



agency for science and higher education

REPORT OF THE EXPERT PANEL ON THE RE-ACCREDITATION OF ISTRIAN POLYTECHNIC

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INTRODUCTION

The Agency for Science and Higher Education (the Agency) is an independent legal entity with public authority, registered in the court register, and a full member of the European Quality Assurance Register for Higher Education (EQAR) and European Association for Quality Assurance in Higher Education (ENQA).

All public and private higher education institutions are subject to re-accreditation, which is conducted in five-year cycles by the Agency, in accordance with the Act on Quality Assurance in Science and Higher Education (Official Gazette 45/09) and subordinate regulations, and by following *Standards and Guidelines for Quality Assurance in the European Higher Education Area* (ESG) and good international practice in quality assurance of higher education and science.

The Agency's Accreditation Council appointed an independent Expert Panel for the evaluation of the Istrian Polytechnic.

Members of the Expert Panel:

- Assist. Prof. Marina Gregorić, Ph.D., University North, Republic of Croatia, Panel chair,
- Prof. Dr. Corinna Engelhardt-Nowitzki, University of Applied Sciences Technikum Vienna, Republic of Austria
- Prof. Dr.-Ing. Faouzi Derbel, Faculty of Electrical Engineering and Information Technology, Leipzig University of Applied Sciences, Federal Republic of Germany
- DI Dr. Andreas Mehrle, MCI Management Center Innsbruck – Internationale Hochschule, Republic of Austria
- Assoc. Prof. Alen Jakupović, Ph.D., Polytechnic of Rijeka, Republic of Croatia
- Tadeja Lukić, bacc. oec., student, College of Slavonski Brod, Republic of Croatia.

During the site visit, the Expert Panel held meetings with the following stakeholders:

- Management
- Full-time teaching staff
- Students
- External lecturers
- Heads of study programmes
- Practice Coordinator
- Members of the Team for international cooperation and mobility
- Alumni
- Representatives of the business sector, potential employers.

The Expert Panel members had a tour of the work facilities, laboratories, IT classroom, student administration office and classrooms, and attended sample lectures, where they held a brief Q&A session with students.

In accordance with the site visit protocol, the Expert Panel examined the available additional documents and study programme descriptions (learning outcomes).

The Expert Panel drafted this Report on the re-accreditation of Istrian Polytechnic on the basis of Istrian Polytechnic self-evaluation report, other relevant documents and site visit.

The Report contains the following elements:

- Short description of the evaluated higher education institution,
- Brief analysis of the institutional advantages and disadvantages,
- List of institutional good practices,
- Analysis of each assessment area, recommendations for improvement and quality grade for each assessment area,
- Detailed analysis of each standard, recommendations for improvement and quality grade for each standard,
- Appendices (quality assessment summary by each assessment area and standard, and site visit protocol),
- Summary.

In the analysis of the documentation, site visit to the Istrian Polytechnic and writing of the Report, the Expert Panel was supported by:

- Maja Šegvić, coordinator, ASHE
- Marina Grubišić, assistant coordinator, ASHE
- Lida Lamza, interpreter at the site visit and translator of the Report, ASHE.

On the basis of the re-accreditation procedure conducted, and with the prior opinion of the Accreditation Council, the Agency issues a following accreditation recommendation to the Minister for Higher Education and Science:

1. **issuance of a confirmation on compliance with the requirements** for performing the activities, or parts of the activities
2. **denial of license** for performing the activities, or parts of the activities
3. **issuance of a letter of expectation** with the deadline for resolving deficiencies of up to three years. A letter of expectation can include the suspension of student enrolment within a set period.

The accreditation recommendation also includes a quality grade of a higher education institution, and recommendations for quality improvement.

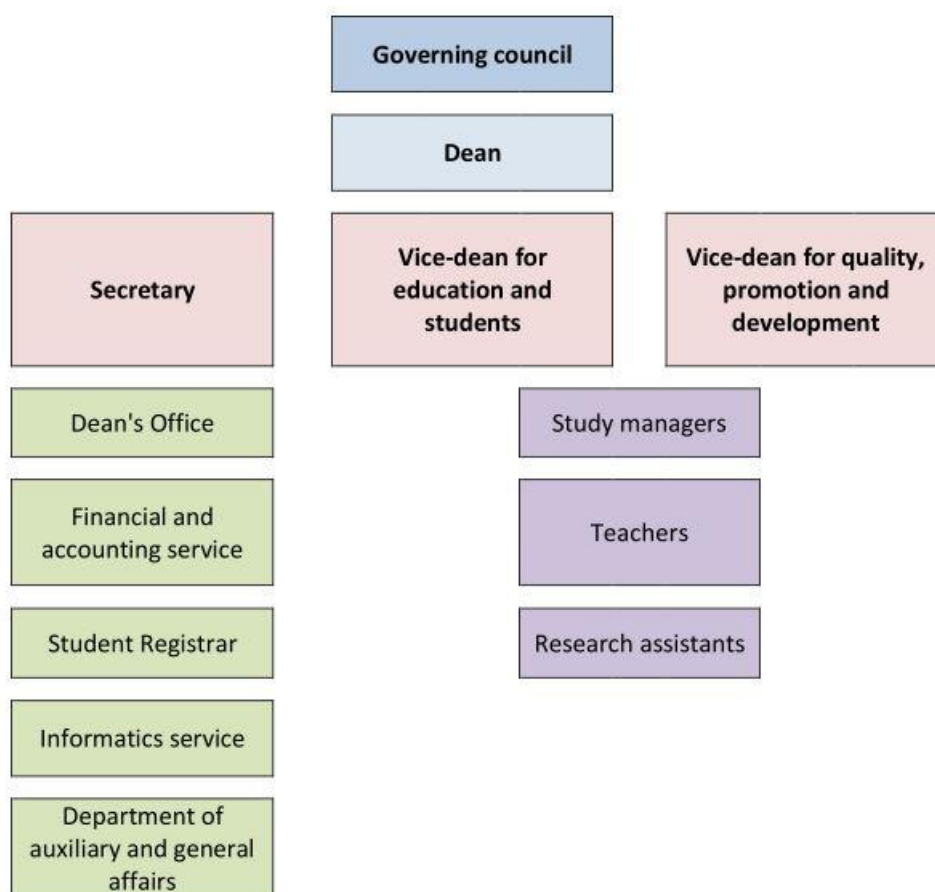
SHORT DESCRIPTION OF THE EVALUATED HIGHER EDUCATION INSTITUTION

NAME OF HIGHER EDUCATION INSTITUTION: Istrian Polytechnic – Università Istriana di scienze applicate

ADDRESS: Riva 6, 52100 Pula

DEAN: Boris Marjanović, Ph.D., Senior lecturer

ORGANISATIONAL STRUCTURE:



STUDY PROGRAMMES:

- Short professional study programme **Polytechnics**
- Undergraduate professional study programme **Mechatronics**
- Undergraduate professional study programme **Polytechnics**
- Specialist graduate professional study programme **Creative management in processes**

NUMBER OF STUDENTS:

According to the data provided in Analytic supplement to Self-analysis, table 3.1. (for Academic year 2018./2019.):

- 67 full-time students
- 138 part-time students

According to the data provided by HEI during the site-visit (from ISVU) for Academic year 2019./2020.:

- 45 full-time students + 2 Erasmus students
- 60 part-time students

NUMBER OF TEACHERS:

According to the data provided in Analytic supplement to Self-analysis, table 4.1.b (for Academic year 2018./2019.):

- 14 full-time staff
- 2 cumulative employment

According to the data from MOZVAG database (from Analysis of performance conditions – number of teachers directly involved in teaching in academic year 2018./2019.):

- 12.2 permanently employed teachers

According to the data for academic year 2019./2020., provided by HEI during the site-visit (Employment contracts):

- 5 Full-time staff
- 1 Cumulative employment
- 1 Teaching assistant.

SHORT DESCRIPTION OF THE EVALUATED HIGHER EDUCATION INSTITUTION

On December 2000, the Istrian region established the Higher technical school in Pula. In 2008, the school is renamed into Polytechnic Pula, and on April 2019 the Istrian Region Assembly (as the founder) decided to change the name into Istrian University of Applied Sciences. This set the bases for the definition of a new vision and business orientation, as well as the strategy of the Istrian University of Applied Sciences, which shall be defined during 2020, considering the Development Strategy of the Region of Istria. A new management has recently been appointed at the Polytechnic, and there have been major changes in the personnel structure.

BRIEF ANALYSIS OF THE INSTITUTIONAL ADVANTAGES AND DISADVANTAGES

ADVANTAGES OF THE INSTITUTION

1. Commitment of management, teachers, students, alumni and partners.
2. Added value with professional and institutional supporters.
3. Teaching in small groups.
4. Practical training implementation.

DISADVANTAGES OF THE INSTITUTION

1. Internal communication.
2. Small and rapidly decreasing number of students.
3. Managerial skills and educational proficiency.
4. Professional activity.
5. Lack of internal resources (human and equipment).

LIST OF INSTITUTIONAL GOOD PRACTICES

EXAMPLES OF GOOD PRACTICE

1. Internship practices and support.
2. Exemplary cooperation with external research facilities.
3. Alumni activities

ANALYSIS OF EACH ASSESSMENT AREA, RECOMMENDATIONS FOR IMPROVEMENT AND QUALITY GRADE FOR EACH ASSESSMENT AREA

I. Internal quality assurance and the social role of the higher education institution

Analysis

Due to its small size, the HEI's internal quality system is mainly based on informal cooperation between individuals. In principle, a huge formal basis of the quality system in the form of documents and process descriptions is available and could be put into practice. However, before that, the strategy and the quality assurance policy must be adapted to the new orientation of the HEI. In the next step, the further development and practical implementation of the quality system can take place. During this development, the following points are particularly important:

- written quality assurance policy statement with associated process descriptions
- periodic data monitoring, analyses and respective improvement activities
- personnel development (qualitatively and quantitatively), including a vocational education concept for all hierarchic levels; in doing so, a particular attention should be paid to the development of full-time teachers
- enhanced communication proficiency, especially change communication.

The implementation of recommendations from earlier re-accreditations is only partially apparent. However, in view of the current changes, some of these recommendations should only be implemented in a second step, once the management has mastered the most urgent steps. Intensified and sensitive change communication is another critical success factor for the further development of the HEI. Moreover, internationalization activities should be improved, and marketing activities should be intensified.

Recommendations for improvement

The HEI should analyse and implement the detailed recommendations below concerning the improvement of the quality management system.

Quality grade:

Minimum level of quality

II. Study programmes

Analysis:

All study programmes have appropriately described learning outcomes and are at the appropriate level of the Croatian Qualifications Framework. The revision of study programmes is done on the level of courses, not the study programme. Labour market analysis is not conducted, and feedback from external lecturers, external stakeholders and the alumni is rarely used.

Course syllabi include the method of assessing the achieved learning outcomes in a way that a group of learning outcomes is assigned with a method of assessment. It is not clear how the achievement of individual learning outcome is assessed.

The meeting with the stakeholders in the teaching process revealed a pronouncedly low level of mutual communication and communication with other structures of the higher education institution.

Recommendations for improvement

1. Include the analysis of labour market needs when changing the existing and developing new courses and study programmes.
2. Significantly strengthen the cooperation with external lecturers, external stakeholders and the alumni related to the alignment of harmonising study programme with the needs of the labour market.
3. Define the method of assessing the achievement of learning outcomes for individual LO.
4. Immediately and markedly improve communication between various HEI stakeholders.

Quality grade

Minimum level of quality

III. Teaching process and student support

Analysis

As observed before, also on the study program level, processes are mainly informal and rarely systematic. This poses great risks, especially in transition phases which the HEI is currently experiencing, when a high number of knowledge carriers are leaving the institution. Teaching started late this year due to major restructuration, but adequate replacement for the personnel leaving could be found. Motivation and dedication of the faculty remaining is surely one of the strongest points of the institutions. In the longer run however, the high amount of external teaching is not sustainable. Processes also need to be standardized, documented and executed according to the guidelines in order to ensure quality independent of the protagonists. First steps in internationalisation are done, but will remain without a noteworthy impact if the number of classes held in

English language remain on a modest level. There seems to be an e-learning system in preparation. However, roll-out has not taken place so far. The alumni seem to be well organized and active, but more on their own initiative than due to the institution's contribution. Student mobility such as the Erasmus program at HEI exists, but the number of students participating in them is very low. This applies to both students who come and those who go to other HEI's. As for checking students' satisfaction with grades and lectures, HEI conducts evaluation of professors by students through surveys. Surveys are filled by a small number of students and it is not possible to conclude how reliable they are.

Recommendations for improvement

1. It is recommended to address student concerns and involve them adequately in the decision-making processes.
2. It is recommended to return to the original level of internal staff.
3. It is recommended to offer some English lectures in each study program.
4. The HEI should encourage the development of new mobility programs and continue with developing Erasmus programs.
5. It is important that HEI takes care of the students' opinions.

Quality grade:

Satisfactory level of quality

IV. Teaching and institutional capacities

Analysis

The HEI has been facing difficult and turbulent time in terms of management in past few years, which resulted in major issues influencing the quality of teaching and institutional capacities. The HEI depends strongly on external teachers and has decreased the number of own teachers to only 5 full time teachers, 1 cumulative employment and 1 assistant. The HEI is in the process of recruiting new teachers and assistants, but it will take time to fill in the current gaps. The quality of external associates is adequate, but the HEI should not depend mainly on them and should build a strong human resource policy and procedures that emphasize the development of internal quantity and quality of teachers. In terms of teaching facilities, the HEI does not have enough mechanical production facilities, electronic laboratories and labs for control and robotics. The computers in the IT lab are insufficiently equipped with relevant software. Because of lack of internal teachers and recent change in number and quality of teachers, the HEI must work on the procedures and implementation of further development of competences of the current, but also of new teachers, by setting clear career plans and development in terms of

enhancing teachers' competencies. The teachers should also be motivated to participate in international exchange programs (Erasmus) in order to acquire up to date competences and improve teaching skills and knowledge. The library and teaching resources are not enough due to the outsourced library and lack of internal library facilities. The financial issues the HEI has been through in recent years lead to conclusion that the previous management did not manage financial resources well, and the Expert Panel members had no ground to assess current management (they have been appointed only 2 weeks before reaccreditation process). However, the HEI has been mostly financed by their owner (Istrian county), and it has no income from professional projects. Since the number of students has significantly decreased, therefore the financing from tuition fees too, it presents also the risk of the financial sustainability for HEI (although the owner is willing to fund the future development too). The HEI reputation and image are influenced by financial issues and management change and it can cause the problems with low admission of students and further quality of the programs.

Recommendations for improvement

1. Implement very strong human resources politics and strategy, to increase number of permanent teachers and ensure their selection in appropriate scientific areas. At least the core competencies of the respective programs should be covered by internal staff.
2. Communication between management and teachers should be highly improved with the aim of creating positive and motivating working environment with clearly set goals for each teacher regarding improvement of syllabuses, learning outcomes, potential cooperation with others, externals, publishing, etc.
3. Strengthen communication with external associates and keep them more involved in different activities of HEI, especially professional projects, scientific research, etc.
4. To implement the system of monitoring, student's survey analysis and peer review to assess the quality of teachers, their publishing activity, project contribution, training and further education of teachers with the aim to support their professional development but also to reward excellence.
5. HEI should improve learning facilities with new and modern laboratories through acquisitions or partnership in mechatronic relevant domains such as electronics, embedded computing, manufacturing engineering, automation and robotics.
6. Carefully plan, manage and monitor all financial activities in generating revenues and managing expenses and work on PR in order to gain positive image in public.

