REPORT
OF THE EXPERT PANEL
ON THE
RE-ACCREDITATION OF
FACULTY OF TEXTILE TECHNOLOGY UNIVERSITY OF ZAGREB

Date of on-line re-accreditation:
30th Aptil 2021 and
4th – 6th May 2021

September 2021

CONTENTS

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 Faculty of Textile Technology University of Zagreb.

Members of the Expert Panel:
1. Prof. Dr. Diana Gregor Svetec, Naravoslovnotehniška fakulteta, Univerza v Ljubljani, Republic of Slovenia
2. Prof. Dr. Ing. Zdeněk Kůs, Fakulta textilní, Technická univerzita v Liberci, Czech Republic
3. Prof. dr. sc. Nediljka Vukojević Medvidović, Faculty of Chemistry and Technology, University of Split, Republic of Croatia – **panel chair**
4. Izv. prof. art. dr. sc. Saša Došen, Academy of Art and Culture, University of Josip Juraj Strossmayer in Osijek, Republic of Croatia
5. Valentina Novački, univ. bacc. chem., student, University of Josip Juraj Strossmayer in Osijek – Department of Chemistry, Republic of Croatia

During the on-line re-accreditation, the Expert Panel held meetings with the following stakeholders:

- Management,
- Quality Assurance Committee,
- Students,
- Full-time teaching staff,
- ERASMUS Coordinator,
- ECTS Coordinator,
- Alumni,

- Assistants and junior researchers,
- Leaders of research projects,
- Life Long Learning Leader,
- Representatives of the business sector, potential employers.

Expert Panel members had a virtual tour of the Faculty premises.

The Expert Panel drafted this Report on the re-accreditation of Faculty of Textile Technology University of Zagreb on the basis of Faculty of Textile Technology University of Zagreb self-evaluation report, other relevant documents and on-line meetings.

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 protocol),
- Summary.

In the analysis of the documentation and online meetings and writing of the Report, the Expert Panel was supported by:

- Vlatka Šušnjak Kuljiš, coordinator, ASHE,
- Frano Pavić, assistant coordinator, ASHE,
- Irena Škarica, interpreter at the preliminary site visit and during the online meetings, ASHE,
- Anna Maria Perović, 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.

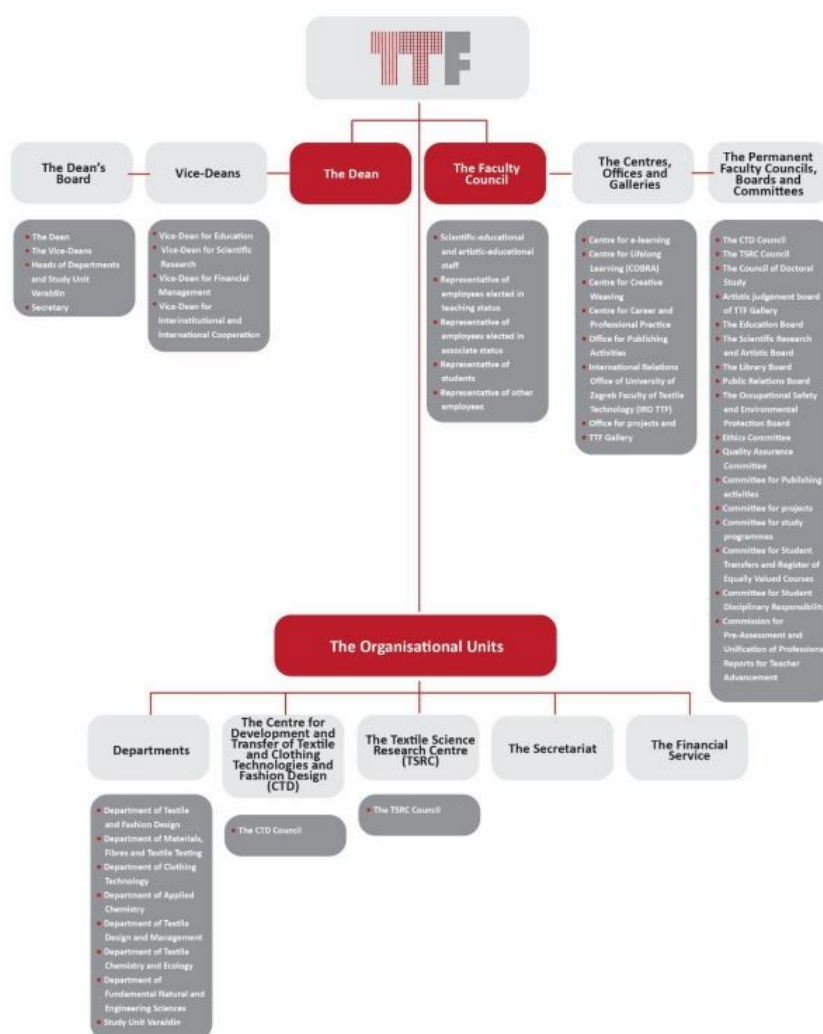# SHORT DESCRIPTION OF THE EVALUATED HIGHER EDUCATION INSTITUTION

NAME OF HIGHER EDUCATION INSTITUTION: Faculty of Textile Technology University of Zagreb

ADDRESS: Prilaz baruna Filipovića 28a, Zagreb

DEAN: Interim Dean Assoc.Prof. Anica Hursa Šajatović Ph.D.

ORGANISATIONAL STRUCTURE:
Based on Self-evaluation document

STUDY PROGRAMMES

Based on self-evaluation report and MOZVAG database

No.	Name of the study programme	Type of programme	Education provider	No. ECTS credit	CQF Level
1.	Textile Technology and Engineering; specialisations in: Clothing Engineering, Engineering Design and Management of Textiles, Textile and Clothing Design for Industry, Textile Chemistry,	Undergraduate university study programme	Faculty of Textile Technology University of Zagreb	180	6
2.	Textile and Fashion Design; specialisations in: Fashion Design, Textile Design	Undergraduate university study programme	Faculty of Textile Technology University of Zagreb	180	6
3.	Textile Technology and Engineering; specialisations in: Clothing Engineering, Design and Management of Textiles, Textile Chemistry, Materials and Ecology, Clothing Engineering, Textile Design for Industry, Clothing Design for Industry	Graduate university study programme	Faculty of Textile Technology University of Zagreb	120	7
4.	Textile and Fashion Design; specialisations in: Fashion Design, Textile Design, Costume Design, Theory and Culture of Fashion	Graduate university study programme	Faculty of Textile Technology University of Zagreb	120	7

