evaluation.

The majority of evaluated HEIs do not carry out systematic planning of professional development of teaching staff. In the following period the higher education institutions are expected to regularly plan the development of teaching competencies and provide active support to teachers in this regard, in order to implement modern teaching methodologies and technologies, and thus improve the quality of teaching and learning.

Planning and encouraging teacher mobility, and learning good practices from institutions abroad, could also provide additional opportunities for improvements in this particular area. Considering the EU plans for the establishment of the European Academy for Teaching and Learning, the improvement of teacher competencies in higher education, viewed in the context of a comprehensive curriculum reform in the Republic of Croatia, will be one of development goals the implementation of which will be a subject of much debate.

Resources allocated for student standard mostly satisfy basic students' needs. Majority of HEIs monitor students' satisfaction in this regard. Resources-related issues mostly refer to the availability of relevant literature and e-journals databases, working hours of libraries and planned improvements, and at some HEIs (especially those that deliver dislocated study programmes), the lack of student accommodation and restaurant. It is necessary to continue developing a system of student support through mentoring and tutoring in the following period, especially for students with special needs and those from socially vulnerable groups.

Opportunities for student mobility exist at the majority of institutions. At some HEIs, however, students are not adequately informed about them, and further efforts are needed in strengthening the international exchange of teaching and support staff, whose motivation for mobility is rather weak. Internationalization is expected to become increasingly important for Croatian HEIs and an integral part of their mission and vision, so as to ensure the contribution of

foreign students and teachers to the development of institutions and the overall academic community.

In the first audit cycle, evaluated institutions received highest grades for ESG 1.7. - publishing relevant, unbiased information on study programmes and levels. All evaluated institutions inform their internal and external stakeholders via their websites, however, the information that is made available is mostly input data and documents. Only a smaller number of institutions regularly and systematically documents processes, and conducts and publishes analyses and reports, including plans for improvements and analyses of the efficiency of implemented changes. During this period, the majority of HEIs invested in the improvement of their websites, and general public was often informed through other media as well.

There is some room for improvement, especially with regard to the English version of official websites (i.e. better international visibility).

## Reporting in audit procedure

In the audit procedure the expert panel produces two reports, and both are adopted by ASHE Accreditation Council. Both reports are drafted according to the template defined in the Audit Manual. The task of audit procedure coordinator is to ensure that reports are made in accordance with the provided template, and that they are uniform in structure, content, style and language.

First audit report is drafted within one month after the site visit. This report is not published, but submitted only to the evaluated HEI. This report contains a current assessment of the effectiveness of evaluated quality assurance system, as well as recommendations for improvement in the 6-months follow-up phase. Higher education institutions are thus provided with an opportunity to implement various activities in order to improve the established quality assurance system.

Upon the completion of the follow-up phase, the evaluated HEI submits a report that includes an analysis of the effectiveness of implemented activities. Based on these documents, the expert panel produces a second, final audit report that is adopted by the Accreditation Council, submitted to the institution and published on ASHE website, along with HEI's comment, final conclusion of the Council and summary of the report in English.

The reports in the first cycle were of consistent quality, and there was no need for any major changes to the report structure. One small improvement was adding a Summary at the beginning of the final audit report, which is translated into English and published separately, additionally increasing the visibility of audit reports.

Feedback on readability and availability of ASHE evaluation reports are not unlike that of other European QA agencies: although the reports are published on Agency website, they are primarily used by HEIs' managements and QA staff.

As for the impact of audit reports on the improvement of the internal quality assurance systems of evaluated HEIs and development of institutional quality culture, it is closely linked to the recommendations for improvement and the dynamics and quality of their implementation.

## Recommendations for development of HEIs' QA systems

In the 2010-2015 period, a total of 40 procedures was carried out. In every procedure the expert committees produced two reports: first audit report after the site visit, and final report after the follow-up.

In addition to the assessment of the effectiveness of evaluated system, the most important element of audit reports are the expert panel recommendations for improvement and further development of the institutional quality assurance system. The expert panels issued a total of **2781 recommendations** in 40 procedures; 1495 recommendations in the first report (for the follow-up phase) and 1286 recommendations in the final audit report.