Quality grade

Minimum level of quality

V. Professional and/or scientific activity

Analysis

The HEI manages its professional and scientific activities mainly with associated staff. The most published papers in the last 5 years have been written by externals coming from partner universities. Besides, the number of professional papers is too small if we take into account the core mission of such institution. The HEI is the co-publisher of the professional journal "TECHNE". The content is teaching oriented and the showed example is dated to 2016.

The cooperation with high skilled external partners and institutions should be maintained and extended. This leads indirectly to the improvement of skills of permanent professors and teaching staff.

The needs of society, local community and labour market are taken into account by means of a strong cooperation and commitments. Agreements with different institutions with regard to different activities e. g. research, development, and tourism are available. The visit to METRIS showed the high potential of cooperation in research and teaching field. The support of the transfer of knowledge is based on individual activities of engaged teachers or representatives. Due to changes in management and teaching staff, we were not able to find out whether the new staff is strongly active in this field.

Based on interviews and SER, the higher education institution is the holder of only 2 recent projects as part of European projects. Professional projects are not available.

The HEI organizes a part of lectures and trainings in partner institutions. Although agreements with partner institutions are available to ensure the lectures and labs, this can lead to disturbances and difficulties in the studying process.

Recommendations for improvement

1. The number of published papers by permanent staff, especially with regard to professional ones, should be improved and based on professional projects.
2. Publications in international conferences or journals should be encouraged based on a transparent procedure.
3. A procedure allowing monitoring and encouragement for knowledge transfer should be defined and introduced.
4. The number of projects and professional activities should be improved mainly by recent staff.
5. The HEI should acquire required equipment for teaching and labs (to be less dependent on the lab of the Faculty of Engineering at the University of Rijeka). This equipment could also be used as nucleus for the acquisition of R&D projects.

Quality grade

Minimum level of quality

DETAILED ANALYSIS OF EACH STANDARD, RECOMMENDATIONS FOR IMPROVEMENT AND QUALITY GRADE FOR EACH STANDARD

I. Internal quality assurance and the social role of the higher education institution

1.1. The higher education institution has established a functional internal quality assurance system.

Analysis

Due to the small size of the organization, the **internal quality system** of the HEI includes and evaluates its activities mainly within informal procedures, herewith exploiting the advantages of face-to-face discussions. Respectively, a high share of quality-related documents is dated from the last year or from earlier years. Most probably due to the recent changes in strategy and management, the HEI did **not yet develop a written quality assurance policy statement**. Hence, apart from course descriptions (syllabus) and feedback questionnaires, **only few explicitly written evidence** (documents, reports...) could be observed during the site-visit. This were, for example:

- KVP² Workshops report (KVP: continuous improvement process) from the year 2017
- 2 student feedback questionnaires, however with a low amount of student answers (n=2, n=3, n=5), unknown year
- a report on the internal quality system with regard to a taught course, containing the number of enrolled students, class attendances, several qualitative criteria (yes/no items), pass rates of final examinations and even a good practice example, from February 2018
- a revision report concerning study program changes (polytechnics program), written by the internal revision committee of the HEI
- a Quality Handbook with detailed regulations.

As the examples show, **written quality-related documents and formal procedures** exist from earlier years, but according to the interviews either not known or not used much in daily life. During the interviews, many answers have given the impression of a seemingly intuitive approach: many activities are flexible to the needs of situation-specific solutions; the meeting participants only rarely referred to official processes. This causes three major risks: firstly, as the current, rather implicit approach of providing high quality performance highly depends on individual persons, the HEI faces the danger of acting subjectively and in-transparently towards students, employees and external stakeholders. Secondly, the system doesn't sufficiently support further growth of the

institution. Since, according to the interview with the management, the HEI intends to have ~5 new study programs within 5 years (tourism, agriculture), and only plans to close one existing program (short program Polytechnics), the internal quality assurance system will have to be prepared for this growth. The third risk is that external lecturers do have few opportunities to systematically meet the expectations of the HEI regarding teaching quality. Neither does the HEI currently have a verifiable chance to monitor teaching quality beyond student satisfaction according to student evaluation questionnaires. Respectively, the discussion with internal teachers and external lecturers showed some evidence that lecturers have compiled their own and differing perceptions of “good” quality without being able to mention clear quality objectives and criteria from the HEI or the heads of its study programmes. According to the documents, a Quality Committee exists. Further there is a Quality Handbook. However, neither this Committee nor the Handbook were explicitly mentioned by the respondents, although several questions regarding quality improvement procedures and change request handling have been asked during all meetings and to officials of all hierarchy levels.

Apart from generic strategic and mission statements, the new management has **not yet developed a written strategy**, nor did the HEI already mention the **strategic tools they intend to use in order to foster their further development** during the Panel’s visit. In the written report provided in advance, the strategic statements are rather generic, still **lacking an individual profile and policy** of this specific HEI. During the on-site visit, the HEI showed activity plans from 2015, 2016 and 2017. At the discussions with the Panel, the management expressed their true intention to develop more specific policies together with partners of the HEI in the next year.

Several meetings have shown that there is a high need to **improve the personnel capacity of the HEI**. A large number of the teachers, program managers and other functionaries has only been working in their new function for a few weeks. Therefore, it is logical (and not negative to attribute to these individuals) that they can only formulate vague ideas about the work of their predecessors and about their future goals. Many of them are only beginning to understand their future responsibilities. Even when being asked, what methods they intend to use for the future development of their positions, the most common answers of the recently appointed officials were “I don’t know yet”, “I can ask anytime, in case I need to know”, “there are no specific procedures for this”, “as long as there are no complaints, I do not see a need for action” and similar. Hence, the strong need for professional training is obvious. Although the aforementioned quality-related documents and procedures exist, the majority of the people interviewed did not know them. Instead they provided generic answers when being asked for these topics. Therefore, under all circumstances, the executives in charge need to be given enough time to develop their tasks well, and appropriate training or consultancy advice has to be provided. This is especially critical for the HEI, as due to its small size, most employees

are working in several roles – the lecturers also in addition to teaching. As stated in the Self-evaluation report and confirmed during the interviews, the HEI supports the professional development of its employees by financing different activities. However, it became evident that employees on all hierarchic levels up to the management aren't aware of skill gaps. Thus, they don't see a need for professional development. Therefore, it can be doubted that they would proactively ask for respective vocational training. Hence, the HEI should apply a top-down approach in order to identify skill gaps according to the assigned roles and tasks and to set-up individual development plans. However, employees should not simply be told what courses they have to attend. There should also be a bi-directional discussion and agreement of objectives, in order to create awareness of the reason why these improvements are essential.

A final phenomenon observed in several meetings was that **not all stakeholders of the HEI are well informed**, in particular regarding recently modified operational processes and procedures of the school. As especially students and teachers seem to be highly committed to the HEI, lots of them have created their own assumptions, what they think could be the future procedure, but there is a lack of knowledge what this future procedure will actually be. Unfortunately, the management doesn't seem to be fully aware of the need to improve change communication, as both the dean and vice deans evaluated the communication topics as good or even very good.

Recommendations for improvement

1. The internal quality assurance system should be consistently linked to the strategy of the organisation. Hence, before realigning the current quality assurance system, **the HEI should work out a specific strategy for the next few years**. Extending the generic formulation from the written Self-evaluation report, these statements have to be concretely linked to the study programmes, the internationalisation strategy, the HR-strategy, the development of infrastructure, the life-long learning strategy, the co-operation approach with scientific and professional partners and further strategic key points of the HEI.
2. Pursuing this strategy development, **the internal quality assurance system should be improved towards a more formalized, more transparent and less subjective mode of operation that also includes written documentation and establishes monitoring capabilities for the management** (reports, key performance indicators). In doing so, a systematic involvement of all stakeholders of the HEI and support for less represented groups or people with specific requirements (e.g. disabled persons) should be implemented by design. As the HEI is small, a specific emphasis should be put on a high degree of employee participation from the beginning, in order for them to gain as much experience as possible and to achieve a high degree of motivation within the team. This is

especially important as the HEI has to allocate all upcoming work packages on a small number of employees. In particular, student involvement should be formally institutionalized from the beginning.

This project should be set-up strategically, starting with **developing a quality policy statement** that is shared by all stakeholders of the organisation, including students. The respective project plan should **make use of respective managerial, moderation and quality assurance methods**. In case the HEI faces a lack of methodological knowledge, external consultancy should be used. High attention should be paid to project feasibility, as – according to the intended development – the small number of employees will have to master a high amount of important projects in addition to their normal workload (risk of overload). Also, an inadequate prioritization would endanger the success of this important strategic project. After having completed this project, the HEI should have at their disposal:

- A **clear and specific strategic approach** (vision, mission, strategy and sub-strategies on each important aspect, goals, intended program portfolio, action plans down to study program level and respective financial calculations (revenue sources and flows, cost structure, investment plan)).
- A **written statement concerning the quality assurance policy**, which is communicated among all stakeholders of the HEI.
- A **well-implemented internal quality assurance system** that includes the regular monitoring of selected data / key indicators from various sources and consistently links data analyses to business processes (controlling loop); the system should take into account all important external and internal stakeholders. As long as the HEI is still small, some analyses and monitoring tools might be designed in a rather non-bureaucratic way (e.g., in the course of regular face-to-face quality meetings), but still yield written protocols. Other analyses and statistics could be automated (e.g., as downloads from the HEIs information system). The monitoring of basic information should be implemented with priority, e.g., dropout rates, teacher performance, student satisfaction.
- When being asked (e.g., in the course of a future re-accreditation), the majority of HEI members are able to **precisely describe the quality-related processes** as far as relevant to their operational work in the school. All stakeholders, including the students, should be able to explain how quality monitoring and feedback procedures work and what happens to upcoming quality issues or complaints.

3. The HEI needs to pay close attention to **personnel development and personnel deployment planning**. Responsible persons who have been carrying out their tasks for some time already described their role and responsibility in general terms, but were largely familiar with the activities at the HEI. They need further training, e.g. to professionalise the definition of learning outcomes and regarding the systematic further development of study programmes. Newly appointed persons urgently need role descriptions for their tasks and basic training, e.g. for the tasks of a head of a study program or concerning the meaningful design and analysis of student feedback. From a didactic point of view, the HEI must become more professional as a whole, since confusion occurs at all hierarchical levels without exception (e.g. positive student feedback – "no complaints" – is equated with the fact that the HEI delivers good quality; e.g. "student-centred learning" merely consists of the advantage of small groups, but was not known to any of the respondents as a didactic method). In addition, modern didactic concepts are not even known at the management level (e.g. constructive alignment), so that the School has no possibility of using deans, vice-deans and heads of study programs as multipliers for the development of this knowledge among the teaching staff. As the majority of employees on all hierarchical levels of the HEI seems to be not fully aware of this need for further professional development, and would eventually not even request respective vocational training (not knowing it is needed), the HEI needs to **develop a top-down educational path for all hierarchical levels** and to **create awareness of what is required for professional development**.
4. In a phase of huge changes, it is not unusual that internal procedures have to be adapted. Therefore, some procedures might even not yet exist, as the new management did not yet have the chance to define these issues in the shortest time they had. Still, the **information and communication density** should be significantly enhanced to create a better awareness with regard to two key messages: first, despite a momentary challenging situation, the HEI will provide all services and educational offers according to legal requirements and educational needs; and second, the HEI will start a systematic process to create adequate new procedures and regulations as soon as possible. However, this will take time in order to be done adequately and include all stakeholders, in particular students. Obviously, during this time period, several questions have to remain unanswered. Facing these issues, an **intensive and proactive change communication** is required to mitigate existing anxieties and individual, subjective assumptions that increase the risk of dysfunctional rumours.
5. As already proposed in the Self-evaluation report, the HEI should conduct a **periodic audit** of study programmes, quality assurance for teaching and administrative / technical processes as well as educational and non-educational

human resource capacity (quantitative and qualitative revision). The monitoring activities and respective analyses should also include information and communication proficiency, local and international co-operation status. In a second step, scientific activities and international visibility could be looked at. The HEI has to make sure that both internal evaluation committee and quality committee have the capability to conduct respective improvement measures by means of time restrictions (personnel capacity) and knowledge (professional experience of appointed people, vocational training according to individual demand).

Quality grade:

Minimum level of quality

1.2. The higher education institution implements recommendations for quality improvement from previous evaluations.

Analysis

For any organisation the implementation of recommendations for quality improvement from previous evaluation is highly important and useful in a situation of stability and continuous improvement. As the HEI recently went through major changes, it is not evident in what regard it derived current improvements from carefully analysing the recommendations from previous accreditations, especially the ones from 2012. Despite some obvious improvements, during the site visit the HEI was not fully able to prove a systematic analysis together with respective action plans and implementation reports concerning recommendations from previous accreditations.

Considering the major re-organisation, one has to divide previous improvement recommendations into two categories: at the one hand, there are issues that are still relevant despite the change; other improvement issues have become obsolete, as either the fundamental pre-conditions for adequate implementation have changed or the underlying concept is re-designed by means of a complete re-launch anyway. Recommendations from previous accreditations, which are currently less useful or less prioritised, should be taken up a second time at a later stage and checked for feasibility. The HEI should do this consistently in the course of the pending strategic development process. Thus, the next re-accreditation process will be able to conduct a holistic analysis of the implementation of past developments as well as new developments of the HEI due to the strategic change. Against this background, the analysis of the Expert Panel focuses on recommendations from the last re-accreditation that the Panel considers to be of high relevance for the HEI at present.

Regarding **recommendations from previous accreditations**:

- There is still a need to not only re-formulate vision, goals, strategy and mission, but to also harmonize it according to realistic and empirically surveyed labour market demands. The intended orientation toward agriculture and tourism might represent a sustainable strategic field, but so might other topics (e.g. in the field of engineering renewable energy systems).
- During the site visit for the 2012 re-accreditation, the Expert Panel stated that the implementation of the teaching quality improvement had been proven doubtful. Moreover, the question how the monitoring results were used for improving teaching quality remained unanswered. The 2019 visit came to the same conclusion. Obviously, the implementation success of this recommendation has remained weak since the last re-accreditation: otherwise, people would have explained the old process standards to the Panel, not yet knowing the new procedures after the change. Instead, respondents gave evidence for a weak process proficiency, comparable to the evaluation in 2012.
- The enrolment processes and quota have been adapted to current requirements. It is, however, not clear, how student enrolment quotas are defined and whether the analysis of the pass rate and labour market needs are taken into account. The lacking market analysis, together with the low number of enrolled students, represents a major risk for the HEI.
- Equal to 2012, there was no proof about an international reputation of study programmes. When asked, the respondents state that students from their School have been accepted by other universities for Erasmus mobility, that some graduates work abroad, and that they have never heard of any problem. This is, however, only a weak evidence for the international visibility of a HEI that intends to attract foreign students and guest lecturers.
- Basic parts of the website have been translated into English since the last re-accreditation. Course syllabi are still available only in Croatian. Guiding documents for incoming students are available in English in a very brief version. English courses for incoming students are conducted in a face-to-face mode (e.g. project assignments, individual instructions together with extra reading material in English). This is sufficient at the moment, but not feasible for future growth.
- Students are still not sufficiently prepared for an engineering program with regard to their skills in mathematics and physics. This is especially crucial for the HEI because the number of applicants has decreased, which means that it doesn't have a good chance to select the best applicants. Accordingly, the Panel was told that the HEI has preparatory courses in place. There was high evidence that all teachers

and non-educational employees try to support the students to their best knowledge. There was, however, no evidence that the success of these preparatory courses or the dropout rates of courses are systematically monitored.