5.	Fashion Clothing Design and Technology *	Postgraduate specialist university study programme	Faculty of Textile Technology University of Zagreb	60	7
6.	Textile Art *	Postgraduate specialist university study programme	Faculty of Textile Technology University of Zagreb	90	7
7.	Haute Couture (High Fashion) *	Postgraduate specialist university study programme	Faculty of Textile Technology University of Zagreb	90	7
8.	Intellectual Property***	Postgraduate specialist university study programme	**University of Zagreb** Academy of Dramatic Arts Faculty of Electrical Engineering and Computing Academy of Music Faculty of Architecture Faculty of Food Technology and Biotechnology Faculty of Law Faculty of Economics and Business Faculty of Medicine Faculty of Textile Technology Academy of Fine Arts	90	7

9.	Textile Science and Technology	Postgraduate (doctoral) university study programme	Faculty of Textile Technology University of Zagreb	180	8
10.	Textile, Clothing and Footwear Technology; specialisations in: Textile Technology - Mechanical, Textile Technology - Chemical, Clothing Technology, Footwear Design	Professional undergraduate study programme	Faculty of Textile Technology University of Zagreb (Varaždin)	180	6

* Source: Data generated from the Mozvag Module Browser

According to the note received from the institution (CLASS: 602-04/21-01/03 FILE NUMBER: 251-68-01/1-21-1) dated from 12th February 2021 this programme was excluded from analytic MOZVAG.

** the study program is performed with multiple constitutes of the University of Zagreb.

NUMBER OF STUDENTS:

The number of students per study programme for the current academic year is given in Table 3.1 in the Analytic supplement to the Self-evaluation report

Study programme name	Full-time students	Part-time students
Textile Technology and Engineering; specialisations in: Clothing Engineering, Engineering Design and Management of Textiles, Textile and Clothing Design for Industry, Textile Chemistry, Materials and Ecology (1470), undergraduate university study programme, Zagreb	115	0
Textile and Fashion Design; specialisations in: Fashion Design, Textile Design (1473), undergraduate university study programme, Zagreb	217	0
Textile, Clothing and Footwear Technology; specialisations in: Textile Technology - Mechanical, Textile Technology - Chemical, Clothing Technology, Footwear Design (1469), professional undergraduate study programme, Varaždin	26	0
Total number for undergraduate level	**358**	**0**
Textile Technology and Engineering; specialisations in: Clothing Engineering, Design and Management of Textiles, Textile Chemistry, Materials and Ecology, Clothing Engineering, Textile Design for Industry, Clothing Design for Industry (1472), graduate university study programme, Zagreb	94	0
Textile and Fashion Design; specialisations in: Fashion Design, Textile Design, Costume Design, Theory and Culture of Fashion (1474), graduate university study	149	0
Total number for graduate level	**243**	**0**
Textile Science and Technology (1466), postgraduate (doctoral) university study programme, Zagreb	51	0
Total number for postgraduate doctoral level	**51**	0
Total number of students on all study programmes	**652**	**0**
Total number of students	**652**	

NUMBER OF TEACHERS:

The structure of teachers is given in Table 4.1.b in the Analytic supplement to the Self-evaluation report

Staff	Full-time staff	Cumulative employment	External associates
Full professors with tenure	11	-	2
Full professors	12	-	-
Associate professors	21	-	1
Assistant professors	18	-	6
Scientific advisor (permanent/with tenure)	-	-	1
Scientific advisor	-	-	-
Senior Research Associate	-	-	-
Research Associate	-	-	-
Teaching grades	7	-	4
Assistants	18	-	9
Postdoctoral researcher	4	-	-
Employees on projects	1	-	-
Expert assistants	6	-	-
Technical staff	6	-	1
Administrative staff	24	-	-
Support staff	11	-	-

LICENSE FOR SCIENTIFIC ACTIVITY:

Tehnical field of science

SHORT DESCRIPTION OF THE EVALUATED HIGHER EDUCATION INSTITUTION

The brief description is based on the data provided in the Self- evaluation report

The independent study of textiles and textile technology in Croatia was organized for the first time in the early 1960s as studies at the Faculty of Technology in Zagreb, initially only textile-chemical technology and later textile-mechanical and clothing technology. In 1961, four independent higher technical schools (junior colleges) were established:
– Higher Technical Textile School in Zagreb
– Higher Technical School of Fashion Design in Zagreb
– Higher Technical Textile School in Varaždin
– Higher Technical Textile School in Duga Resa.

Due to the increased needs of the textile industry for trained personnel, the Faculty of Technology of the University of Zagreb organized separate branches of study in 1971 - Textile Chemical Engineering and Textile Mechanical Engineering. Three years later, in 1974, Textile engineering was established as an independent organization within the Faculty, with the aim of organizing textile studies. Textile Engineering functioned independently from 1978. The Higher Technical School of Textiles in Zagreb started training textile and clothing designers in the mid-1970s. On July 1st 1983, all textile technical schools were integrated into the Institute of Textiles and Clothing of the Faculty of Technology at the University of Zagreb. The Institute of Textiles and Clothing reorganized itself on November 15th 1991 as an independent institution and a member of the University, under the name of the Faculty of Textile Technology, University of Zagreb. In the beginning, the Faculty had four departments in Zagreb and two business units in Varaždin and Duga Resa.

Thanks to the continuous and hard work of teachers and researchers, the Faculty of Textile Technology, University of Zagreb, became the only higher education institution in the field of technical sciences, textile technology in Croatia and the only institution systematically engaged in scientific research and professional work in this field.

In terms of the number of academic and teaching staff, the number of students and opportunities for professional work, the Faculty was the strongest institution of higher education in the field of textiles and clothing in the former Yugoslavia, and it is still one of the most important institutions of its kind in Europe. The diplomas obtained at the University of Zagreb are internationally recognized by the Association of Universities for Textiles of Europe (AUTEX) and the Textile Institute of Manchester (UK).

BRIEF ANALYSIS OF THE INSTITUTIONAL ADVANTAGES AND DISADVANTAGES

ADVANTAGES OF THE INSTITUTION
1. Enthusiastic management.
2. Assistants and postdoctoral students are enthusiastic and dedicated to their work.
3. Good ground for interdisciplinary approach in all area of activity.
4. Excellent research equipment, good working environment for realisation of most study programmes.
5. Good possibility for collaborations with the industry and public institutions at national and international level.
6. Good supportive research environment for students at all study levels.
7. High number of patents and innovations.
8. Good ratio between the number of teachers and students.
9. Nourishing academic integrity and freedom.