**Table 4:** *Number of expert panel recommendations (by individual ESG standards) in 2010-2015 audit reports (total number of procedures: 40)*



ESG	No. of recommendations in the 1st report	No. of recommendations in the final report
<b>1.1</b>	395	287
<b>1.2.1.</b>	222	209
<b>1.2.2.</b>	80	98
<b>1.3</b>	133	128
<b>1.4</b>	199	166
<b>1.5</b>	190	130
<b>1.6</b>	158	150
<b>1.7</b>	118	118
<b>Total</b>	<b>1495</b>	<b>1286</b>

Findings show that ESG 1.1 presents the greatest challenge for the evaluated institutions, so the highest number of recommendations, almost a quarter (a total of 682, of which 287 in the final reports) relates to this standard.

A further optimization of established quality assurance systems was recommended to the evaluated institutions, as well as the inclusion of all the stakeholders in QA bodies, revision of basic system documentation, regular planning, monitoring, analysing and reporting on all QA processes. Special emphasis was placed on a well-defined and well-implemented internal audit procedure, as the main tool for regular institutional self-evaluation. The purpose of the internal audit is to identify both good practices and critical issues at the level of institution, and enable joint activities that will lead to the desired improvements.

The establishment of quality assurance system presented a great challenge for the majority of Croatian HEIs evaluated in the first cycle, particularly with regard to the issue of employing new personnel that would be in charge of the institutional quality assurance system, and the level of their expertise.

Over the last couple of years, only a few institutions secured a full-time position of quality manager (from own funds), while the majority of institutions still maintains a system whereby QA activities are carried out part-time by teaching and administrative staff. Quality assurance committees/boards are usually appointed for a set term, after which their composition changes and new members are elected. This raises certain concerns with regard to the continuity of work of such bodies, which also reflects on the effectiveness of the quality assurance system. Institutions were, therefore, recommended to ensure the continuity and development of their internal QA systems, and organise regular trainings for QA personnel.

HEIs that have implemented, or are planning to implement ISO Quality Management System, were given recommendations to adequately integrate the two quality systems into one that will meet the requirements of both ESG and ISO, in order to avoid unnecessary duplication of processes.

A recommendation was given to all the evaluated institutions, especially those that deliver professional study programmes, to formalise and systemise their - often informal - cooperation with the local community and business/industry sector, and thus improve their operation.

Regarding the standard 1.2, (which for HEIs listed in the Register of Scientific Organisations also includes scientific research, sub-standard 1.2.2), recommendations were focused on defining adequate learning outcomes at the level of programmes and courses, establishing mechanisms for monitoring the quality of study programmes, systematic collection of feedback from all the stakeholders on the quality of study programmes and use of that feedback in periodic revision of learning outcomes, inclusion of all the stakeholders (students, alumni, representatives of local community and business sector) in development of new study programmes and revisions of the existing programmes. For institutions that carry out scientific research, recommendations were given to better interlink their teaching and research activities, and develop adequate mechanisms for monitoring and evaluating scientific output.

Regarding the standard 1.3, HEIs were recommended to continuously improve their assessment procedures.

Since teaching and learning are at the core of Croatian HEIs' mission, is crucial and that the Assessment process is transparent and linked to learning outcomes. The progress of students should also be regularly monitored, and they should be provided with adequate support. HEIs need to systematically monitor the allocation of ECTS credits, and provide regular education on learning outcomes (and the assessment thereof) for teachers.

The emphasis of the recommendations related to the quality of teaching staff (ESG 1.4) was on the establishment of systematic support to teachers with regard to the improvement of teaching competencies, which would have a direct impact on the quality of teaching and learning processes. The evaluation of the quality of teaching staff should, in addition to student survey, also include data from other sources; teachers should be encouraged for regular self-evaluation (i.e. introduction of a peer review model).

Higher education institutions need to plan the development of teaching staff, in order to ensure the application of innovative methodologies and pedagogical approaches to teaching and learning.

In order to encourage teaching, but also research excellence, HEIs were recommended to actively motivate their teachers to participate in mobility programmes and to publish in prestigious journals.