- The HEI states in its Self-evaluation that students can also compete for accommodation in the student dormitory in Pula, based on the open call of the Student Centre of the Juraj Dobrila University in Pula.
- Comparable to the 2012 re-accreditation report, the employability of graduates is currently monitored in two ways: firstly, by means of official statistics of unemployed persons and secondly via Alumni club activities. During the 2019 visit there was only weak evidence that the monitoring of the employability of graduates has been conducted in a systematic and regular way. According to management's estimations, the expected employment for the new study programs (agriculture, tourism) is good. This may be valid, although it is rather a subjective assumption. The HEI could not show empiric evidence for a labour market demand in these fields.
- The Alumni club attitude is apparently enthusiastic and shows a high commitment of the responsible people. The membership database has been significantly improved. The Alumni club organizes meetings and workshops, and also has conducted surveys that could be used by the HEI. However, the estimated number of active members is only ~12, which is low despite the fact that the HEI only graduates a small number of students in every year. As the alumni representatives mentioned a lot of creative ideas concerning the future development of the HEI, it would be highly recommendable to also offer an alumni participation in the future strategic development e.g. within a SWOT analysis, a design thinking workshop or similar. Provided proposals were to strengthen the link between the HEI and the alumni club (experience transfer, success stories), to refresh the study programs, to improve the marketing and the visibility of the HEI. A further idea is to set-up innovation incubators in order to show what the students of this HEI are able to do.
- Despite the recommendation of the 2012 Expert Panel to ensure that students have appropriate opportunities to participate in the decision making of the HEI, the implementation of respective procedures remains doubtful. A further concern that occurred during the 2019 evaluation was the low availability of information, mentioned by the students. As the HEI strongly depends on their students, this issue has to be seen as strategically critical. The students showed a high commitment to their School, and are convinced that teachers and service staff of the HEI support them in any possible way. This positive attitude is a strength with

regard to the attraction of new applicants. By no means should this be weakened due to the restrictive attitude and information policy of the HEI towards the students and their information enquiries. Although not all proposals will be feasible, the students also represent a huge creative potential (just like the Alumni) that the HEI should use to enrich its future development.

- Teacher education is in line with the requirements of the study programmes regarding the professional knowledge of the disciplines and courses. However, as similarly stated in the 2012 accreditation, the HEI should **take care that the number of full-time teachers is increased** (and by no means further decreased). Obviously, there are subjects to be taught by external lecturers, because the HEI cannot cover all topics – nor would all topics require full-time teachers. Still, the **dependency on individual teachers is high**, as the number of teachers is too small. Compared to the 2012 re-accreditation, in 2019 this issue has become more critical: as some teachers have left the HEI, the newly appointed teachers are not yet familiar with the HEI and will have to put more effort in the preparation of their lessons compared to teachers who have already been teaching their courses for some years. In this regard, the HEI has to manage **several critical issues at the same time**: new teachers, higher time-effort required for policy- and process development, many additional roles and committee memberships assigned to always the same individuals, and the intended growth. The student-teacher ratio is acceptable, but only due to the fact that the number of students is low – which results in a mathematically-sufficient ratio when compared to the small number of teachers. Currently the HEI is in a position where it will have to improvise in case a teacher suddenly falls sick or gives up teaching at this HEI for any other reason. Accordingly, there is a high risk of not being able to deliver the required course in time. A second risk is to assign too many teaching hours to persons who are already struggling with their current workload – not to mention the necessary time for further individual development and the development of the School.
- In the current situation and according to the statement of the new management, the HEI has neither the capability nor the intention to execute scientific research in the near future. Public funding submissions will concentrate on ERASMUS+ and eventually initiate a European project proposal together with external partners.
- The international mobility of students has been improved since the last re-accreditation. Consequently, several students went to foreign universities, and the HEI can show a list of foreign partner universities. This is a positive development that needs to be further extended.

- The class equipment is sufficient for a small amount of students and well-equipped in terms of furniture. The electro-technical laboratory is simply equipped, which seems at the moment still adequate for a basic polytechnic education. As the Panel members haven't seen the laboratory equipment in Rijeka (nor pictures or component lists), there is no basis for assessment. Students of the mechatronics course have admittedly described this as sufficient. However, it cannot be assumed that the student's judgement alone permits a valid judgement: the students still lack experience. In addition, they may give answers in the sense of social desirability to the alleged support of "their" school. At the HEI there is a computer lab with 16 workstations and basic software. According to statements during the meetings, also further licenses are available. Although the library is still dislocated, neither students nor teachers mentioned a severe barrier regarding the access to adequate literature. The visit of the Panel members at the METRIS laboratories showed very good equipment for the polytechnics student education and covers parts of the mechatronics needs (in particular, mechanics and material sciences).

Recommendations for improvement

1. In accordance with the re-accreditation report from 2012, the 2019 Expert Panel strongly **repeats the recommendation** that the HEI should **implement mechanisms for monitoring and improvement of the teaching quality** (after having adapted them to the new strategy). Relevant **data** should be **collected periodically**. In addition to that, a **traceable analytic approach** should be implemented to make use of the collected data concerning the **improvement of the teaching quality and the organisational performance** within educational and non-educational tasks.
2. The HEI should **find a resource-efficient way to self-evaluate the international recognition of their programmes abroad**. In a first step, they could, e.g. initiate a best practice workshop or bilateral interviews with partner universities in order to achieve a benchmark of their study programs compared to international programs with high recognition.
3. The HEI should **strengthen its marketing activities** (e.g. in schools) in order to attract more applicants for its study programs. Further, the HEI should timely and accurately **monitor dropout rates** and strengthen the attempts to **support struggling students**. The 2019 Panel repeats the recommendation from 2012 that the HEI should develop ideas and **implement measures to attract better students**.
4. The HEI should **periodically monitor the employability of graduates**.

5. Before implementing new study programs, a systematic **market requirements survey** should be done.
6. The HEI must ensure that **students have appropriate opportunities to participate** in its decision-making processes and the resolution of matters that affect their experience. Considering that this issue repeats the recommendation of the 2012 re-accreditation, that the number of enrolled students is too low, that the changed situation demands intensified (instead of reduced) information flows, and that the HEI needs to attract even more students for forthcoming programmes, this is a **critical issue that should be implemented in the shortest time**. Even in the case that students come up with wrong conclusions, misconceptions or unfeasible proposals, the HEI should handle these opinions and suggestions with a constructive attitude rather than hierarchic answers. This will be especially helpful if the current changes cause unavoidable incidents like, e.g. frequent schedule changes: if the students understand the reasons for such occurrences and perceive that all entities of the HEI including the management are doing their very best to solve them, there is a high probability that they will even try to contribute to solutions rather than only passively complain. In this regard, the 2019 Expert Panel repeats the necessity of **intensified change communication** (see above). In this regard, the HEI should make use of its staff in a multiplier role: well-informed teachers and service officials that are able to clearly distinguish what to tell to whom (and what rather not), could become an efficient driving force of a fast and constructive change process based on an open information policy.
7. Repeating the recommendation 3 from standard 1.1., the HEI needs to **advance its personnel development (quantitatively and qualitatively)** and **develop an educational path for all hierarchical levels**. In addition to that, **a functioning contingency management** has to be established as soon as possible.
8. The HEI should **develop an action plan** within its pending strategy development that will enhance outgoing **student mobility**, alleviate matters for potential and actual incoming students and motivate **teacher mobility**. The HEI should consider that going abroad for their students does not necessarily mean taking courses, but could also include a practical internship. Incoming students could be attracted by adequate English course offers and further strengths of the school (small groups, highly committed teachers, attractive location). **International co-operations** should be strengthened step by step according to the organization's capability to do so – but in a systematic manner and monitored by means of a project management that is part of the action plan to be developed.

9. The following list mentions **further recommendations from the 2012 re-accreditation** that are still valid, but have a comparably **lower priority** in the current situation (i.e. implementation could start after the end of the first year with the new management and the fulfilment of the aforementioned high-priority criteria):

- Enhancement of international co-operations in the course of internships.
- As soon as a higher volume of incoming students is accepted, a sufficient number of courses has to be equipped with an English syllabus. As soon as teaching capacity becomes a bottleneck, the current one-to-one consultation mode of teaching has to be replaced by regular courses taught in English.
- Intensified support of extracurricular student activities by the HEI.
- In the long run, a university campus should have a library – maybe still in cooperation with a bigger library and sharing licenses for, e.g. scientific databases and ebooks, but offering at least a small amount of specific journals and books and a space for students to do their information searches and to carry out joint group work that needs information retrieval.
- Dislocated laboratories are – even if well-working – a disadvantage. The METRIS-lab is close to the school and offers good opportunities. To have to drive to Rijeka is problematic in the long run. Also, the establishment of at least some laboratories for mechatronics/ robotics/ power-electronics would alleviate this burden, increase the HEI's attractiveness and strengthen the confidence of any re-accreditation panel in the capability of the HEI to provide a proficient study program in engineering. The respective action plan to be developed by the HEI should also consider how the HEI can fulfil the continuous modernisation needs of its technical equipment.

Quality grade:

Minimum level of quality

1.3. The higher education institution supports academic integrity and freedom, prevents all types of unethical behaviour, intolerance and discrimination.

Analysis

In their Self-evaluation report, the HEI expressed its awareness for and its support of the importance of academic integrity and ethics assurance, as well as ethical and transparent activities. Hence, the HEI **intends to continuously monitor its activities by means of quality indicators in the future. A Code of Ethics, an Ethics Committee and a student ombudsman are in place** in order to ensure freedom in research, professional and scientific creativity, and to preserve the dignity and reputation of the HEI. So far, **no infringements have been formally reported**. Therefore, one can only assume that the installed mechanisms will begin their work as described in the event of an officially reported failure to comply. Plagiarism is only identified based on singular Google searches by the supervisors. The HEI neither has its own plagiarism software, nor does it use the plagiarism software of other universities in the course of its co-operations, nor does a formal process exist at the HEI for dealing with this topic. Student instructions about inappropriate ways of writing are good, but not enough.

A change of the magnitude that the HEI is currently going through cannot be free of conflict at the human discretion. It is also unlikely, given such a huge change, that in some meetings only insignificant difficulties were mentioned upon request, while in other meetings it was claimed that everything was regular. Nor did the management name any relevant conflicts. This is a **strong hint for hidden conflicts and raises serious doubts about the effectiveness of the mechanisms to uphold ethical principles**.

Whether or not there are unknown irregularities that are not reported to the Ethics committee for fear of negative consequences (e.g. job loss, degradation or exmatriculation) cannot, of course, be assessed. In view of the recent job changes of many lecturers and the lack of clarity among students as to how their next semester will proceed, **this situation must be handled with the utmost sensitivity by management**: even if those fears are irrational, based on inaccurate facts and/or not officially expressed to the Committee or the management, there is a high risk that they will negatively affect the system. It is true that there is no immediate problem arising from unofficially reported ethical violations. However, those affected will talk about it by means of word-of-mouth, and thus diminish the attractiveness of the HEI for employees and future students much more than a conflict resolved by means of careful mediation. **Just as in every change process, here it is, above all, the management that serves as a role model for the rest of the organization.**

Recommendations for improvement

1. Although the HEI has established formal mechanisms to uphold ethical principles, the practical implementation has not been proven. The HEI is strongly encouraged to **work on an open and supportive communication and corporate culture** in order to quickly achieve a constructive and creative working environment.

Especially when it comes to developing new strategies, this is essential for an academic organisation. Since it is not possible to create an ethically conducive culture by instruction, the HEI should anchor the prerequisites for this in its leadership patterns, in its HR-policy, in its communication with all internal and external stakeholders and, above all, in the daily activities of its executive staff.

2. Recognition as a reputable academic organization requires access to **plagiarism software**. This should either be licensed by the organisation itself or included in the cooperation agreement with a partner institution. In addition, every bachelor thesis and every master thesis should be subject to a mandatory plagiarism check.

Quality grade:

Minimum level of quality

1.4. The higher education institution ensures the availability of information on important aspects of its activities (teaching, professional and/or scientific and social role).

Analysis

Basic information about all study programmes and enrolment details are publicly available. There is a Q&A study-guide for the students. The website has been improved last recently, and to date also contains information in English language. A guidebook for incoming students is also available, though this contains only little information. The HEI also conducts marketing in social media. Currently lots of this material needs to be updated because of the recent changes. There are also events, e.g., career days. Since the HEI itself does not have extensive key figures, it has no possibility to make selected parts of them available to the public or to use them in the context of its marketing activities.

Recommendations for improvement

1. Especially in view of comprehensive changes and the HEI's intention to expand its offerings and to attract more students, also from abroad, comprehensive and customer-oriented information offerings are a critical success factor. The HEI should therefore **make every effort to expand its range of relevant external information, much of it also in English**. This includes, on the one hand, in-depth information on the courses offered, and, on the other hand, information on other HEI activities. This can be done via the website and social media, but also with the involvement of alumni as well as local and regional partners.
2. Given the small size of the HEI, the informal face-to-face exchange of information between colleagues seems to work well. On the other hand, the HEI should **significantly improve the internal availability of quality indicators, process information and strategic information**. It should not confuse this with “making

all information available to all stakeholders" unfiltered, but should carefully select which functionaries need which information in which roles on a periodic and reliable base.

Quality grade:

Minimum level of quality

1.5. The higher education institution understands and encourages the development of its social role.

Analysis

The firm integration into the region is a clear strength of HEI. According to the Self-evaluation report, the basic idea of establishing this HEI lies in creating polyvalent experts needed by the economy and society who will contribute to the development and the prosperity of the region and Croatia as a whole. Via professional study programmes, the HEI seeks to transfer primarily applicative knowledge that enables graduates to quickly integrate themselves in their later workplace and give a qualitative contribution to the company's business. In this regard, an Economic Council has been established, and co-operation agreements have been signed with the Region of Istria and several Istrian agencies. Furthermore, workshops have been conducted in order to involve the public. The management plans (also in view of the bankruptcy of the local shipyard) to offer new study programmes in agriculture and tourism in the future. The statements made by external stakeholders during the on-site visit of the HEI showed a strong commitment towards this intention.

Recommendations for improvement

1. The HEI should **continue along the path of close local cooperation and transform the existing declarations of intent into concrete activities**. This can be, for example, the integrative design of relevant curricula, the availability of practice-oriented external lecturers, internship offers for students, the financing of laboratory equipment or the possibility to use such in these companies.
2. The HEI should **sharpen its profile** and thus advance the self-imposed claim to promote the region even more intensively through its activities and graduates. These should **first be curricular activities and measures for the further development of HEI**. In a **second step**, the HEI can **tackle further projects and coordinate events and publications**.