DISADVANTAGES OF THE INSTITUTION
1. Development Strategy and Research Strategy for period 2014-2020 have expired and new strategies need to be adopted.
2. Students at the undergraduate and graduate level do not have sufficient student practice in order to be prepared for the labour market.
3. Number of enrolled students is significantly lower compared to enrolment quota.
4. Unequalised teacher's workload and excessive work overload in case of some teachers.
5. Very low number of publications compared to number of teachers and research environment.
6. Lack of transfer technology into industry and obtaining financial benefit.
7. Lack of adequate prior knowledge of the enrolled students in STEM area.
8. High drop-out rate from first to second year.
9. Art being taught within a technical science study programme.

LIST OF INSTITUTIONAL GOOD PRACTICES

EXAMPLES OF GOOD PRACTICE
1. Good support for students to be involved in research activities.
2. Sufficient number of realised scientific projects.
3. Established Centre for Career and Professional Practice.
4. Equipment catalogue is available at the Faculty's website.
5. Collaboration with real sector is at high level.

6. Interdisciplinary approach to research.
7. High level of environmental awareness and social sensitivity.

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

The Faculty has established a generally functioning quality assurance system. Internal quality assurance system involves teachers, administrative staff, students and external stakeholders.

The Faculty does not have valid key documents: Development Strategy or Research Strategy and has not presented to the Expert Panel even drafts of those documents.

The data on student satisfaction is being collected, but there is a lack of evidence of feedback from the employers or peer review. It was noted that graduated students lack general organization skills and certain digital competencies in order to be fully prepared for the labour market.

Enrolment quotas are much higher than the number of enrolled students and the drop-out rate is quite high.

A large number of teachers is significantly overloaded and teaches too many hours and too many courses within a single academic year. The Faculty does not employ teachers in all the artistic fields relevant to the study programmes it is executing.

The Faculty shows that it nourishes academic integrity and freedom as well as moral principles.

The Faculty's website as a whole is a bit crowded; the information is not well organized and therefore not easily accessible.

It is evident from HEI's collaborations and a two-way support between the Faculty and real sector stakeholders that it is contributing to the development of economy at the level of the University. Involvement in scientific, cultural and artistic production is fulfilling a social role on a satisfactory level.

The Faculty is working on a lot of innovations and patents for which it is internationally recognized. Teachers and students are encouraged to collaborate on multidisciplinary and interdisciplinary projects.

Even though The Centre for Lifelong Learning COBRA was established at the Faculty in 2004, a single lifelong study programme at the level of the Faculty does not exist. In the endeavours of the Centre for Lifelong Learning there is no evidence that in the planning of the activities the social needs have been taken into serious consideration.

Recommendations for improvement

The Faculty should adopt the Development Strategy and Research Strategy documents for the future period as soon as possible, since such documents are key guidelines for the assurance of quality on all levels of Faculty's activities.

In order to achieve learning outcomes and prepare students for the labour market, student practice should be included as a regular activity throughout the study process and be included as an obligatory part to all study programmes. Digital competencies should be part of course curriculum in order to align learning outcomes with labour market requirements.

Drop-out rate is still extremely high and that issue needs immediate attention.

It is suggested that the Faculty makes an attempt at reducing the number of courses in order to reduce the workload of teachers. The Faculty should aim to employ at least a couple of teachers from the artistic area of costume design.

The Faculty's website needs to be redesigned in a way that all the relevant information is logically and systematically presented and, in consequence, easily accessible. The content of the official HEI's website should not be confusing and advertising or promoting activities that are part of any project that is not organised by the Faculty.

The Faculty should expand teaching-related activities aimed at general public. Responsible technology transfer might be a good path for the Faculty's development.

Attention should be paid to the alignment of prospective lifelong learning programmes with social needs and with the needs of graduates and people that are already employed in the respective fields of technical science, industry or design that need to upgrade their knowledge and professional skills.

Quality grade
Minimum level of quality

II. Study programmes

The general goals of all study programmes are mostly in line with the mission and vision, but the faculty does not have an adopted development strategy and scientific strategy. Low number of enrolled students at all study programs is evident, thus the reorganization of study programmes will certainly contribute to a greater interest of students in enrolment, which will improve enrolment quotas. A critical situation regarding the number of enrolled students has been identified for professional studies in Varaždin, and this situation needs to be seriously addressed. The Faculty generally has clearly defined learning outcomes for all of its study programmes. Learning outcomes are mostly aligned with the CroQF and EQF and reflect progress from undergraduate to graduate level. However, it has been observed that the curricula of study programmes are based more on the professional knowledge of the teaching staff than on social and economic needs. According to students' comments, learning outcomes are not always aligned with the main area of study. Learning outcomes referring to technical knowledge on the modules of Fashion Design and Costume Design are poor and they are not on required level for an engineer's degree. Artistic competences are on a satisfactory level. Students also commented the lack of digital competences. Learning outcomes of some courses are overlapping, thus they can be merged into one. Therefore the Expert Panel highly recommends considering the reorganisation of study programmes according to specific recommendations for each study programme which are explained in detail in section 2.2. Achieving learning outcomes is checked through colloquiums, seminars, presentations, group and individual project tasks and written and oral exams. Feedback from students is collected; however, it would be desirable to more systematically and formally involve external stakeholders in the process of reviewing study programmes. The Faculty awards ECTS credits for individual courses based on the total number of working hours required to successfully achieve learning outcomes. However, it is suggested to continue to harmonise the actual student workload with the defined ECTS credits in the courses. A lack of professional practice at undergraduate and graduate study was noted. A number of ECTS credits is awarded for student internships and this is in principle positive.

Recommendations for improvement

Due to the constantly decreasing number of enrolled students at all study programmes, the Expert Panel highly recommends to work more on the reorganisation of study programmes according to specific recommendations explained in detail in section 2.2., on the internationalisation by introducing study programmes in English language as well as collecting information from stakeholders, students and alumni for the improvement of study programmes. At the same time, it is recommended to work more on the promotion

of the Faculty in media and on additional activities aimed at high school students coming from other than vocational schools. The Faculty should continue with the evaluation of learning outcomes at course level, and working on assessment of alignment of student workload and defined ECTS credits should be based on feedback information collected from teachers and students.