Since higher education institutions plan their own development, ESG standard 1.5. is related to specific issues regarding learning resources and student support (availability of current literature, allocated space and equipment for learning and practical work, organization of student accommodation and restaurants, quality of mentoring and tutoring, organization and efficiency of the support for students with disabilities, foreign students and part-time students, recognizing, providing support and rewarding excellence, etc.), not just to meet the minimum legal requirements, but also to ensure the conditions for the further development and fulfilment of HEI's mission. Institutions also received some general recommendations: more student practice (as requested by the students at all evaluated HEIs), encouraging students to mobility, continuous collection of feedback and regular monitoring, analysis, planning and improvement of all processes related to the quality and availability of resources for studying, etc.

With regard to ESG 1.6, HEIs were recommended to strengthen their efforts in collecting and analysing data from various groups of stakeholders (particularly the feedback on the quality of study programmes from employers and alumni and information on student progress, from admission to employment), to analyse and publish the collected data, and use it for further improvement of courses and programmes, for planning and future development. Regular



comparative analysis and observing good practice of similar institutions in Croatia and abroad was recommended to all evaluated HEIs.

In addition to regular revision and updating of QA processes and documents based on results of internal audit, stakeholders' feedback and analyses, HEIs were recommended to publish relevant and current information pertaining to QAS on their websites, to encourage open two-way communication within the HEI and with external stakeholders, and to continuously inform all the stakeholders on the importance of quality culture.

Finally, with regard to the standard related to public informing (ESG 1.7), HEIs were recommended to, in addition to information packages on study programmes and studying, their work, activities and comparative advantages of the institution, also use their websites for publishing information on student passing rate and opportunities for employment upon the completion of study programme.

A recommendation was given to all the evaluated institutions to continuously improve and update their websites, and to harmonize the content between Croatian and English webpages, in order to improve their international visibility.

Overall, the first cycle of external quality assurance audit indicated that Croatian higher education institutions should in the following period improve the following areas: strategic planning, risk management, improved internal communication, third mission of higher education and strengthening ties with industry and labour market, modernising curricula and integration with CroQF, systematic support to teachers in developing their competences, systematic support and help to students in achieving academic success, increased efficiency and quality improvement of study, work of alumni organisations, planned development of competencies of administrative/technical staff and capacity building of internal QA staff and auditors.

### Quality analysis of audit procedures

ASHE regularly collected feedback from stakeholders who were involved in external quality assurance audit on their satisfaction with this procedure. Satisfaction survey of evaluated higher education institutions and expert panels was conducted via questionnaires that were sent at the end of the audit procedure, upon the adoption of the final audit report.

Table 5 shows the results of the questionnaires sent to Croatian higher education institutions that were audited according to annual plans of audit in 2010-2015 (N: 39).

**Table 5:** Analysis of the satisfaction survey and efficiency assessment of the external quality assurance audit

	Average grade
Clarity of the QA audit procedure	4,18
Clarity of QA audit standards and criteria	3,97
Applicability of QA audit standards and criteria	3,75
Clarity of guidelines for preparing audit documentation	3,93
Overall assessment of audit procedure:	3,98

Cooperation with ASHE coordinator during the procedure	<b>4,43</b>
HEI was given opportunity to adequately present its QAS	<b>4,37</b>
Communication between audit panel and QAS stakeholders	<b>4,29</b>
The Audit Committee was:	<b>4,35</b>
a) Competent	
b) Objective	<b>4,25</b>
c) Well-informed	<b>4,13</b>
d) Well-intentioned	<b>4,37</b>
e) Constructive	<b>4,25</b>
Observations were clearly, objectively and appropriately presented in the report	<b>4,05</b>
Recommendations for improvement were clear and applicable	<b>4,06</b>
External QA audit provided added value to HEI	<b>4,18</b>
Assessment of own contribution to discussions with audit panel during the site-visit	<b>4,10</b>
External QA audit allows for improvement of HEI QAS	<b>4,30</b>
<b>Overall assessment</b>	<b>4,16</b>

Survey analysis showed that the issue of applicability of audit standards and criteria (ESG 1.1 and 1.2 in particular) is rather challenging to HEIs, receiving a lowest average grade of 3.75. Highest average grades were given to cooperation with ASHE coordinator during the procedure (4.43), opportunity to adequately present HEI's QAS (4.37), as well as competency (4.35) and goodwill (4.37) of expert panels' members.