Quality grade:

Satisfactory level of quality

1.6. Lifelong learning programmes delivered by the higher education institution are aligned with the strategic goals and the mission of the higher education institution, and social needs.

Analysis

The HEI runs several lifelong learning programmes, starting with the CISCO Academy, which was established in 2006. However, as the management stated during the site visit, the HEI in its current situation has different priorities than the further development of lifelong learning activities. The Expert Panel agrees with this opinion. Nevertheless, the HEI should not lose the status quo that has already been achieved.

Recommendations for improvement

1. As soon as the HEI has mastered the current consequences of the management change to some extent, the **further development of lifelong learning programmes** should be resumed as well and respective activities should be put into practice.
2. The HEI should make use of its current partnerships and deepen its cooperation with the alumni club to **explore the need for future lifelong learning opportunities and to respectively offer targeted programmes**.

Quality grade:

Minimum level of quality

2. Study programmes

2.1. The general objectives of all study programmes are in line with the mission and strategic goals of the higher education institution and the demands of the labour market.

Analysis

Based on the Strategy for the period 2013-2020, specifically in chapter "4.1. Improving and developing study programmes and life-long learning programmes", the Expert Panel concluded that **all study programmes are in line with the mission and strategic goals of the HEI**.

The HEI is in the process of developing a new strategy, and the Management and external stakeholders stated that further sustainability of the Polytechnics study programme will be reviewed, and that the HEI will focus on developing new study programmes in the area of tourism and agriculture. Also, the Management plan to close the short professional study (120 ECTS); in 2016, HEI received permission to perform this short study program.

The Expert Panel recommends that the HEI also **reviews the other two study programmes (Mechatronics and Creative Process Management)**.

The Expert Panel saw examples of new courses and changes that were introduced: course content, student workload (ECTS) at the course level, course schedule and the connections between the content of different courses. These examples show that the changes are thought-out, but also that all the arguments are of an internal nature (e.g. students did not achieve the LO of previous courses which they need for the subsequent course). The Panel did not see any examples of **external arguments for changing the courses or study programmes** (e.g. the needs of the labour market). Furthermore, the Panel did not see any **arguments for changing the student workload (ECTS) for some courses**.

All study programmes are the result of study programme proposals which **included their justifiability as well as the analysis of HEI resources**.

Recommendations for improvement

1. Continue with the development of the new strategy, and include elements related to current study programmes.
2. Include the analysis of labour market needs in the changes of existing and the development of new study programmes.
3. When changing the student workload (ECTS), include the analysis based on the results of student surveys.

Quality grade

Minimum level of quality

2.2. The intended learning outcomes at the level of study programmes delivered by the higher education institution are aligned with the level and profile of qualifications gained.

Analysis

Learning outcomes on the level of study programmes are available through the following links:

<https://www.iv.hr/obrazovanje-i-znanost/mehatronika/>

<https://www.iv.hr/obrazovanje-i-znanost/politehnika/>

<https://www.iv.hr/obrazovanje-i-znanost/kmp/>

All study programmes **have defined learning outcomes which are in line with the mission and goals of the HEI**, as was already stated in the standard 2.1.

Undergraduate professional study programme Polytechnics has 15 learning outcomes. According to Blooms taxonomy, the distribution of LO is as follows: there are no LO on

levels 1 and 2, there are 3 LO are at level 3, 1 LO on level 4, 5 LOs on level 5, and 6 LOs on level 6. According to the Dublin descriptors, LOs cover the first 3 categories (area-specific). The study programme has a general LO of "Professionally communicate in the national and foreign language" which covers the "communication" category. The general LO "Evaluate the need for life-long learning and become involved in it" covers the category "learning skills". **Study programme learning outcomes correspond to level 6 of the Croatian Qualifications Framework (CROQF).**

Undergraduate professional study programme Mechatronics has 15 learning outcomes. According to Blooms taxonomy, the LOs are distributed in the following manner: no LOs on levels 1 and 2, 6 LOs on level 3, none on level 4, 5 LOs on level 5, and 4 LOs on level 6. According to Dublin descriptors, LOs cover the first 3 categories (area-specific). The study programme has two general LOs: "Use a foreign language in professional literature as well as every-day and professional communication" and "Apply the principles of business communication in the framework of the profession and adjust to working in project teams" which cover the category "communication". There is no general learning outcome that covers the category "learning skills". **Study programme LOs correspond to level 6 of the CROQF.**

Specialist graduate study programme Creative Process Management has 14 learning outcomes. According to Blooms taxonomy, the LOs are distributed in the following manner: there are no LOs on levels 1 and 2, there is one LO on level 3, one on level 4, none on level 5 and 12 LOs on level 6. According to Dublin descriptors, LOs cover the first 3 categories (area-specific). The study programme has one general LO: "Apply the methods of scientific-research work and develop the concept of the final thesis" which covers the category "communication". There is no general LO that would cover the category "learning skills". **Study programme learning outcomes correspond to level 7 of the CROQF.**

The Panel was presented with a table that shows the contributions of individual courses to the learning outcomes of the study programme (link to the document is included in the Self-evaluation). This leads to the conclusion that the HEI **monitors the alignment of course LOs and LOs at the level of the study programme.**

Analysing the programme LOs, the Panel concluded that **all study programmes are at the appropriate level of the CROQF.**

The HEI has submitted a project of aligning the undergraduate professional study of Polytechnics with the Croatian Qualifications Framework as part of the European Social Fund-funded project "Implementing CROQF at the level of higher education", but it did not get the funding. The HEI is partner on the project "Modern education of professional bachelors of Mechatronics aligned with the requirements of the CROQF".

Based on the meetings with external lecturers, external stakeholders and the alumni, the Panel concluded that these groups have **poor cooperation with the HEI regarding the alignment of the existing study programmes with the needs of the labour market.** It

was emphasised that this cooperation would be strengthened during the development of the new study programmes.

Expert Panel did not see any examples of **changes made to the study programmes based on the analysis of labour market needs**.

The Self-evaluation mentions that the HEI has an Economic Council (there is also a Regulation on the work of the Economic Council), which should include external stakeholders with the aim of exchanging information on the competences needed on the labour market. The meeting with external stakeholders revealed that they were not familiar with the existence of the Economic Council. The Panel came to the conclusion that **the Economic Council is no longer active**.

Learning outcomes at the level of the study program clearly reflect the competences needed for the labour market, continuing education or other needs.

Recommendations for improvement

1. Undergraduate professional studies of Polytechnics and Mechatronics have many LOs on levels 5 and 6 of Bloom's taxonomy. Check whether students are able to achieve those outcomes on undergraduate professional study programmes.
2. In the undergraduate professional programme Mechatronics and the specialist graduate study of Creative Process Management introduce a general LO that would cover the category "learning skills" from Dublin descriptors.
3. Use the prepared project application for the implementation of CROQF in higher education, which did not receive funding, for applying for another, similar project.
4. Significantly strengthen the cooperation with external lecturers, external stakeholders and the alumni for the purpose of aligning study programmes with the needs of the labour market.
5. Revive the Economic Council.

Quality grade

Minimum level of quality

2.3. The higher education institution provides evidence of the achievement of intended learning outcomes of the study programmes it delivers.

Analysis

Course syllabi that were submitted to the Panel showed that groups of LOs were paired with assessment methods. However, it was not clear from a submitted exam sample **which part of the exam tested which learning outcome**. Also, one of the methods of assessing LOs was "class attendance"; it is not clear how **attendance can be used to assess the achievement of learning outcomes**.

Based on the examples of final thesis, the Panel noticed that some thesis were graded as excellent, but that their **level of complexity was maybe not high enough for a professional thesis** (for example, the topic of constructing a regulated DC power source). The Self-evaluation did not indicate whether the HEI has **conducted the revision and improvement of the teaching process on the basis of the achieved learning outcomes**. Meetings with the teachers, external lecturers and students showed that any improvements of the teaching process are done **informally**, on the basis of informal communication between the teachers and students.

Recommendations for improvement

1. Define the methods of assessing the achievement of learning outcomes for each individual LO.
2. Stop using the method "class attendance" to assess the achievement of LOs.
3. Ensure the appropriate level of complexity of final thesis' topics.
4. Ensure formal revisions and improvements of the teaching process based on the achievement of LOs.

Quality grade

Minimum level of quality

2.4. The HEI uses feedback from students, employers, professional organisations and alumni in the procedures of planning, proposing and approving new programmes, and revising or closing the existing programmes.

Analysis

The higher education institution has a Regulation on the procedure of improvement and conducting periodic revision of study programs. The Panel saw examples of revisions, but only on the level of courses (new courses, changes of content, linking the contents of two courses, changing the course schedule and the number of ECTS credits). All changes were made on the basis of internal factors (e.g. informal student feedback). The Panel did not see any **examples of reviews arising from external factors (feedback from external lecturers, external stakeholders and the alumni)**.

In April 2019, the HEI signed an agreement with a number of external stakeholders aimed at developing new study programs.

Since the last re-accreditation, the HEI initiated two new study programmes – short professional study program (120 ECTS) and undergraduate professional study of Mechatronics (180 ECTS). These new study programmes passed an **analysis of justification and all other analyses prescribed by the procedure for developing new study programmes**.

As was stated in the Self-evaluation, the HEI bases **the development of new study programmes on the development strategy of the Istria County.**

New versions of study programmes are available at the HEI website:

<https://www.iv.hr/obrazovanje-i-znanost/mehatronika/>

<https://www.iv.hr/obrazovanje-i-znanost/politehnika/>

<https://www.iv.hr/obrazovanje-i-znanost/kmp/>

Regulation on improving and conducting a periodic revision of study programmes prescribes a form for registering proposals for changing the study programmes. Based on the submitted examples of proposals, the Panel concluded that the **proposed changes are registered and that their relevancy is analysed.**

Recommendations for improvement

1. Use the agreement signed in April 2019 for the revisions of existing study programmes.
2. Strengthen the cooperation with employees, external lecturers, alumni and other external stakeholders for the development of new and the revision of existing study programmes.

Quality grade

Minimum level of quality

2.5. The higher education institution ensures that ECTS allocation is adequate.

Analysis

Based on the meetings with the teachers, external lecturers and students (which corroborated the information in the Self-evaluation), the Panel determined that the **feedback on the teaching process are collected informally, through informal communication between the students and teachers.**

The HEI does **not have a formal procedure of monitoring the allocation of ECTS credits.**

The meetings with the teachers, external lecturers and students revealed a pronouncedly **poor communication between various HEI stakeholders. This situation demands an immediate and significant improvement of communication.**

Undergraduate professional study programme Polytechnics has internship in all 6 semesters (29 ECTS credits in total), undergraduate professional study programme Mechatronics includes an internship in the 6th semester (7 ECTS), while the **specialist graduate study Creative Process Management does not include an internship.**

Some courses have practical teaching and field work.

The students and the alumni expressed a desire for **more internship.**

Recommendations for improvement

1. Define and implement a formal procedure for reviewing ECTS credits.
2. Immediately and significantly improve the communication between various HEI stakeholders.
3. Increase the number of ECTS credits allocated to internship on the undergraduate professional study of Mechatronics; try to organise internship in all semesters.
4. Make sure to make internship a part of the specialist graduate study Creative Process Management.

Quality grade

Minimum level of quality

2.6. Student practice is an integral part of the study programmes.

Analysis

Internship is obligatory on all study programmes except the specialist graduate study programme Creative Process Management. Polytechnics study programme has internship in all semesters (total of 29 ECTS), while Mechatronics has it only in the 6th semester (7 ECTS).

Internship is an integral part of two undergraduate professional studies: Polytechnics and Mechatronics. As is stated in the Self-evaluation, students do their internship in organisations which have signed an agreement with the HEI. Students also have the opportunity to do their internship abroad through the ERASMUS+ programme.

Students do their internship in accordance with the Regulation on internship, the Procedure for applying for internship and the syllabus of the internship course. The meeting with the head of internship revealed that the students **evaluate the organisations in which they do their internship, but that these organisations do not evaluate the students.**

Recommendations for improvement

1. Include internship in the specialist graduate study of Creative Process Management.
2. Organise the evaluation of students by the organisations in which they did their internship.

Quality grade

Satisfactory level of quality

3. Teaching process and student support

3.1. Admission criteria or criteria for the continuation of studies are in line with the requirements of the study programme, clearly defined, published and consistently applied.

Analysis

The **criteria for admission and continuation are published** on the homepage and are clearly defined. Students with Matura as well as students with 4 years of middle school education without Matura are accepted into the undergraduate programs. The latter, however, are required to pass additional exams in mathematics, physics and IT. For the continuation of studies application via the STUDOMAT system, payment of tuition and payment of fees are required. **No evidence could be found during the interviews that this criterion would not be followed currently.** The practice of also enrolling students with only 3 years of middle school was abandoned after explicit request of the Ministry of science and education. The policy of selection is rudimental, since basically all students fulfilling the formal requirements are admitted due to very low application numbers (enrolment during the last 3 years is in most cases far below 50% of the quota, see Tab. 3.2 and 3.3 in the Analytic supplement to the SER). It was expressed by the vice deans that, if fewer students are enrolled than applied, this is usually due to self-selection of applicants to more prestigious (or cheaper) universities. **Prior knowledge, in the form of formerly completed courses at other universities, are recognised according to the statements of the HEI management.** However, no policy is yet in place for the recognition of informal prior knowledge such as on-job-learning or non-university continuing education.

Recommendations for improvement:

1. It is recommended to continue not to enrol students with only 3 years of middle school education.
2. It is recommended to define a minimum threshold for the acceptance of students.
3. It is recommended to devise and consistently apply a policy for recognition of prior informal learning.

Quality grade

Satisfactory level of quality

3.2. The higher education institution gathers and analyses information on student progress and uses it to ensure the continuity and completion of study.

Analysis

Due to the extremely low numbers of students (roughly 100), **many processes are handled in an informal way**, which is also the case for the monitoring of student progress. **Dropout rates were compiled for the SER, but are not available otherwise** and are low for the graduate program (below 10%, see Tab. 3.5 in the Analytic supplement to the SER) but considerable for the undergraduate programs (between 30% and 50%, see Tab. 3.5 in the Analytic supplement to the SER). As far as the Panel could find out (written evidence is scarce), **extra support for students and actions to increase pass rates are mainly carried by the lecturers, rather than on a program level**. In many instances this is actually the same due the common dual role of internal staff as lecturers and heads of programmes.

Recommendations for improvement

1. It is **strongly** recommended to regularly monitor student progress and dropout rates.
2. It is recommended to find out the reason for drop outs.
3. It is recommended to regularly adjust the curriculum and if necessary, course syllabi (keeping in mind learning quality) in order to decrease drop outs.