Quality grade
Satisfactory level of quality

III. Teaching process and student support

Faculty's website have published criteria for admission or continuation of studies, study regulations as well as the most relevant information about studying on the Faculty. The website is not quite user friendly and some of the relevant information about study programmes and study processes are rather hard to find. Enrolment standards are not in line with study programmes and the Faculty should reconsider merging some of its courses as well as lowering the number of STEM area related subjects if they are interested in attracting future students from vocational schools. Greater attention should be paid towards the promotion of the Faculty to potential future students. The Faculty has great difficulties with enrolment quotas, and they should be reconsidered and adapted to labour market needs. There is a clear procedure and monitoring process through analysing data, but there are no remarkable changes done to fix the occurring problems. The number of students who complete their studies is worryingly low, which just increases the urgency and importance of change and adaptation of current study programmes at the Faculty. The high drop-out rates could also be lowered by the same adjustments. The Faculty set up a "mentorship programme" to reduce the number of drop-out, but it did not yield much success so far. The introduction of so called "zero-semester" would greatly help the students coming from vocational schools if the Faculty insist on keeping the high number of STEM area subjects. Even though the Faculty seems to have quite good relationship with the real sector, they should ask them for more guidance while reconstructing future study programmes. The Faculty uses many methods of teaching, especially during pandemic of Covid-19. Students and alumni themselves voiced their concern about the required digital literacy for future employment. Digital literacy of the students is not quite up to date with the labour market needs and the Faculty should put more effort to introduce new digital software used in the industry to their students for ensuring their competitiveness on the labour market. By offering student practise to all of the study programmes, the Faculty would greatly help students with acquiring needed knowledge about real sector. When it comes to opportunities for students during their studies, it is quite apparent that students of technology have grater chances of participation in projects and with that are more likely to be rewarded, then students of design. Students have a good support from the Faculty. In their opinion, they are satisfied with the provided space, materials and the content of the library. All of the important information is presented in introductory classes as well as mobility opportunities. The Faculty has coordinators for technical area, as well as coordinators for mobility and ECTS credits which can help students with any pressing questions. The Student's Office also has its section on Merlin e-learning platform, where students can also ask for help or seek answers for certain questions. Psychological counselling is also available for students via University of Zagreb. Students with disabilities, students from

under-represented or vulnerable groups and student that face any kind of hardship are well taken care of by the Faculty. The Faculty ensures they have all the help needed and they adjust their teaching accordingly. Students with disabilities are presented with opportunity of a "friend-student". "Friend-students" are students from the same study programme who receive special education from the University of Zagreb and then can proceed to help students with disabilities during the semester. The Faculty has well developed mobility and should continue to work on its further improvement. The Faculty offers horizontal and vertical mobility to their students, via programmes such as CEEPUS, ERASMUS+ and bilateral mobility. The Faculty also accepts foreign students. The Faculty provides about 30 classes in English language and that number should be increased going forward. All the necessary information about the study on the Faculty for foreign students can be found on the Faculty's English website. The Faculty has established procedures for ensuring the objective evaluation of student's work. Teachers are encouraged to partake in courses and workshops which can help them develop even further their methods of evaluating student's work and planning their courses. Students after graduating receive appropriate diplomas and diploma supplements in accordance with the relevant regulations.

Recommendations for improvement

- The Faculty should seriously consider lowering their enrolment quotas so future students can be more competitive on the labour market when graduating from their studies.
- Introducing a "zero-semester" or lowering the number of STEM area related subjects would be beneficial for lowering the drop-out rates and increasing the number of graduates.
- Providing higher number of classes in English would be good for attracting larger number of foreign students, but classes in English should also be offered to Faculty's students as an opportunity to improve their knowledge of the language.
- The Faculty should work on students' digital literacy and provide them with more current digital content used in the real sector.
- Introducing student practice to all of the study programmes would greatly help students with the experience needed for labour market.
- Increasing the number of surveys and their more frequent implementation on student's satisfaction with teaching process, on-line and distant learning, etc. would give the Faculty better insight into the issues, which then could lead to faster solving of said issues.
- Students of design should be provided with more opportunities to expand their academic work by including them in more projects, etc.

Quality grade

Satisfactory level of quality

IV. Teaching and institutional capacities

Analysis

Teachers are working in five research areas: natural sciences, social sciences, humanities, arts and technical sciences. More than 80 percent of the teaching staff have permanent employment and are working full-time at the Faculty. Teachers have appropriate qualification to perform teaching, scientific and artistic activities. There exist significant differences between teachers focused on the technology courses and teachers of design. More than 50 percent of teachers have higher workload in standardized teaching hours than the prescribed limit for HEIs in public sector. The overload of some teachers was also highlighted during the interviews.

The engagement of external associates is a good practice, but the current practice seems to be inadequate in ensuring appropriate distribution of teaching and scientific/artistic activities, as well as for personal development.

The ratio of students to teachers is relatively very low (6.5 for teachers, 5.3 for external associates), it is very favourable and helps to ensure high quality of study, but also indicates the differences between study programmes.

Teachers recruitment is done well, it is based for instance on the announcing in well-known media. The online discussion with approx. 20 members of staff did not show any important problems in the procedures connected with the recruitment process.

The self-evaluating documents describe the system of the employees support very well. The Faculty helps the teachers in the whole area of their working process and also helps them to use new educational technology. The mobility support for teachers is very good (Erasmus, etc.)

The space, equipment and entire infrastructure are appropriate for the implementation of teaching, research and professional activities. The infrastructure of the Faculty and especially the quality of the laboratories is on very high level. Some of the laboratories can be comparable with similar ones in the European or world scale in the field of textile engineering. A range of modern research equipment, including machines and analytical instruments are superior to many comparable HEIs in the Europe. The main problem they are facing now is maintenance and servicing of expensive laboratory equipment. According to the self-analysis report they have an appropriate number of computer equipment, which is relatively outdated, but they try to regularly renew it. The problem they state is funding of specialized and licensed computer programmes.

Also, it is not clear how students from dislocated unit in Varaždin have access to equipment located in Zagreb, because they are significantly less equipped with research instruments.

Two libraries are very small (26 and 124 m2) in comparison with the number of students and also the number of literature units is not very high. Nevertheless, the library provides sufficient literature available for studying. They are subscribed to national and

international scientific and professional journals and the access to relevant databases is provided. Students confirmed that they are satisfied with the literature provided.