The majority of higher education institutions find the audit procedure (i.e. recommendations that expert panels provide in their reports) useful for further development of their internal quality assurance mechanisms.

Table 6 shows the results of questionnaires sent to the foreign higher education institution that was subject to pilot audit procedure - the first external evaluation that ASHE conducted abroad, as well as the first audit procedure carried out at request of the evaluated institution.

**Table 6:** Analysis of satisfaction feedback of the evaluated foreign HEI with the audit procedure and its effectiveness

	Average grade
Clarity of the QA audit procedure	4.30
Clarity of QA audit standards and criteria	4.00
Applicability of QA audit standards and criteria	3.90
Clarity of guidelines for preparing audit documentation	4.00
Overall assessment of audit procedure:	4.40
Cooperation with ASHE coordinator during the procedure	4.90
HEI was given opportunity to adequately present its QAS	4.60
Communication between audit panel and QAS stakeholders	4.50
The Audit Committee was:	4.50
a) Competent	
b) Objective	4.33
c) Well-informed	4.56
d) Well-intentioned	4.56
e) Constructive	4.43
Observations were clearly, objectively and appropriately presented in the report	4.40
Recommendations for improvement were clear and applicable	4.40
External QA audit provided added value to HEI	4.30
Assessment of own contribution to discussions with audit panel during the site-visit	4.40
External QA audit allows for improvement of HEI QAS	4.50
<b>Overall assessment</b>	<b>4.37</b>

Table 7 shows the results of the survey on the effectiveness of external audits that was sent to members of expert panels. The information refers to 39 procedures conducted in Croatia.

**Table 7:** Analysis of the expert panel members' feedback on the effectiveness of implemented audit procedures

	Average grade
Clarity of the QA audit procedure	4,82
Clarity of QA audit standards and criteria	4,74
Applicability of QA audit standards and criteria	4,63
Clarity of guidelines for preparing audit documentation	4,74
Usefulness of training for QA audit procedure	4,82
Cooperation with coordinator:	
a) before the site-visit	4,83
b) during the procedure	4,93
Overall assessment of the procedure	4,71
Quality of panel's work at the 1st panel meeting	4,62
Quality of panel's work at the 2nd panel meeting	4,79



Audit was conducted in accordance with the ASHE QA Manual, ASHE QA Ordinance and ESG	<b>4,92</b>
All the stages of audit procedure were carried out in accordance with planned goals and adopted methods of work	<b>4,84</b>
Satisfaction with own performance	<b>4,49</b>
<b>Overall assessment</b>	<b>4,76</b>

Analysis of the panel members' feedback (a survey that was carried out as a form of self-evaluation and evaluation of implemented procedures) shows that all the procedures have been carried out in line with the adopted documents, standards and criteria (average grade of 4.92). Panel members assessed their own performance and efficiency with the average grade of 4.49. Members of the expert panels are satisfied with the Agency's support and cooperation with ASHE coordinators before and during the procedures (average grades of 4.83 and 4.93, respectively).

During the first cycle of external audit, expert panel members for the most part actively participated in the analysis of documents, data and providing suggestions for improvements. Other positive examples include good teamwork of certified auditors who carried out the procedures (whom the evaluated institutions described as objective and well-intentioned), their affirmative approach to the audit procedure and building of quality culture, as well as openness to self-evaluation, learning and training.

**Conclusion:**

External quality assurance audit procedure contributed to better understanding of how significant management's support is to quality assurance system at higher education institutions, and that a functional QA system brings added value to the institution.

Although the majority of HEIs collect information on their activities and results, these need to be regularly analysed in accordance with the set quality indicators, for the purpose of improvement, development, recognition of good practice and excellence, as well as identifying deficiencies and risks. It is necessary to continuously inform all the QAS stakeholders on the importance of their contribution to development of QAS, to encourage their cooperation and promote development of quality culture in academic and non-academic environment.

Zagreb, February 2017

Made by:

Dr. sc. Vesna Dodiković-Jurković

Goran Briški

Ivan Bišćan