Quality grade

Minimum level of quality

3.3. The higher education institution ensures student-centred learning.

Analysis

In view of single-digit or low double-digit group sizes, student centred learning is difficult to evade. **Teaching modes do vary, especially in what concerns practical applications in the electronics and computer labs** for both Polytechnic and Mechatronics students. **In classical lectures, little evidence was found for teaching methods other than teacher centred education. Special needs are considered in scheduling of part-time students.** However, due to the extremely low student numbers per programme, lectures are often held together for full and part-time students in the evening. There is one lecture room and the computer lab currently accessible for physically disabled people. Lecture rooms are consistently equipped with projectors. Otherwise, **lab equipment is good at external facilities such as the METRIS research centre, but rudimentary in-house.** To the surprise of the Panel, MATLAB is currently not installed in the computer lab, although a course dedicated to this software is held in the Mechatronics undergraduate program. **Commitment of the remaining and newly hired teachers is certainly one of the Institution's strong point.** There is a student support system available called "STUDOMAT", which supports students mainly in

organizational matters. **It was expressed by the student representatives that concerns expressed by students are not always taken seriously and addressed properly.**

Recommendations for improvement

1. It is **strongly** recommended to address student concerns and involve them adequately in the decision-making processes.
2. It is recommended to install proper full-time courses during morning and afternoon.
3. It is recommended to develop the teaching capacities towards modern student-centred teaching forms.
4. It is recommended to introduce an e-learning system.
5. It is recommended to install crucial software on the computers in the computer lab.

Quality grade

Minimum level of quality

3.4. The higher education institution ensures adequate student support.

Analysis

Students are, again due to the favourable students/teacher ratio, well supported by mentors and heads of departments. At the same time, as already stated earlier, procedures are not well defined, but rather installed on demand. **The same is the case for the special needs of students from underrepresented groups. There seems to be no systematic approach to career guidance and counselling at the present.** A career day from former years does not take place anymore due to more urgent organisational challenges. However, the alumni club seems to have stepped in and supports job finding according to their own testimony. **The number of qualified and committed staff used to be adequate, but has suffered considerable from the recent restructuration.** Technical staff is scarce, but so are the laboratories.

Recommendations for improvement

1. It is **strongly** recommended to return to the original level of internal staff.
2. It is **strongly** recommended to reinstall regular career events in cooperation with alumni club.
3. It is recommended to install well defined guidelines for the support of vulnerable/underrepresented groups such as physically impaired, dyslexic and non-Croatian-speaking students.
4. It is recommended to formalise student support procedures.

5. It is recommended to upgrade lab facilities internally or by external cooperation in particular considering engineering programmes.

Quality grade

Minimum level of quality

3.5. The higher education institution ensures support to students from vulnerable and under-represented groups.

Analysis

The Panel observed the HEI's willingness to react to special student needs, rather than conduct constant monitoring. Little activities to encourage female students to enter MINT programs could be identified, although a large proportion of programs offered are of that kind. One notable exception is the, however small, presence of female faculty in the engineering programs. Special help for dyslexic or otherwise impaired students is provided on an improvisational, rather than institutional basis, as reported by the programme heads. Currently there is only one lecture room and computer lab easily accessible by wheelchair. In contrast, the HEI focuses a lot on part-time students. Classes are held late in the day or early evening. Unfortunately, in order to profit from economies of scale, those classes are jointly held for full time students, for whom this is inconvenient.

Recommendations for improvement:

1. It is **strongly** recommended to turn ad hoc solutions into persistent guidelines how to support students from vulnerable and under-represented groups.
2. It is recommended to develop strategies how to grant physically impaired persons access to all important facilities of the HEI.
3. It is recommended to find time models which are appropriate for both full time and part time students.
4. It is recommended to take action to increase the number of female students in the engineering-related programs.
5. It is recommended to make classrooms wheelchair-accessible wherever possible.

Quality grade

Minimum level of quality

3.6. The higher education institution allows students to gain international experience

Analysis

Through the SER, the Expert Panel was able to observe that the HEI has been awarded with the Erasmus Charter for Higher Education since 2013, which allows the institution to participate in the Erasmus+ program. The Erasmus program gives students the opportunity to take a residency and professional internship at another HEI. **Students can access information related to their ability to participate in the Erasmus + program on the HEI website, where all members of the International Mobility Team and all contacts are listed.** In an interview with the students, members of the Expert Panel found that the students were informed about the possibilities of international mobility through the website and in the first lectures at the beginning of the academic year. As mentioned above, **the HEI has an International Cooperation and Mobility Team.** However, the team members have been doing that job for a very short period of time and were unable to provide the Expert Panel with more information on future plans for the Erasmus + program. During the meeting with the Erasmus Coordinator, members of the Expert Panel were able to see a list of students and professors who had used the opportunity to go to mobility, and a document listing the countries and colleges with which they had signed a bilateral agreement. The document is also available on the official website of HEI. According to the table from the supplement to the SER, 12 students from the HEI have participated in Erasmus in the last five years, and 21 students have come to the HEI for a period of up to three months. For more than three months, there were no students going or coming. In an interview with the International Cooperation and Exchange Team, the members of the Expert Panel were informed that the countries to which the students of the HEI most often go are Romania, Poland, Italy, Portugal, and this also applies to incoming students. Also, the International Cooperation and Mobility Team attached documents through which the Expert Panel realized that **the HEI recognized ETCS points earned at other colleges.** According to the SER, the Erasmus Coordinator assists the student in selecting the subjects so that they are compatible with the courses of the HEI, and can be recognized. It is also stated that, if the courses are not fully compatible, the students are informed of the possibilities for their exams. According to the SER, course syllabi contain the expected learning outcomes and course objectives that may be helpful to students in finding a compatible study program for the Erasmus program. **When the Expert Panel studied the SER and talked to the International Cooperation and Mobility team, they found no evidence that the HEI is collecting data on the satisfaction of its students with the quality of the institution's support during the student mobility application.** The fact that the HEI does not test its students' satisfaction with the opportunities offered by HEI for Erasmus mobility is not good, because students who have gone through the Erasmus application and departure process are the best incentive for students who have concerns about going to mobility. **Among other things, it is essential that students acquire enough competencies required to work in an international environment.** According to the SER, the HEI enables students to gain international experience. It is stated that, during lectures, teachers try to acquaint

students with the professional titles related to their future professions in the English language.

Recommendations for improvement

1. The HEI should continue with a way of informing students about Erasmus mobility but also they should increase the number of information about it.
2. In the future, the HEI can organize an Erasmus info day where students who attended Erasmus would share their experiences with interested students.
3. Given that the Mobility and International Cooperation Team has just started its work, the **HEI's management should give maximum support to it and encourage further development of Erasmus and other types of mobility at the HEI.**
4. The HEI should start participating in the CEEPUS student exchange program and encourage students to participate in it.
5. It is **strongly recommended** for the HEI to organize a student survey to see what they need to improve in their support for Erasmus students.
6. The HEI along with professors should introduce professional materials in English to help prospective Erasmus students to be ready to work in an international environment.

Quality grade

Satisfactory level of quality

3.7. The higher education institution ensures adequate study conditions for foreign students

Analysis

In an interview with the HEI management, the Expert Panel was informed that the HEI participates in the Erasmus+ mobility programme, and they cited students from Italy and Poland as the most common examples. The administration of the HEI's says that **the website contains all the information for incoming students in English**, but by browsing the website, members of the Expert Panel could conclude that the provided information is too general. The HEI has an info leaflet that provides information on the education system in Croatia, programmes and courses offered at the HEI, and information on the city of Pula, but there is a lack of information on how to enrol at the HEI. According to the data from table 3.6. in Analytic Supplement to SER on the total incoming student mobility in the last five years, there were 21 students at the HEI for the period up to three months, and for more than three months in the last five years there were no students. **It is important that every foreign student has good support in application and study.** The Expert Panel established through an interview with the management that they

considered the provided support for international students to be enough. Also, the International Mobility and Co-operation Team and administrative staff claim that they are trying to reach out to foreign students fully and solve any problems they may have. The members of the Expert Panel had the opportunity to interview the student from Italy, who is currently studying at the HEI. The student told the members of the Expert Panel that she feels very welcome at the HEI and that everyone, from administration, professors and students are trying to help her. The Italian student said that the lectures are mostly held in Croatian, but that the professors work with her in English and even Italian, and give her the opportunity for additional consultations. The testimonial of an international student for whom additional mentoring and literature was provided improvisationally is exemplary for the approach. **The satisfaction and needs of international students are one of the most important elements of Erasmus mobility that needs to be checked daily.** Members of the Expert Panel learned through discussions with the HEI's Management and the Mobility Team that the HEI does not collect feedback from students who were or are currently attending the HEI through the Erasmus + program. Solving surveys and collecting feedback is one of the practices that the newly established Mobility Team plans to introduce. **Teaching foreign students in English or another language** is a great advantage for the HEI, because of this they can have a much higher number of foreign students coming to the College. Through the SER, but also in conversation with the administration, the Expert Panel learned that lectures in English could be held if more than five foreign students take the course. This has never happened at the HEI because they have a small number of incoming students during the year. When it comes to courses syllabi, some of them include English literature on an adequate level, but this is not persistent.

Recommendations for improvement

1. The HEI should offer as much information as possible in English for foreign students.
2. The HEI should encourage the development of a website that would provide all the necessary information for students who have doubts about whether to choose the HEI for their Erasmus + program.
3. The specific space should be established on the website that would contain a section with the experiences of students who have studied at the HEI for a certain period.
4. The HEI provides support to international students and it is recommending that this practice continue in the future. If there is an increase in the number of foreign students, the HEI should employ of at least one person with good English language skills in the area of support and administration.
5. It is **strongly recommended** that the HEI's management should encourage the establishment of a program for collecting feedback from foreign students.
6. It is **strongly recommended** that the HEI should determine which courses could be held in English in the future.

7. If there are more than five foreign students in a program, the HEI should stick to the information they provided in the SER, which is that in that case the lectures are held in English.
8. It is recommended to include English literature in the suggested reading for each course.
9. It is recommended to offer some English lectures in each study program.

Quality grade

Minimum level of quality

3.8. The higher education institution ensures an objective and consistent evaluation and assessment of student achievements.

Analysis

The criteria and methods of assessment at the HEI are determined by the syllabuses of each subject. The HEI did not publish the syllabuses on its website before the start of teaching in the academic year 2019/2020, as it is prescribed by Ordinance on Studies and Studying, so they were not available to students on time. The beginning of the new academic year itself was also delayed, which was ascribed to the current situation at the Institution and major changes in the structure of the teaching staff and administration. The students confirmed that they are introduced to the criteria and methods of assessment during introductory lectures, but complained about the syllabuses that were not published. Regarding the teaching materials, the students confirmed that the repository on which the materials were published was very useful, but the HEI is currently transitioning to the Merlin e-learning system, and it is not yet known when this process will end. This whole situation has the most negative impact on students.

Given the current situation at the HEI and a number of teachers that are newly hired in the current academic year, it was difficult to determine whether the criteria and methods of evaluation and assessment were in line with teaching methods.

According to the information provided in the Self-evaluation, in the academic year 2016/2017 all teachers attended a professional development course "Teacher Competences in Higher Education - Pedagogical Minimum for Teachers of Polytechnics" in the duration of 20 hours. It was also stated that some teachers have completed pedagogical and psychological education at the Juraj Dobrila University of Pula. One teacher is at PhD study financed by the Polytechnic. The Polytechnic should adopt a plan and organize systematic support for teachers in developing skills related to student assessment and examination methods, especially given that most of more experienced teachers are no longer employed at the HEI, which now has a large number of new teachers and external associates.

The manner of student monitoring and evaluation is regulated by the Ordinance on Studies and Studying, and is described in the syllabus for each course. The students said that they had no objections to the grading so far, but could not comment on the new teachers since they were just hired by the HEI.

Student surveys enable students to evaluate their satisfaction with individual teachers, their teaching methods and the provided feedback on student assignments, seminars, and written examinations, but there is no question that covers student satisfaction with the objectivity of the assessment. The surveys that the Expert Panel had the opportunity to see are several years old and should be revised. Furthermore, students should be motivated to fill out the survey in greater numbers. Feedback on the evaluation results was made available to students in the repository of courses, but it was not currently available due to the transition to the Merlin e-learning system.

Teachers stated that, upon publication of the results, students had the right to view their written examination during consultation hours. The Panel did not have the opportunity to see an example of the students' complaints regarding their grades, but this possibility was prescribed by the Ordinance on Studies.

The HEI does not carry out double assessment that would ensure objectivity.

Procedures for adapting examination procedures to particular groups of students (e.g. persons with disabilities) are not formally prescribed, but the HEI management said that such students' needs are met. The Panel was given the minutes of the meeting of the Expert Council, which adopted the decision on the individual approach to students with learning and reading difficulties. The Expert Panel was not shown examples of customized examination procedures.

Recommendations for improvement

1. It is **strongly recommended** to the HEI that, in the future, they publish course syllabuses one week before classes start.
2. It is recommended to HEI that they should support newly hired professors in the new job to ensure that the criteria and methods of examination and assessment are aligned with the teaching methods used.
3. **The Management of the HEI should hurry up with the introduction of the Merlin e-learning system.**
4. The Expert Panel makes a strict recommendation to the HEI regarding the development of the skills of the professors. The HEI should encourage teachers much more to develop their teaching methods through participation in professional development and through the completion of psychological and pedagogical education.
5. It is **very important** that the student satisfaction surveys expands and that they add a separate section for grading where they examine whether the evaluation elements

are clear, how satisfied students are with the grades, whether all professors respect the grading elements they have provided.

6. The HEI should develop special examination procedures for students with health problems.

Quality grade

Minimum level of quality

3.9. The higher education institution issues diplomas and Diploma Supplements in accordance with the relevant regulation

Analysis

Based on the SER and the presented examples of diplomas and diploma supplements, the Expert Panel concludes that **the HEI provides documents that are in accordance with the Ordinance on the contents of diplomas and supplementary documents and with the Statute of the HEI. The HEI issues diplomas and diploma supplements in Croatian and English, which are without charge.** The supplementary document contains information on the graduate, information on the qualification and its level, transcript of grades, information on participation in various events during study and other data related to the completed study.

Recommendations for improvement

1. The Expert Panel recommends that the HEI should continue to issue diplomas and degree supplements in this way.

Quality grade

High level of quality

3.10. The higher education institution is committed to the employability of graduates

Analysis

The HEI has an Alumni Club consisting of three executive members and has been active for several years. In conversation with the members of the Alumni Club, the Expert Panel found out that, after graduation, all students of the HEI become passive members of the Alumni Club and if they wish they can become active members who will participate in its activities. **This means that the HEI has a certain base of its graduates which is mentioned in the SER, but there is no evidence that they analyse the employment of students after graduation.** In talking with the members of the Alumni

Club, the Expert Panel was informed that the club has the full support of the HEI. The Alumni Club often organizes various activities annually, such as the Alumniad, but also different workshops for current students that are related to future employment. They plan to continue with these activities. **Enrolment quotas at the HEI should be in line with market needs.** According to the SER, HEI states that enrolment quotas are proposed through study programs based on market needs and the possibilities of the HEI to enrol the optimal number of students in terms of space, equipment and number of teachers. But, according to the table 3.2. from the Analytic Supplement, it can be seen that the enrolment quotas for the undergraduate degree in Mechatronics are the same and the number of students enrolled is decreasing. Which leads to the conclusion that HEI does not base enrolment quotas for study programs according to work needs. Also, the Expert Panel has reviewed the analytical contributions to the SER through the table 3.7., Employment of graduates / alumni in the last 3 calendar years. The right column of the table is empty. Based on this, it can be concluded that the HEI does not have information on the employability of students who graduated from the HEI. It is stated in the SER that **the HEI informs its students about the possibilities of continuing their studies throughout their education, especially in the third year of undergraduate study.** A review of the HEI's website shows that information on all programs at the HEI is available. It is also important that the HEI informs students about job opportunities. All students of the HEI must at some point go through an internship at which they can become familiar with work in the profession, and several of them are later given a job opportunity. Through discussion with the professional practice team, the Expert Panel learned that the HEI helps its students find an internship company. One such example is Metris, a materials research centre. While studying at the HEI, one of their current employees did an internship at Metris and, after graduation, got a job there. Also, in an interview with the Alumni Club, the Expert Panel learned that one of the members is working as an external associate of the HEI and had previously completed her studies at it. **For the HEI, it is very important to help students with future career planning.**

Recommendations for improvement

1. **HEI should develop through the Alumni Club a database of alumni and their jobs where their progress will be checked every six months or a year.**
2. It is recommended to the Administration of the HEI to continue the practice of informing students about the possibility of continuing their studies at the HEI or employment opportunities after graduation.
3. A list of the organizations and companies with which the HEI cooperate and in which students could work after graduation should be placed on the website.
4. The HEI should continue with the organization of Career Day for students and work hard to plan similar activities such as visits to different companies in which students could be employed in the future.