The Faculty is rationally managed. The Faculty financing system is based on regulations and mainly on the state support. Such budget structure is good for the faculty everyday life but cannot give a chance to focus significant amount of money to new research ideas and areas.

Recommendations for improvement

- Periodically make a screening between the teachers and the scientists and map the overload of every teacher. Discuss with the employees.
- Find the balance between technical and artistic areas, pay attention to the different demands regarding the students/teacher ratio in the artistic area.
- Periodically inform your employees about their rights and risks of discrimination in the recruitment process.
- Organize lectures and workshops for teachers focused on the newest technology used in education, help them to work in the complicated conditions caused for e.g. by the Covid crisis.
- Organise informational workshops for the employees focused on international cooperation.
- Follow the newest trends regarding laboratory instruments, buy new machines and measuring devices to keep the high quality, provide teachers and students with the appropriate computer software.
- Extend the capacity of the libraries, extend remote access to other libraries and databases.
- Increase own income of the Faculty, try to get more money from private sources, companies, factories or faculty alumni.

Quality grade
Satisfactory level of quality

V. Scientific/artistic activity

Analysis

The Faculty of Textile Technology carries out scientific, artistic and professional research in five research areas and mostly in the textile technology field. In the previous research strategy five goals were set and followed, most of them in a satisfactory manner. They are aware of some weaknesses in the research field and have been working on them, such as lack of faculty staff in certain fields of expertise, underdeveloped research work dealing with the arts domain, low number of interdisciplinary research projects, which still remain to be solved. The Faculty has appropriate resources for scientific and artistic activities. An efficient support system for research and transfer of knowledge is present. Given the size and research resources, especially excellent research equipment in the textile engineering filed, the continuity in research is guaranteed, but it should be more developmental.

In the last few years, the scientific publication activity was constantly declining till 2020. The total number of publications, number of citations and total h-index citations are quite low. Teachers publish in peer-reviewed scientific publications, also in highest category, but there is a big discrepancy between teachers. Some strong performing individuals have high number of publications and are involved in research projects, showing that high quality and quantity of scientific research can be reached. In the last period the artistic productivity has been increased and a very good cooperation with academies, museums, theatres and other organizations has been established. Through exhibitions of their artwork they make an important contribution to the visibility of the Faculty.

Scientific/artistic/proffesional activities have been well recognised. The Faculty organizes and co-organizes international and national conferences, as well as forums and seminars. This gives good opportunity for transfer of knowledge and establishing new cooperation with external stakeholders. They are active in the popularization of science and promotion of scientific/artistic/professional work on national level.

Scientific/artistic/professional activities improve the teaching process. Excellent research equipment is enabling students to acquire very good knowledge in the textile engineering field. Students at all study levels, especially PhD students are involved in scientific/artistic/professional projects of the Faculty.

Recommendations for improvement

- Considering the excellent research equipment, good space and number of teachers and associates there is a good possibility to increase scientific/artistic activity, which has to be encouraged from the management. They all should work in order to improve interpersonal relationships in terms of networking, collaboration and the transfer of

scientific excellence to less experienced colleagues. Uniform ownership and awareness of research strategy among teachers should be encouraged.

- The number of publications in all categories, especially in high-level peer-reviewed journals should be increased. The Faculty should try to secure more funding for publishing activity. When it comes to artistic productivity, the Faculty should strive to increase the number of artworks premiered at artistic events and try to achieve some complex artworks defined as extraordinary achievement. More efficient procedures for encouraging high-quality scientific publications and artistic productivity with international merit should be implemented.
- Considering the high number of patents and innovation, their application and the transfer of knowledge should be done more efficiently, as well as continuous work on innovations and patent applications.

Quality grade
Satisfactory 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

The Faculty has established a generally functioning quality assurance system. Internal quality assurance system involves teachers, administrative staff, students and external stakeholders.

The Expert Panel had, prior to all other meetings, a meeting with the management and a meeting with the Quality Assurance Committee. Dean and Vice-deans all seem eager to maintain the highest standards of teaching processes, material and spatial resources and high professional standards. Amongst the members of the Quality assurance Committee there were some uncertainties about the actions of the Committee in the past five-year period due to the change of management. Change of management was a key reason given by staff for any irregularity or uncertainty on their behalf on the area they are in charge with throughout the meetings during the course of the evaluation proceedings.

In human resources area the Faculty is committed to maintaining functional and efficient management strategies and it has an appropriate number of scientific-teaching, administrative and supporting technical staff. The average age of teaching staff was noted as quite old and there is no permanently employed teaching staff in the artistic field of costume design at the Faculty, even though a degree course module with a substantial number of students is dedicated to the study of costume design.

The Faculty does not have a valid Development Strategy or Research Strategy document and the members of both the Management and of the Quality Assurance Committee seem to be aware of the downside of lacking such key documents.

The presented SWOT analysis does not include enough elements to its analysis. The Quality Assurance Policy is a general guideline consisting of few lines of text. The evidence regarding surveys and other evaluation procedures provided by the Faculty for the Expert Committee to examine was not sufficient or adequately organized.

The Faculty is collecting data on student satisfaction, but there is a lack of evidence of feedback from the employers or peer review. During the meeting with external

stakeholders and alumni it was noted that HEI graduates lack student practice and general organization skills in order to be fully prepared for the labour market.

Internal assessment of the quality relies on the University and an internal quality assessment committee does not exist on the Faculty itself, except for the duration of the assessment period, every few years.

The communication of information between previous and current president of the Quality Assurance Committee is poor and therefore it somewhat hinders the continuity of working efforts of the named body. Some of the employees are not familiar with the mechanisms of the quality assurance system.

Recommendations for improvement

The Faculty should adopt the documents of the Development Strategy and Research Strategy for the future period as soon as possible, since such documents are key guidelines for the assurance of quality on all levels of Faculty's activities.

The Quality Assurance Policy should be written as a comprehensive document following international standards of quality assurance in HEI.

Human resources management needs to focus on the employment of a sufficient number of teaching staff appointed in the appropriate area there where the teaching staff are completely lacking or there where the work overload of certain members of teaching staff is evident.

All of the Faculty's employees should be acquainted with the mechanisms of quality assurance and be encouraged to do their part in achieving and maintaining high standards in their respective areas of work in order for internal quality assurance system to function on the level of the entire HEI.