5. **In the future, the HEI should start with a Career Centre organization to help students build future careers.**
6. It is recommended that the HEI management continues to support the Alumni Club in their activities and ideas.
7. The HEI should establish a space for the Alumni Club on the new website and set up a space for alumni's who would like to write occasionally about their work and the jobs they do within it.

Quality grade

Satisfactory level of quality

4. Teaching and institutional capacities

4.1. The higher education institution ensures adequate teaching capacities

Analysis

The HEI has been through a period of recent management change, which is why the information collected and presented in the SER and the data gathered during the site visit (by the Expert Panel) differ. There was a lot of issues with the previous management due to its change as follows: in year 2018, there was a dean who was dismissed from the position for being accused for financial and other misconduct; in the year 2019, there was another dean elected and he was retired few weeks before the reaccreditation. The current dean and vice deans were appointed 2 weeks before the reaccreditation visit, which made it difficult for them and for the Expert Panel to identify current facts regarding changes. The new management has been faced with many challenges when it comes to recruitment of new employees, especially due to the information that most of the teachers left the HIE with the previous deans. There were speculations about reasons for leaving the HEI, and the Expert Panel faced difficulties in identifying the real reasons, eventual misconduct of previous management and competencies of current management. Therefore, the information about **the number and qualifications of the teachers suitable for the execution of the study programs and for the acquisition of foreseen learning outcomes as well for the implementation of scientific and professional activities** given in the SER is different than the information gathered during the site visit. The data presented in SER states that HEI has a total of 16 permanently employed teachers (2 cumulative employment). Of these, two are full professors, one assistant professor, two college professors, five senior lecturers, and six lecturers. Teachers have been appointed to the fields of technical science (area of mechanical engineering, electrical engineering, computing and basic technical science), social science (economics,

politics and pedagogy), and natural sciences (mathematics and physics). According to the SER, permanently employed teachers generally cover basic subjects, whereas external associates are experts in specific fields, and they perform a larger number of professional subjects. In the academic year 2018/2019, there was a total of 205 students, of which 67 full time and 138 part-time students studied at all study programmes.

In terms of teachers and student's ratio, the SER stated that the ratio was 1:8.50 in academic year 2018/2019. The information collected and identified during the visit implicates that HEI currently employs 6 permanent teachers (5 full time and 1 with 20%) with the total number of 105 students. The teachers and student's ratio are now 10.64. The problem of HEI is not seen only in number of current teachers and its ratio towards students, but in the nonconsistency of information and lack of qualified internal teachers, especially in the field of technical science. Recent management change and staff reduction created the chaos and unsecure atmosphere at HEI. The quality of education is threatened by those events. There is also the trend in decreased number of students at HEI. The HEI does not admit students into short professional study program (Polytechnic, 2 years) anymore due to the industrial and economic situation in the region (Uljanik, Pula). The HEI has plans to establish and initiate new study programs in the future in order to remain sustainable and follow the market needs in Istria: study program in Tourism and Agriculture. This is seen as a sign of good observation and Expert Panel supports the idea, but it is not part of the assessment and current reaccreditation process. In terms of qualified permanent teachers, it will also be a challenge since current teachers are not specialised in any of these programs. New employment, recruitment and research in the field of tourism and agriculture will be needed.

HEI is currently in the process of recruitment (as seen per advertisement) of 4 new internal/permanent employees, two of which were present during the external associate's meetings with Expert Panel. This shows the effort of HEI to overcome current situation of having high turnover of staff, but also to improve quality of education due to lack of qualified permanent teachers in technical field and selection in appropriate area, as well as of experienced teachers, and teachers with experience in industry.

The teachers load is currently compliant with the applicable laws, bylaws and collective agreement and it currently counts from 390, 525, 255, 270, 90 (English language), 45 (Mathematics, 20% employment) and 165 norm hours. The data is derived from the interview with the management and from the table provided by vice dean for teaching.

There is a balanced distribution of the teaching obligations, professional work, personal development, and administrative duties, but the major problem is the lack of experts in the technical field amongst the permanently employed teachers. Institution can't depend on external teachers and it was one of the recommendations from the previous reaccreditation which was not fulfilled adequately.

The consequences of recent management change and issues the HEI faced during past year led to lack of communication between management and teachers but also to fear of some employees for their future and HEI sustainability.

Recommendations for improvement

1. HEI must implement very strong human resources policy and strategy, to increase number of permanently employed teachers and ensure their selection in appropriate scientific areas. At least the core competencies of the respective programs should be covered by internal staff (Measurement technology, Electrical drives, Automation and control, Electronics, Modelling and simulation, Embedded computing for mechatronics, software development - firmware or other specific software). Therefore, they should have involve internal staff in the field of software development.
2. To search and recruit teachers from the industry, with good practical background and experience (with or without teaching grades) and support their teaching career and selection in teaching grades, research, publishing, etc.
3. Due to recent management changes (three management teams in short period of time), **management should work closely to permanent teachers, to involve them more in understanding and implementation of change at HEI as well to make them aware of the career plan for each of them.**
4. Communication between management and teachers should also be highly improved with the aim of **creating positive and motivating working environment** with clearly set goals for each teacher regarding **improvement of syllabuses, learning outcomes, potential cooperation with others, externals, publishing, etc.**

Quality grade

Minimum level of quality

4.2. The higher education institution ensures appropriate quality of external associates.

Analysis

During the academic year 2018/2019, the HEI has engaged 33 external associates, as seen in the SER, List of external associates for the academic year 2018/2019. From 33 external associates, 13 of them are professional assistants (not appointed into teaching or scientific grades). Most of the external associates are employed in the business sector (industry) and they do have good experience background as well as practical knowledge. Majority of them has been appointed into appropriate areas and do contribute to the quality of the teaching process in a positive way. The Expert Panel evaluated their **work experience as relevant** and positive. Other external associates come from other HEIs

such as University Juraj Dobrila in Pula, Faculty of Engineering in Rijeka and University of Applied Sciences in Zagreb. The external associates coming from other HEIs strongly contribute to the quality of teaching and to level of professional and scientific activity related to research and publishing scientific and professional papers. In terms of that, **external associates include in the teaching process their latest research, trends and insights from the labour market and practice.** The HEI is very dependent on external associates when it comes to core technical and engineering subjects and therefore should strengthen the relationship and cooperation with them in terms of publishing together, participate in research and professional projects, lifelong learning, start-ups establishment, student's incubator formation, etc.

In the current study year, many of externals have left and contracts with new ones have been signed, which also indicates that problems with the management change has affected this area too.

The HEI **does not involve external associates in the mentorship of final and graduate assignments.** Only one of 11 externals who were present during the meeting has been mentor several times in past few years. Logically, it was only one, because he was the external associate during past few years (with previous management).

Students are encouraged to carry out the internship at the institutions of the external associates, which the Expert Panel assessed as an example of positive practices. The representative of Cimos and Metris were present at the meetings with positive approach to cooperation with HEI and their experience with students.

The Expert Panel also visited Metris where the detailed presentation of the laboratory was held, and their cooperation with students was assessed as a good practice and quality. The company takes yearly 2 students for internship and one of the students is now permanently employed there, which is a good sign of students' recruitment based on cooperation with HEI and recruitment amongst students.

Recommendations for improvement

1. Continue with the good practice of cooperation with external associates from industry and other institutions, with good experience, professional and scientific background.
2. Broaden the scope of companies where the students can do the internship and furtherly encourage students to carry out the internship at the institutions of the external associates.
3. **Strengthen communication with external associates and keep them more involved in different activities of HEI, especially professional projects, scientific research, etc.**
4. **Encourage and motivate external associates in the mentorship of final and graduate assignments.**

Quality grade

Satisfactory level of quality

4.3. Teacher recruitment, advancement and re-appointment is based on objective and transparent procedures which include the evaluation of excellence.

Analysis

According to the SER, the teacher recruitment at the HEI is derived from the “Ordinance on the Content of Licence and Conditions for Issuing Licence for Performing Higher Education Activity, carrying out a Study Programme and Re-accreditation of Higher Education Institutions” of the Ministry of Science and Education, and the requirements for a balanced and optimal teachers load. In the SER it is evident that the recruitment of teachers is carried out in accordance with the internal acts of the Istrian University of Applied Sciences, the Statute, the Ordinance on Employment, the Ordinance on Internal organisation and establishment of workplaces and the Ordinance on the procedure for the selection of teachers and associates. These are harmonized with **the positive legal regulations**, Act on the scientific activity and higher education, as well as with other Ordinances and Decisions of the Croatian Council of Universities and University Colleges of Applied Sciences regulating the teacher appointing procedure.

The HEI is currently in the process of recruiting 4 new teachers; 3 in the field of social sciences and 1 in the field of technical sciences. The evidence of advertisement, written procedure and selection criteria is according to regulations and laws.

Taking into consideration the existence of all the above listed acts and procedures, it is evident that HEI has **established procedures and internal acts of recruitment in compliance with the positive laws** and they formally fulfil the criteria. On the other hand, during the interviews with different stakeholders (management, teachers, external associates and students) it was not clear what are the reasons for the management change and, consequently, the high turnover in teachers. Most of the teachers left, new ones are in the process of recruitment, and some of them were already external associates. There were some implications that some of the teacher have been dismissed and new ones are being recruited based on the influence of the County (the founder) and their “suitability”. It is difficult to judge the information based on the perception of different stakeholders, but it can be identified that HEI should be more careful in its implementation of recruitment process, availability and transparency of recruitment (especially selection process). The Expert Panel confirmed that procedures and ordinances are there, but the implementation should be improved and more transparent when it comes to **teacher selection, appointment and evaluation process, their previous activities such as teaching activity, research activity, student feedback, etc.** The HEI must work on this standard very hard in order to ensure quality, good reputation and long-term

development. They can also include media, advertising, PR and Alumni club in terms of promoting the recruitment of the best candidates for each position. The goal should be not only to recruit, but also to keep and motivate quality teachers to remain working at HEI and contribute to further development of HEI together with the management. During the interviews with permanent teachers, it was noted that not all of them were positive in terms of cooperation with management, communication and awareness of what are the future steps for them and new teachers (strategic and operational goals were not clear to teachers).

In the SER it is explained that the requisites and procedures of HEI advancement are based on the Act on the Scientific Activity and Higher Education, as well as on other ordinances and decisions of the Croatian Council of Universities and University colleges of Applied Sciences that regulate the teacher appointing procedure. During the site visit and meetings with the management and the teachers, the Expert Panel did not get evidence on **teacher advancement procedures based on evaluation and rewarding excellence, taking into account important achievements** (e.g. successful projects, successfully ensured additional funds, mentorships, undergraduate and graduate assignment mentoring, drafting of teaching material, books, popular lectures), mostly because the **majority of teachers who were employed in the past academic years (under the previous management) do not work there anymore**.

Based on above explained situation as well as the turnover of teachers and change in the management, the Expert Panel did not identify **the implementation of the evidence of the excellence indicators including professional and/or scientific activities, as well as teaching activities**.

Recommendations for improvement

1. To ensure the transparent implementation and monitoring of all acts, ordinances and procedures related to recruitment of best candidates, but also according to positive laws.
2. To establish clear and transparent communication system between management and teachers regarding all recruitment and advancement activities, current and future needs and development.
3. To improve implementation of recruitment, based on the best possible candidates and excellence criteria.

Quality grade

Minimum level of quality

- 4.4. The higher education institution provides support to teachers in their professional development.**

Analysis

As a consequence of the situation explained in standard 4.3, related to change of management and change of teachers with a low number of teachers who are currently employed in comparison to those who left, it was not possible to assess the success and excellence of those not working at HEI anymore. The whole reaccreditation process was aimed at the previous period (including the academic year 2018/2019), but the current situation (academic year 2019/2020) is different in terms of human resource to the extent that the Expert Panel has to take it into consideration when it comes to quality and possibility to execute the academic year successfully. Therefore, the Panel decided to emphasise on the current situation in terms of prosperity of the HEI with recommendations related to current situation as well as previous period.

According to formal procedures and information provided in the SER, it is evident that the HEI provides the opportunities to improve teachers' competences (Ordinance on professional education and development). There is a yearly Plan of Professional Education and Development. The Ordinance is adopted according to the financial capabilities, i.e. to the financial plan for the current academic year, and it considers the previously started education and development programs. Besides attending postgraduate specialist and doctoral studies, the teachers can attend courses, seminars and workshops, participate in scientific and professional conferences, etc.

The above information was valid for year 2018, but for academic year 2019/2020 the Expert Panel did not identify the same for the current employees. As mentioned above, there is one PhD fund awarded to 1 teacher who is not on the list of the teachers financed from the yearly plan of Professional Education and Development from March 2018. The future plan **for improving teaching competencies** was not presented and it can be assumed that it is going to be applied to new teachers once they are recruited.

The teacher who remained employed at HEI is satisfied with support of HEI management when it comes to attending conferences, publishing papers and work on the projects, but the sample is very small (only 1 teacher). Only one teacher whose PhD was funded, is still under obligation to work for the HEI. The atmosphere about funds is positive, but there is no strong evidence that it will remain so in the future.

From the perspective of research and publishing, as another way of improving competencies by attending conferences, there is also an evidence that publishing activity of HEI teachers was also low in the previous years (according to the SER).

Another way of acquiring more competencies is to participate in projects. Both activities (publishing and projects) are on the very low level at the HEI. There is no participation in professional projects at all, even though they can be a precious source of research activity and publishing materials (detailed analysis in standard 5), and can also contribute to the competencies of teachers.

The HEI does not conduct **peer review assessments of teachers' competencies**, especially in terms of current management and teachers change.

The **results and recommendations from student satisfaction surveys** are not being implemented as they should be, which is an important missing element when it comes to the assessment of teachers' competencies as well as the support for their professional development. The students are not motivated to participate in the surveys, which is something that the HEI must find a solution to (explained in standard 3). The feedback given by students is a vital element for the improvement of teachers, but also a contribution towards excellence (analysed in standard 4.3).

At the HEI, the teachers can participate in **the Erasmus+** programme. The following is mentioned in the SER: "Although teachers are informed in a timely manner about the possibility of applying for the mobility of the teaching staff, by analysing the table from the Analytic supplement to SER a relatively poor outgoing teacher mobility is noticed, focused primarily on the professional mobility and mobility aimed at familiarisation with the activities of the other institution, whereas the outgoing teaching mobility for lectures and direct participation in the teaching process is lacking." From the SER it is evident that the management is aware of the low interest for Erasmus+, but on the other hand the teachers do speak English well and there is no formal barrier to improvement of their mobility. During the meeting with the Erasmus coordinator, the Expert Panel identified his positivity, confidence with procedures and the motivation to work on the improvement of Erasmus activities, but past and current situation is not satisfactory in terms of teachers' participation.

In the summer semester of academic year 2018/2019, 2 teachers were on mobility. In the past 5 academic years, there were 3 teachers participating in teaching outgoing mobility, 6 in professional, while 14 teachers in teaching incoming mobility and 11 in research incoming mobility. It is evident that the outgoing mobility is extremely low and should be improved, especially with recruitment of new teachers.

According to already explained situation related to current human resources issues as well as the turnover of teachers and the change in management, the Panel did not find the evidence of the excellence indicators including professional and/or scientific activities, as well as teaching activities for more than one teacher.

However, current teachers are aware of the possibilities for improvement and development, and are willing to participate in projects, research, etc., but they need some time to get adjusted to the HEI working environment, get to know more about the higher education system (those coming from industry), etc. In terms of that, the HEI must ensure the transparent implementation of the already existing procedures and ordinances, but also propose additional criteria for teacher advancement that would reflect the strategic objectives of the higher education institution and make all teachers aware of it as a team, but also on each individual basis.

The Expert Panel believes that teachers would be interested in participating more in different innovative and educational/professional projects, workshops, trainings, etc. but

the HEI management must ensure the opportunities and basis for such activities. It is a big challenge for the management to bring the HEI to a higher level of quality.

Since external associates are well positioned in the business sector, industry and other HEIs, there is a strong potential to involve permanent teachers in cooperation, workshops, trainings, projects, etc., together with companies and institutions of external associates. There is also strong potential in the cooperation with external stakeholders and Alumni, where teachers could work closely with them in terms of projects, workshops, trainings, conferences, events, etc. The HEI management should focus on building strong relationship with them and try to establish new start-ups as well as engage in more projects. All these activities would also contribute to higher competencies of teachers.

Recommendations for improvement

1. To establish working environment where all teachers will know the exact support they can expect from HEI in terms of academic and professional advancement, teaching support, funds available for further education, training, projects, workshops, etc.
2. To work strongly on creating projects, participate in projects with other institutions and exchange knowledge while at the same time getting diverse positive effects: financial income, advancement of knowledge of teachers and more research results available for publishing activities.
3. **To specify additional criteria for teacher advancement that would reflect the strategic objectives of the higher education institution. To make all teachers aware of the exact criteria, expectations in next 3 to 5 years based on the yearly planning** (team goals and individual goals for participation in projects and research/professional activity).
4. **To implement the system of monitoring, student's survey analysis and peer review to assess the quality of teachers**, their publishing activity, project contribution, training and further education of teachers with the aim **to support their professional development but also to reward excellence.**
5. **To set up excellence criteria for each year and promote it amongst teachers** with the goal to keep highest quality of teachers on the long term.
6. To motivate teachers in participation in Erasmus+ programs and create awareness of its benefits for teachers and institution.

Quality grade

Minimum level of quality

- 4.5. **The space, equipment and the entire infrastructure (laboratories, IT service, work facilities etc.) are adequate for the delivery of the study programmes**

and ensure the achievement of intended learning outcomes and the implementation of professional and/or scientific activity.

Analysis

The HEI uses 1.809 m² space for teaching (558 m²), laboratory (311 m²) and office purposes. There are 7 lecture rooms (4 renewed and 3 ordinary). The laboratories are informatics and electro lab. There is a possibility to use 3 external labs, based on the Agreements of Cooperation signed with the University of Rijeka Faculty of Engineering, the Pula School of Traditional Industries and Crafts and the Research Centre for Materials in the Region of Istria - METRIS.

The higher education institution plans and promotes the infrastructure development, in agreement with the strategic goals, but still has very limited own resources in terms of laboratories. Especially mechanical production facilities, electronic laboratories and labs for control and robotics are missing. Also the computers in the IT lab are insufficiently equipped with relevant software.

Full-time students can use the student restaurant located within 1000 meters from the HEI building and apply for the accommodation in the student dormitory in the Student Centre of the Juraj Dobrila University in Pula. Most of the facilities that the students might need for better study conditioned are outsourced, but it is important that HEI in the future works on the development of own premises.

According to above mentioned factors, it is identified that **space, equipment and general infrastructure (laboratories, IT service, workplaces etc.) correspond to the needs of the study programs implementation and ensure that the learning outcomes are fully realized** only at a minimum level. The HEI must ensure own facilities especially modern and fully equipped laboratories.

Recommendations for improvement

1. HEI should improve learning facilities with new and modern laboratories through acquisitions or partnership in mechatronic relevant domains such as electronics, embedded computing, manufacturing engineering, automation and robotics.
2. HEI is recommended to provide adequate software licenses for teaching.

Quality grade

Minimum level of quality

4.6. The library and library equipment, as well as access to additional resources ensure the literature necessary for ensuring high-quality of study and scientific and teaching activity.

Analysis

During the site visit to the HEI as well as from the SER, the Expert Panel identified a lack of own library resources (therefore the lack of influence and control on library resources, subscriptions to appropriate databases, different domestic and international literature, etc.) as a weakness of the HEI.

The HEI has an agreement of cooperation with the Pula University Library and the City Library and Reading Room Pula located very near the HEI (400 m). In order to provide adequate learning resources, teaching materials and offer students comfort of in-house library, it is not enough to depend on outsourced ones. **The library equipment, including the additional resources, available in the outsourced library** are of a good quality, but the lack of own resources indicates that the HEI do not meet the conditions for a high quality of study. Consequently, **the library and equipment, including additional resources, do not ensure high-quality professional and /or scientific activity.**

Recommendations for improvement

1. It is highly recommended that HEI starts developing and organising own library resources within the building and side building it uses, in order to equip students with in-house teaching materials, books, IT and internet resources, databases and study/reading room, and other possible up to date resources.
2. It is recommended that the HEI builds up a basic stock of textbooks on-site. For the beginning, this could be the suggested literature of each course.
3. Consider applying the Massive Open Online Course – MOOC and other Creative Commons licence online and e-learning materials.

Quality grade

Minimum level of quality

4.7. The higher education institution rationally manages its financial resources.

Analysis

In terms of **financial sustainability and efficiency in all aspects of the higher education institution's work**, Expert Panel concluded that there is a need for careful financial management and project-oriented financial planning, especially due to the financial affairs that the HEI faced in recent years. The HEI's financing comes from the budget of the Istria County (the owner and founder), the budget of the City of Pula, the income of projects and own funds. The income of the founder and the local community (the City of Pula) accounted for 74% in 2018, while the rest came from tuition fees. As seen in table 4.11 of the Analytic Supplement, there is no income and activity coming from professional and scientific projects at all.

The HEI has established internal ordinances and procedures to ensure a transparent, efficient and purposeful management of financial resources, but there were financial misconducts in the previous years by the previous management. The founder of the HEI conducted an internal audit which revealed that the operations were not conducted in compliance with the regulations and legal acts (*an audit was conducted of the entire financial system and operations of the former institution in 2017.*). After the audit, the former dean was dismissed, and the entire system of operations was revised and reorganized. According to information provided in the SER and the meetings with the current management, it is evident that a new dean (together with vice deans) was appointed 2 weeks before the Panel visited the HEI. The new management started to work on the improvement of finances and rational use of material resources (mostly by planning because 2 weeks' time is not enough to do more). Because of the recent events, the Panel identified that **the HEI manages its financial resources transparently, efficiently and appropriately** when it comes to the new management efforts and year 2018, although the years before financial resources were compromised by the previous management.

Due to the financial problems from the past, the HEI gained a bad reputation in the public, becoming known as an institution undergone financial issues and changes of management. The current management is struggling to improve the HEI's image, but it will take time to regain the trust of public and potential students. Current students, staff, teachers and alumni are also aware of the affairs and they are worried about the prosperity of the institution, although most of them believe there is a good opportunity for the sustainability of the HEI. Most of the stakeholders are optimistic and show motivation to support the HEI's future development. **Additional sources of financing were not designated for the development and improvement of the higher education institution** during the previous management, but the current management has proposed new development plans for the introduction of new study programs (rural tourism and agriculture, improve cooperation with business and industry network). The most important task for the current management is to focus on involvement in new projects in order to generate own revenues, as well as to comply with the regulations and laws when it comes to financial management. The HEI has full financial support of its owner (Istria County) and they can create common projects, cooperate with local businesses and agencies in order to revitalize the budget and income. The budget received from the founder is spent in an appropriate manner and the sum was enough for covering the costs of regular work, but the HEI should work more on self-financing. There is a strong potential in developing new study programs such as rural tourism and agriculture (which should contribute to revenues from tuition fees). At the same time, the HEI is exposed to the risk of financial instability because of the closure of the short study program Polytechnic and the low number of students admitted to other study programs.

Additional financing is currently not obtained from local and international projects, nor from the cooperation with the industry or local community (except the owner and the City of Pula).

The HEI should carefully investigate the potential for future development and sustainability, and plan its activities accordingly. The involvement in national and international projects is of vital importance for contributing to the HEI's funding, as is the cooperation with the industry and external stakeholders who are ready and interested in common projects (projects of mutual interests with the HEI).

Recommendations for improvement

1. New management is facing serious task: **regain good/positive image as an institution of higher education** (due to the financial misconduct and management dismissal) for current and potential students, teachers, community and public.
Recommendation is to increase public relations activity by informing and promoting regularly of its financial clarity, investments, projects, achievements, examples of good practice, etc.
2. Carefully plan, manage and monitor all financial activities in generating revenues and managing expenses.
3. Increase participation in professional projects with other institutions, businesses, industry and local community.
4. Initiate closer cooperation with other HEI (on professional and scientific level).
5. Get involved in international projects by building a strong network with foreign HEIs and industry.

Quality grade

Minimum level of quality

5. Professional and/or scientific activity

- 5.1. Teachers and associates employed at the higher education institution are committed to the achievement of high quality and quantity of professional and/or scientific research.**

Analysis

Based on the SER, a collection of published papers is present. According to Table 5.1, the number of publications of the highest category according to the Ordinance on Appointment to Scientific Grades is 39. The number of other publications according to the Ordinance on Appointment to Scientific Grades is 65. The number of professional papers is 14 and Peer-reviewed publications from scientific and professional conferences is 56.

The publication process in the HEI is organized with the involvement of associates and external partners from other universities.

The cooperation with externals is indeed very important and should be enforced in order to be able to increase the level of the internal staff (table 5.1); on the other side, we can notice that most of papers have been published by staff who are not employed at the institution anymore. Besides, the publication numbers are unbalanced. A teacher who already left contributed the most papers.

Most of papers are categorized as scientific papers and cited in scientific data bases. The reason is related to the fact that the externals and associated staff to the HEI do publish in relation to their main institutions. The number of published papers of internal staff is too small.

Since publishing professional papers is usually faster than scientific papers, and the content can be focussed on teaching topics, the mentioned number is not appropriate for a HEI with a professional focus. Although the mentioned journal “TECHNE” is available, the content is teaching-oriented and the presented example was dated to 2016.

Based on the plan of publishing activity, teachers are encouraged to publish in conferences by means of funding from the HEI. The complexity of writing professional papers is generally low. Professional papers can be created spontaneously. Therefore, the procedure should be able to handle unplanned publications in advance. A procedure for publications is available, but it does not mention the reward approach.

A procedure for rewarding is mentioned in the SER but not described as procedure in the Rulebook on publishing (SKSP.20.25-A) or annex to the evidence during the visit of the Expert Panel.

Recommendations for improvement

1. The number of published papers especially with regard to professional ones should be improved. This issue belongs to the core mission of such institution.
2. Publications in international conferences or journals should be encouraged. This leads indirectly to the improvement of skills of professors and teaching staff.
3. A transparent procedure encouraging publications should be defined and introduced.
4. The permanent staff should publish more professional papers especially based on professional projects. At the same time, cooperation with highly skilled external partners should be encouraged, even in the same research area. The cooperation with the research institution METRIS represents a very good basis for that.

Quality grade

Minimum level of quality

5.2. The higher education institution proves the social relevance of its professional and/or scientific research and transfer of knowledge.

Analysis

The needs of society, local community and labour market are taken into account by means of a strong cooperation and commitments. Agreements with different institutions with regard to different activities e. g. research, development, and tourism are available.

During the interviews, a strong commitment of the external partners to the HEI and its development was noticed. It has been shown that institutions participate in the activities of the HEI, e. g. for the definition of new study programs related to the need of the market and the region. In this context, the plan of introducing study programs for tourism and agriculture could be mentioned. Those intentions are mentioned in the agreement with the Istrian Development Agency.

The HEI maintains a good relationship with its partners. During the visit to METRIS, it has been mentioned that students from the HEI are encouraged to carry out their internships as well as their study labs in this institution. Besides, the staff of the HEI has also the possibility to carry out research activities using the equipment of this institution.

The support of research and the transfer of knowledge and technologies is described with activities of teaching staff by participation in different events, e. g. workshops, conferences.

The specificity of the transfer of knowledge is not well justified. Activities are generic and not detailed.

The collaboration between the HEI and professional organizations is organized by means of projects as well as other activities such as lectures in schools, workshops, roundtables and memberships in institutions, even with regard to social aspects.

The HEI cooperates with the public sector as well as with professional organizations, and is involved in the development of the education strategy of the Istrian region.

Teaching staff is simultaneously involved in partner institutions and therefore builds the bridge to students and other staff to cooperate and work with them.

Former teachers were involved in professional and public bodies. Due to changes in management and teaching staff, the Panel was not able to find out whether the new staff is strongly active in this field.

Recommendations for improvement

1. A strong cooperation in the field of mechatronics is noticed, but the transfer of knowledge should be extended to other fields.
2. The support of the transfer of knowledge is based on individual activities of engaged teachers or representatives. A procedure allowing monitoring and encouragement for transfer should be defined and introduced.
3. The new internal staff should be encouraged to be active in many institutions.

Quality grade

Minimum level of quality

5.3. Professional and/or scientific achievements of the higher education institution have been recognized in the regional, national and international context.

Analysis

A teacher of the HEI who belongs to the recent teaching staff was awarded at a Croatian conference in 2015. Only one award in a local conference can be seen as minimum and should be improved.

Based on the SER, the HEI is a holder of the project EduIT – strengthening IT skills to the profession of the future (14 May 2018 - 14 March 2020; total budget: 835,609.74 HRK).

The HEI is also partner on:

- Project Dynamic – Towards responsive engineering curricula through Europeanization of dual higher education in sectors of Innovation & Smart Specialization (duration 32 months from 2017.; partner until February 2019; total budget: 697,989.00 EUR, total amount allocated to HEI is 58.600 €)
- REI II- Raising employment in Istria (14.05.2018. - 14.11.2020; total budget: 1,943,942.76 HRK without an amount allocated to HEI)
- Modern education of Professional Bachelors of Mechatronics (22.03.2019 - 22.03.2021; total budget: 2,825,655.13 HRK). This project is not mentioned in table 5.3.b.