Quality grade
Minimum level of quality.

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

Analysis
The Faculty of Textile Technology has implemented some, but not strictly all of the recommendations for improvement from previous external evaluation. The Management explained why some of the recommendations were ignored.

The HEI analyses all gathered information from previous internal and external evaluations and makes managerial decisions regarding which course of action and what changes in the internal organization of the institution would be the best for the future development of the HEI and the maintenance of its high quality standards.

The Action Plan following previous external evaluation was adopted by the Faculty.

Student surveys are conducted, but there is no evidence of self-evaluation of teaching staff. Study programmes and enrolment quotas have not been, since the last external evaluation, changed in order to align them with labour market needs.

Students and teachers are informed about internal and external evaluations of quality and are acquainted with the procedures of quality assurance that are in accordance with the European standards for higher education.

The management decided not to reduce the number of departments claiming that such an endeavour would not be possible due to the interdisciplinarity of the Faculty's teaching staff nor has it reduced the number of courses as was recommended by the former external evaluation report. Drop-out rate is still extremely high.

Strategic planning of the courses' alignment with labour market requirements is not carried out to the full extent.

Technical equipment and the use of digital tools at the Faculty seems to be appropriate for the realisation of study programmes.

According to the management, student practice is currently realised to the extent that is realistically possible, given the global pandemic situation. However, during meetings with students and alumni it was evident that student practice is not an integral part of most study programmes. On the undergraduate level it is scarcely organised, while on the graduate level students have some more opportunities to engage in student practice. Students are advised by the Faculty to apply to student practice programmes abroad through Erasmus+ and Ceepus programmes.

The enrolment quotas have not been reduced. More strict enrolment criteria were applied, but it had a negative effect on the number of enrolled students.

Students' suggestions for the improvement of learning processes is taken into account. Teachers cover narrow areas in the field of textile science.

The Faculty doesn't employ a single member of teaching staff in the field of costume design, yet it has a Costume Design module on a degree level.

Overall scientific productivity of the HEI in terms of published papers is still very low and there is no evidence of artistic research, which was confirmed by the management.

Mobility of students and staff has improved since the last external evaluation. But the recommendation for increasing the number of formal partnerships with international HEI and researchers is still valid.

Resources of the Faculty are at appropriate level of quality.

Recommendations for improvement

The Faculty should rethink and try to implement some of the constructive suggestions and recommendations discarded as unnecessary from the previous external evaluation, the implementation of which would decrease teachers work overload, increase the quality profile of students enrolling to the study programmes and attending the study programmes, increase the quality of education processes and reduce the drop-out rate.

Since a large number of teachers is significantly overloaded and teaches too many hours and too many courses within a single academic year, it is recommended that the Faculty makes an attempt in reducing the number of courses as was suggested earlier.

Drop-out rate is still extremely high and that issue needs immediate attention. Enrolling students coming only from vocational high schools to demanding technical scientific study programmes according to loose criteria should be abandoned. The Faculty should make an attempt to attract students coming from high schools with better prior knowledge in natural science in order to reduce drop-out rate and, accordingly, increase the number of highly qualified graduates. The content and learning outcomes of the courses need to be aligned with the current requirements of the labour market.

In order to achieve learning outcomes and prepare students for the labour market, student practice should be included as a regular activity throughout the study process and be included as an obligatory part to all study programmes.

Teachers in the area of textile science should broaden their area of expertise in order to cover broader subject area.

The Faculty should aim to employ at least a couple of teachers from the artistic area of costume design in order to legitimate the realisation and assure quality execution of Costume design module on the degree level of the Textile and Fashion design course.

The number of scientific publications made according to high quality standards still needs to be increased, as well as research in the area of art and design.

In order to increase the possibility and quality of international cooperation, additional formal partnerships with international HEI and researchers should be considered.

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
Evidence provided by the Faculty shows that it nourishes academic integrity and freedom as well as moral principles. It has adopted all the necessary documents, it has established the Faculty's Ethics Committee, and follows all the procedures as well as rules of the Ethical Code necessary for the preservation of ethical standards.

The Quality Management Committee is processing anonymous remarks delivered to a designated mailbox on regular basis.

In the past five-year period, the Faculty's Committee for Student Disciplinary Responsibility received nine cases and the Ethics Committee received three applications. In all cases all appropriate procedures were followed and opinions issued.

PlagScan software is used at the Faculty in order to prevent plagiarism.

Recommendations for improvement
The HEI should try to minimize the number of breaches of *Ethical Code* and *Regulations on student disciplinary responsibility* by raising overall awareness of ethical standards, academic integrity and freedom, plagiarism, personal rights and intellectual property.

Quality grade
Satisfactory level of quality

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

Analysis

The Faculty's website as a whole is a bit crowded. It contains most of the neccessary information (general information about Faculty, basic information on study programmes, research, projects, numerous documents, agreements, section reserved for students and section containing students work, information of interest to professionals and general public), but it is not designed in a way that navigation and access to all of the wanted information is simple enough.

Integral versions of study programmes are not available on the Faculty's website, therefore it requires great deal of navigation through information to find out detailed information about each course within a particular study programme, or which courses are taught by Faculty's employees and which by external associates.

Information on enrolment criteria, quotas and learning outcomes of a particular study programme or a module witnin it is presented on the website, but the logic of navigation through data makes communication of simple information rather complicated. The information in the tables refering to the criteria for the enrolment to the 1st year of undergraduate study programmes is below the legibility level.

The information on study programmes is available only in Croatian in most cases. There is a short description of study programmes in English in some cases, while for some only the English title is available online. Curriculum for Undergraduate professional study programme Textile, Clothing and Footwear Technology is available in English on the HEI's website.

The section on the website containing information about teaching staff is marginalised and difficult to find (almost hidden under three dots navigation button), it is poorly organised mixing full time employees and external associates and inconsistent in content between the Croatian and English versions. Area, field and discipline of the appointment into the staff's teaching grade are not clearly visible on the website, neither are courses that particular member of staff teaches listed in all cases. Presentation of teachers' CVs is rather poor.

The Open doors day is organised in Zagreb and in Varaždin in order to promote Faculty's study programmes to high school students and general public and make available information about all of the specific aspects of gaining education at the Faculty of Textile technology.

The information on previous external evaluation is accessible to all.