According to the table 5.3.b, the duration of the EduIT project is 22 months. But during the interview, the management strongly pointed out this project, but with a duration of 7 months. This issue shows that the institution has shortcomings in terms of communication and administration between staff.

The HEI is the co-publisher of the professional journal “TECHNE”. The content is teaching oriented and the showed example is dated to 2016.

Especially former teachers and associates of the HEI participated in activities with regard to scientific and professional conferences. They were also involved as members of organizing, editorial committees of conferences and journals.

The mentioned activities were mainly carried out by the former staff.

Recommendations for improvement

1. The number of projects and activities should be improved mainly by recent staff.
2. The management process of projects, e. g. with regard to administration and monitoring, should be improved.

3. The number of the TECHNE issues should be increased. Indirectly the number of published papers in this professional journal will be increased.

Quality grade

Minimum level of quality

5.4. Professional and/or scientific activities and achievements of the higher education institution improve teaching.

Analysis

The HEI is equipped with an acceptable number of computers, laptops and workstations, which allows students and teachers to carry out laboratory exercises and work with software and simulation tools.

The Istrian University of Applied Sciences organizes some of its lectures and trainings in partner institutions. Agreements with the Faculty of Engineering in Rijeka, the Institution Centre for Material Research Metris in Pula, and the company CIMOS are available. In this context, the HEI provides to students the opportunity to work on sophisticated equipment in specialized laboratories.

During the interviews, students pointed out that this way of organizing lectures and training is useful and acceptable for them.

Although the HEI is focussed on professional activities, no R&D centre is available.

Students are involved in the implementation of the teaching process as demonstrators.

Based on the SER, students are also involved in teaching activities by assisting teachers.

Due to the recent situation of the HEI, the involvement of students assisting teaching process is very important and necessary due to lack of required own staff.

Students have been considered as co-authors, which is very useful for them to develop scientific and didactic skills.

During the interviews, it can be concluded that the HEI recognizes and rewards employees for their achievements.

Recommendations for improvement

1. The HEI should acquire required equipment for teaching and labs similar to them in the Faculty of Engineering at the University of Rijeka. This equipment could be also used as nucleus for acquisition of R&D projects.
2. Although agreements with partner institutions are available to ensure the lectures and labs, this can lead to disturbances and difficulties in the studying process. This equipment could be also used as nucleus for acquisition of R&D projects.

Quality grade

Minimum level of quality

APPENDICES

1. Quality assessment summary - tables

2. Site visit protocol

<i>Quality grade by assessment area</i>				
<i>Assessment area</i>	Unsatisfactory level of quality	Minimum level of quality	Satisfactory level of quality	High level of quality
<i>I. Internal quality assurance and the social role of the higher education institution</i>		X		
<i>II. Study programmes</i>		X		
<i>III. Teaching process and student support</i>			X	
<i>IV. Teaching and institutional capacities</i>		X		
<i>V. Professional and/or scientific activity</i>		X		

<i>Quality grade by standard</i>				
<i>I. Internal quality assurance and the social role of the higher education institution</i>	<i>Unsatisfactory level of quality</i>	<i>Minimum level of quality</i>	<i>Satisfactory level of quality</i>	<i>High level of quality</i>
1.1. The higher education institution has established a functional internal quality assurance system.		X		
1.2. The higher education institution implements recommendations for quality improvement from previous evaluations.		X		
1.3. The higher education institution supports academic integrity and freedom, prevents all types of unethical behaviour, intolerance and discrimination.		X		
1.4. The higher education institution ensures the availability of information on important aspects of its activities (teaching, professional and/or scientific and social role).		X		
1.5. The higher education institution understands and encourages the development of its social role.			X	
1.6. Lifelong learning programmes delivered by the higher education institution are aligned with the strategic goals and the mission of the higher education institution, and social needs.		X		

<i>Quality grade by standard</i>				
<i>II. Study programmes</i>	<i>Unsatisfactory level of quality</i>	<i>Minimum level of quality</i>	<i>Satisfactory level of quality</i>	<i>High level of quality</i>
2.1. The general objectives of all study programmes are in line with the mission and strategic goals of the higher education institution and the demands of the labour market.		X		
2.2. The intended learning outcomes at the level of study programmes delivered by the higher education institution are aligned with the level and profile of qualifications gained.		X		
2.3. The higher education institution provides evidence of the achievement of intended learning outcomes of the study programmes it delivers.		X		
2.4. The HEI uses feedback from students, employers, professional organisations and alumni in the procedures of planning, proposing and approving new programmes, and revising or closing the existing programmes.		X		
2.5. The higher education institution ensures that ECTS allocation is adequate.		X		
2.6. Student practice is an integral part of the study programmes.			X	

<i>Quality grade by standard</i>				
<i>III. Teaching process and student support</i>	<i>Unsatisfactory level of quality</i>	<i>Minimum level of quality</i>	<i>Satisfactory level of quality</i>	<i>High level of quality</i>
3.1. Admission criteria or criteria for the continuation of studies are in line with the requirements of the study programme, clearly defined, published and consistently applied.			X	
3.2. The higher education institution gathers and analyses information on student progress and uses it to ensure the continuity and completion of study.		X		
3.3. The higher education institution ensures student-centred learning.		X		
3.4. The higher education institution ensures adequate student support.		X		
3.5. The higher education institution ensures support to students from vulnerable and under-represented groups.		X		
3.6. The higher education institution allows students to gain international experience.			X	
3.7. The higher education institution ensures adequate study conditions for foreign students.		X		
3.8. The higher education institution ensures an objective and consistent evaluation and assessment of student achievements.		X		
3.9. The higher education institution issues diplomas and Diploma Supplements in accordance with the relevant regulations.				X
3.10. The higher education institution is committed to the employability of graduates.			X	

<i>Quality grade by standard</i>				
<i>IV. Teaching and institutional capacities</i>	<i>Unsatisfactory level of quality</i>	<i>Minimum level of quality</i>	<i>Satisfactory level of quality</i>	<i>High level of quality</i>
4.1. The higher education institution ensures adequate teaching capacities.		X		
4.2. The higher education institution ensures appropriate quality of external associates.			X	
4.3. Teacher recruitment, advancement and re-appointment is based on objective and transparent procedures that include the evaluation of excellence		X		
4.4. The higher education institution provides support to teachers in their professional development.		X		
4.5. The space, equipment and the entire infrastructure (laboratories, IT service, work facilities etc.) are adequate for the delivery of the study programmes and ensure the achievement of intended learning outcomes and the implementation of professional and/or scientific activity.		X		
4.6. The library and library equipment, as well as access to additional resources ensure the literature necessary for ensuring high-quality of study and scientific and teaching activity.		X		
4.7. The higher education institution rationally manages its financial resources.		X		

<i>Quality grade by standard</i>				
<i>V. Professional and/or scientific activity</i>	<i>Unsatisfactory level of quality</i>	<i>Minimum level of quality</i>	<i>Satisfactory level of quality</i>	<i>High level of quality</i>
5.1. Teachers and associates employed at the higher education institution are committed to the achievement of high quality and quantity of professional and/or scientific research.		X		
5.2. The higher education institution proves the social relevance of its professional and/or scientific research and transfer of knowledge.		X		
5.3. Professional and/or scientific achievements of the higher education institution have been recognized in the regional, national and international context.		X		
5.4. Professional and/or scientific activities and achievements of the higher education institution improve teaching.		X		

Site visit protocol

***Ponedjeljak, 18. studeni 2019.
Zagreb - Pula***

***Monday, 18th November 2019
Zagreb - Pula***

	Ponedjeljak, 18. studeni 2019.	Monday, 18th November 2019
9:30 – 13:00	Put Zagreb - Pula	Trip from Zagreb to Pula
14:00 – 15:00	Ručak	Lunch
15:00 – 17:00	Edukacija članova Stručnog povjerenstva (kratko predstavljanje rada Agencije, upoznavanje sa sustavom visokog obrazovanja u Republici Hrvatskoj, upoznavanje s Postupkom reakreditacije, Standardima za vrednovanje kvalitete i načinom pisanja završnog izvješća)	Training for the Expert Panel members (short presentation of ASHE, introduction to the higher education system in Croatia, introduction to the re-accreditation procedure, standards for the evaluation of quality and writing the final report)
17:00 – 20:00	Priprema Stručnog povjerenstva za posjet Istarskom veleučilištu (rad na Samoanalizi) Pitanja za posjet	Preparation of the Expert Panel members for the site visit (working on the Self-evaluation report) Questions for the site visit

	Utorak, 19. studeni 2019. Istarsko veleučilište	Tuesday, 19 th November 2019 Istrian Polytechnic
09:00 – 10:00	Sastanak s dekanom, prodekanima i predsjednikom Upravnog vijeća	Meeting with the dean, the vice deans and the chairman of the Governing council
10:00 – 11:00	<i>Sastanak članova Stručnog povjerenstva (analiza dokumenata)</i>	<i>Internal meeting of the Panel members (Document analysis)</i>
11:00 – 12:00	Sastanak s nastavnicima u stalnom radnom odnosu (osim onih na rukovodećim mjestima)	Meeting with full-time teaching staff (members of the management are excluded)
12:00 – 13:00	Sastanak sa studentima (otvoren sastanak za sve studente)	Meeting with the students (open meeting for all students)
13:00 – 15:00	<i>Radni ručak Stručnog povjerenstva</i>	<i>Working lunch</i>
15:00 – 15:45	Sastanak s vanjskim predavačima	<i>Meeting with external lecturers</i>
15:45 – 16:15	Sastanak s vanjskim dionicima – predstavnicima strukovnih i profesionalnih udruženja, poslovne zajednice, poslodavcima, stručnjacima iz prakse, organizacijama civilnog društva	Meeting with external stakeholders - representatives of professional organisations, business sector/industry sector, professional experts, non-governmental organisations
16:15 – 16:45	Organizacija dodatnog sastanka o otvorenim pitanjima (prema potrebi)	Organisation of additional meeting on open questions, if needed

	Hotel u Puli	Hotel in Pula
17:30 – 20:00	Sastanak Stručnog povjerenstva – refleksija o viđenom i priprema za idući dan posjeta	Joint meeting of the Expert Panel members – reflection on the day and preparation for the second day of the site visit

	Srijeda, 20. studeni 2019. Istarsko veleučilište	Wednesday, 20th November 2019 Istrian Polytechnic
09:00 – 10:30	<i>Sastanak članova Stručnog povjerenstva (analiza dokumenata)</i>	<i>Internal meeting of the Panel members (document analysis)</i>
10:30 – 11:15	Sastanak s voditeljima studija	Meeting with the heads of study programmes
11:15– 12:00	Sastanak s voditeljem stručne prakse i sa članovima Tima za međunarodnu suradnju i mobilnost (Erasmus koordinator, ECTS koordinator)	Meeting with the Practice Coordinator and members of the Team for international cooperation and mobility (Erasmus Coordinator and ECTS Coordinator)
12:00 – 13:00	Obilazak poduzeća/mjesta u kojima studenti obavljaju praksu	A tour of companies in which students do student practice
13:00 – 14:30	<i>Radni ručak Stručnog povjerenstva</i>	<i>Working lunch</i>
14:30 – 15:00	Sastanak s alumnima (koji nisu zaposlenici Veleučilišta)	Meeting with the alumni (which are not employees of the HEI)
15:00– 16:00	Obilazak Veleučilišta (predavaonice, uredi studentskih službi, informatička dvorana, laboratoriji), prisustvovanje nastavi	Tour of the Polytechnic (lecture rooms, student services, IT room, laboratories), participation in teaching classes
16:00 – 16:30	Organizacija dodatnog sastanka o otvorenim pitanjima (prema potrebi)	Organisation of additional meeting on open questions, if needed
16:30 – 16:45	<i>Interni sastanak članova Stručnog povjerenstva</i>	<i>Internal meeting of the Panel members</i>
16:45 – 17:00	Završni sastanak s dekanom i prodekanima	Exit meeting with Meeting with the dean and vice deans

	Hotel u Puli	Hotel in Pula
18:00 – 20:00	Sastanak Stručnog povjerenstva – izrada nacrt završnog izvješća	Joint meeting of the Expert Panel members – Drafting the final report

	Četvrtak, 21. studeni 2019. Gradska knjižnica i čitaonica Pula	Thursday, 21 st November 2019 City Library and Reading Room Pula
9:00 – 12:00	Sastanak Stručnog povjerenstva – izrada nacрта završnog izvješća	Joint meeting of the Expert Panel members – Drafting the final report

SUMMARY

During the reaccreditation process, the Expert Panel thoroughly analysed the academic and business activities of the HEI as well as all standards related to the reaccreditation process. From the site visit and the SER, as well as the additional documents, the Expert Panel has created the final report with recommendations for each specific standard that emphasize the most important ones and those critical for the future of HEI. The HEI should ensure periodic data monitoring, analyses and respective improvement activities, personnel development (qualitatively and quantitatively), including a vocational education concept for all hierarchic levels. In doing so, particular attention should be paid to the development of full-time teachers and enhanced communication proficiency, especially change communication. The implementation of recommendations from earlier re-accreditations is only partially apparent. Intensified and sensitive change communication is a critical success factor for the further development of the HEI. All study programmes have appropriately described learning outcomes and are at the appropriate level of the Croatian Qualifications Framework. The meeting with the stakeholders in the teaching process revealed a pronouncedly low level of mutual communication and communication with other structures of the higher education institution. The HEI needs to include the analysis of labour market needs when changing the existing and developing new courses and study programmes. It should also significantly strengthen the cooperation with external lecturers, external stakeholders and the alumni related to the alignment of harmonising study programme with the needs of the labour market. The HEI must define methods of assessing the achievement of learning outcomes. The HEI has an Erasmus higher education charter that allows the institution to participate in the Erasmus + program. It is important that, in the future, the HEI further encourages students to participate in international mobility and provides as much information in English to foreign students as possible. In the next academic year, it is essential that the HEI makes sure that syllabuses are released on time and without delay. It is necessary that the HEI encourage teachers even more to develop their teaching methods by participating in professional development. The HEI should continue to encourage and assist the Alumni Club in the organization and use it to build a base of students who have completed their studies. The HEI has been through management change and is facing various financial and human resources issues, which results in lower number of teachers being employed as well as lower number of students being enrolled. The problems related to communication issues with students and management in terms of recent changes influence the quality of the delivery of study programs, students and teacher's insecurity and public opinion. The HEI must strongly work on hiring new teaching staff, work on better information and communication system with students and employees, and use the external associates by involving them more in cooperation with internal teachers in order to improve

competencies and execute study programmes to a higher quality. The library facilities and learning resources must be improved at the premises of the HEI. The financial issues should be addressed more systematically, with exact planning of income (especially in terms of tuition fees and professional projects), and the allocation of sources should be set for increasing the competencies of teachers. The number of professional papers is too small considering the core mission of such an institution. The cooperation with highly skilled external partners and institutions should be maintained and extended. The needs of society, local community and labour market are considered by means of a strong cooperation and commitments. The support of the transfer of knowledge is based on individual activities of engaged teachers or representatives. After careful analysis, the Expert Panel concludes that the HEI has a strong will and motivation to develop the institution even with new study programmes (tourism and agriculture), but there are major improvements to be done in terms of the quality standard. With good organisation, communication and commitment of the management and all other stakeholders, together with support from the owner, the Panel believes that the HEI can overcome the current critical issues and achieve progress and success in the future.