In addition to the official website, the Faculty is continuously communicating information to stakeholders and general public via Facebook, Instagram and its YouTube channel.

Recommendations for improvement

The Faculty's website needs improvement, maybe even reconstruction that would make crucial information accessible and the website user-friendly.

Study programmes should be presented in a more comprehensive manner and available in a format suitable for download of the integral version of each particular programme.

Organisation and presentation of information should be laid out logically.

It is crucial that it is clear that projects and all of the content presented on the Faculty's website are related to the activities of the Faculty itself. The official HEI's website should not be advertising or promoting activities of external associates that are part of any project that is not organized by the Faculty.

The Faculty should make an effort to promote its courses to the population of high school students attending schools with teaching intensified in the field of natural sciences, art and general education on a higher level than that prescribed by vocational secondary schools curriculum.

Quality grade

Satisfactory level of quality

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

Analysis

The contribution to the development of the economy by the Faculty at the University level, but also at the broader geographical and social level, is evident from its collaboration and partnerships with industry in research-related activities and a two-way support between the Faculty and stakeholders in the real sector.

Cooperation with local stakeholders on a professional level, on the level of scientific research, patents and innovations, artistic productions in collaboration with the Academy

of Dramatic Arts in Zagreb, Music Academy and Fine Arts Academy, as well as participation of Faculty's employees in various committees, councils and public bodies contributes to the development of the local community on a professional level. Furthermore, involvement in scientific, cultural and artistic production is fulfilling a social role of promoting values of sustainable production, addressing environmental issues and promoting moral and aesthetic standards that all help in the development of an orderly and functional society.

Analysis of the documentation provided by the Faculty as well as information gathered during the meetings of Expert Panel with employees, students and external stakeholders has shown that the Faculty is aiming at highest standards in its teaching, scientific and artistic endeavours. Most members of the teaching staff are dedicated to their work and committed to the development of the Faculty of Textile Technology that will contribute to the development of the University as a whole.

The Faculty is working on a lot of innovations and patents for which it is internationally recognised. Teachers and students are encouraged to collaborate on multidisciplinary and interdisciplinary projects. There is evidence of high level of environmental awareness and social sensitivity in Faculty's scientific, artistic and professional work that is beneficial to the community on a larger scale. Continuous efforts are made to improve all aspects of the Faculty operations.

Recommendations for improvement
While the Faculty organises teaching-related activities for the professionals, it should expand those aimed at general public. In that way general public would be familiarised with the scientific research and projects, patents and innovations as well as artistic production and importance of all aspects of the Faculty's scope of actions. The image of the Faculty perceived by the public and professionals would be clear and, accordingly, the Faculty would have a better opportunity to attract a higher profile of students with a required level of prior knowledge for quality participation in its study programmes.

The Faculty should attempt to collaborate on interdisciplinary research activities and project realisation with HE institutions from universities in Croatia, other than those of the University in Zagreb.

Responsible technology transfer might be a good path for the Faculty's development, as it not only supports the process of innovation, provision of know-how and technical expertise, but it also creates economic and social value.

The Faculty might consider in which way it could make its human, spatial and technical resources available for volunteer contribution, popularisation of science and work with vulnerable and underrepresented groups.

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 Expert Panel is aware of the fact that lifelong education might not be fully regulated at the level of the University of Zagreb and that it is still in an early developmental stage on the level of higher education in the Republic of Croatia as a whole.

The Centre for Lifelong Learning COBRA was established at the Faculty of Textile Technology in 2004. The Centre has since organised thematic workshops and seminars, education of the teaching staff on Croatian Qualifications Framework (HKO) standards, education on e-learning and learning outcomes, workshops in collaboration with the industry and periodical events aimed at teachers at vocational schools, but a single lifelong study programme at the level of Faculty does not exist.

In the endeavours of the Centre for Lifelong Learning there is no evidence that in the planning of the activities the social needs have been taken into serious consideration. The programmes organised and realised by the Centre are aimed at a narrow circle of professionals and interested stakeholders.

Recommendations for improvement
The Faculty needs to adopt the key document of Development Strategy and to include within it lifelong learning goals that would be aligned with the strategic goals of the HEI and labour market requirements.

Attention should be paid to the alignment of prospective lifelong learning programmes with social needs and with the needs of graduates and people that are already employed in respective fields of technical science, industry or design that need to upgrade their knowledge and professional skills.

The implementation of well thought lifelong learning courses could be a valuable source of financing Faculty's research projects and acquisition of technical equipment.

The Faculty might see the lack of any lifelong learning programme as an opportunity to thoroughly think through the implementation of lifelong learning programmes that would be credited with appropriate ECTS credits and that would be in accordance with contemporary European lifelong learning programmes, following the guidelines of continuous professional development in various forms of online or direct courses.

Quality grade
Minimum level of quality

II. 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 needs of the society.

Analysis

Informations about the study programmes are available on the Faculty's web page. All study programmes have valid permits for delivering. They are offering courses in English, as well. The strategic documents with which the study programmes are aligned are available. All study programmes are in line with the mission and vision of the Faculty. However, Development Strategy and Research Strategy for period 2014-2020 have expired and new strategies need to be adopted.

Low number of enrolled students at all study programmes is evident. Also, the number of enrolled student decreases from 2017 to 2019. Very critical situation is with professional study in Varaždin (only 3 students enrolled in 2019, while enrolment quota is 75). The management of the Faculty is aware of this problem. The situation is partially due to the situation in the economical sector, as well as a lower interest of young generation for studying in STEM area. The representative of the professional study in Varaždin commented that an increase in the number of enrolled students will be achieved thanks to the influx of students coming from 4-year secondary school of Clothing Technician in Varaždin, which was not the case in previous period.

The "round table" is continuously organised by the Faculty in order to collect relevant information for study programme. Surveys are also continuously performed with students and teachers, but not with external stakeholders and alumni.

After graduation, students are able to obtain the European engineering card.

Recommendations for improvement
- Increase the number of enrolled students, especially at professional study in Varaždin through continuous promotion of the Faculty in media and additional activities aimed at high school students coming from other than vocational schools.
- Continue working on internationalisation of study programmes in English language.
- Continue with collecting information from stakeholders, students and alumni for the improvement of study programmes.

Quality grade
Satisfactory 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

All teachers inform students about learning outcomes already during the first lecture at the beginning of each semester. Also, students are introduced with course programme, examination, grading, seminars, practical work and literature. Study programmes and syllabus for each course can be found on the web page. However, it has been observed that the curricula of study programmes are based more on the professional knowledge of the teaching staff than on social and economic needs.

Students commented that learning outcomes are not always aligned with the main area of study. Learning outcomes referring to technical knowledge on the modules of Fashion Design and Costume Design is poor and it is not on the required level for an engineer's degree. Artistic competences are on a satisfactory level. Students also commented on the lack of digital competences. Learning outcomes of some courses are overlapping, thus they can be merged into one.

From the analysis of learning outcomes (see Analysis of Table 2.1. from Analytical supplement), it is evident that learning outcomes of some courses are not harmonised at the level of the study programme. Specifically, for courses History and Theory of Design (1127) and History of Art (1133) at the undergraduate university study programme in Textile and Fashion Design and for course Clothing Construction II (1394) at professional undergraduate study programme in Varaždin.

The analysis of learning outcomes for each study programme separately is given in the following paragraphs.

Undergraduate university studies in Textile Technology and Engineering last 6 semesters. After three joint semesters, the study branches into four directions: Textile Design and Management (TDM), Textile Chemistry, Materials and Ecology (TCME), Clothing Engineering (CE), Industrial Textile and Clothing Design (ITCD). During the first joint semester, students are getting basic engineering and design competences. Through other semesters, they acquire specific knowledge closely related to each module. Each module is not exactly a specialization as it includes a significant number of obligatory courses. But they give students a good preparation for graduate study. Learning outcomes are defined at the level of each course except for courses: Computer Science at TDM, History and theory of design at CE module, and Modern art and design at ITCD module. **Learning outcomes at the course level are mostly aligned with learning outcomes at study programme level and with CroQF and EQF level descriptors.** However, it is suggested to work on linking learning outcomes from similar subjects.

Graduate university study programme Textile Technology and Engineering (TTE) last 4 semesters. The main goal of this study programme is to upgrade the knowledge of the undergraduate study in a way that graduates are capable of solving complex engineering tasks based on a scientific approach. The study programme deals with the application of scientific and engineering principles to the design and control of all aspects of fiber, textile, and apparel processes and products. Graduates should be able to design, organise and manage the processes in companies and other organizations in the textile field in the area of their specialisation. The study programme contains five specialisations/modules: Textile Design and Management, Textile Chemistry, Materials and Ecology, Clothing Engineering, Textile Design for Industry, Clothing Design for Industry. Modules are organised in a way that they give in-depth knowledge within specialisation. Most courses are obligatory in one specialisation/modulus, some of them are also elective in other specialisations. As each of five modules covers a specific field in the textile technology and engineering, the graduate study programme TTE is composed of high number of courses, with specific goals and course-specific competences. This is also connected with a high number of defined learning outcomes, i.e., 59. Some courses give just one or two learning outcomes; for example, course Clothing and Textile Care, as obligatory course in the modulus Clothing Design for Industry, gives only one specific competence for this specialisation. Most courses give four to six learning outcomes. The quota of learning outcomes that can be reached in 1 or 2 courses is 10 percent, whereas for 3 and 4 courses the quota of learning outcomes is 35 percent. Due to a substantial number of general engineering courses, two learning outcomes related to application of natural science knowledge and laboratory equipment and methods in textile technology can be obtained in 17 and 21 courses. This shows that some reorganisation and merging of subjects is possible.

Learning outcomes at the course level are aligned with the learning outcomes at the TTE study programme level. The analysis of the study programme has shown that the programme level learning outcomes are arising from course level outcomes and not vice-versa. Such organization of study programme leads to fragmentation, which was also a remark given by the students.

Learning outcomes achieved in the study programme are aligned with the CroQF and EQF level descriptors. Students obtain course-specific learning outcomes within specialisation, lacking broader competences, which can limit their employment opportunities. The remark from external stakeholders was that students have good encyclopaedic knowledge, but they are lacking other skills needed in the real sector.

Undergraduate university study programme Textile and Fashion Design, offering specialisations in: Fashion Design or Textile Design, is currently realised in the area of technical science. **Learning outcomes are not aligned with the level and profile of qualifications gained (technical engineering).** Students are gaining insufficient

technical knowledge on one and there is evident lack of student practice on the other side. The courses taught at the study programme within both modules indicate that the study programme is clearly design orientated in all of its segments (textile design and fashion design module alike) and yet it is registered within the area of technical science. The course structure offers a good base for further study of design and the learning outcomes would be in excellent alignment with a qualification in the field of design, but neither is in accordance with the declared study programme in engineering.

Graduate university study programme Textile and Fashion Design contains four modules: Fashion Design, Textile Design, Costume Design and Theory and Culture of Fashion. Graduates are issued a diploma in engineering even though the learning outcomes regarding digital competencies, technical knowledge and skills are deficient, as the Expert Panel has concluded through evaluating the study programme, the evidence presented by the Faculty and after discussing the matter with students, alumni and external stakeholders. The amount of student practice on the graduate level seems to be unequalised between the four modules. **Learning outcomes are to the satisfactory extent aligned with the specific qualifications requirements** for future fashion designers, costume designers, textile designers or theoreticians of culture and fashion, should the graduates be issued appropriate diploma in design for the first three modules and a diploma in humanities for the fourth.
Fewer courses with more ECTS credits at the degree level offer students more in depth approach to the chosen area of study.

Undergraduate professional study of Textile, Clothing and Footwear Technology (TOOT) in Varaždin lasts 6 semesters. The study is divided into four modules. Learning outcomes are defined at the level of each course, but for some courses the learning outcomes need to be redefined according to Bloom taxonomy and Dublin descriptors. The study is oriented towards the specifics of individual modules of the textile, clothing and footwear professions. The focus is on practical knowledge. Implementation of student practice is good since students are required to spend some time on internship in industrial plants. **Learning outcomes at the course level are mostly aligned with learning outcomes at study programme level and with CroQF and EQF level descriptors.** However**,** it is suggested to work on the promotion of this study programme due to very, very low number of enrolled students.
Six occupational standards at the level of the Faculty are already registered in CroQF. Diploma supplements confirm student competences. Undergraduate and graduate study programmes of Textile Technology and Engineering are included in the FEANI Index list.

- Continue working on the improvement and revision of learning outcomes to be in line with CroQF and EQF.
- Decrease the number of courses by merging similar courses into one.
- It is recommended that the **undergraduate university study programme Textile and Fashion Design** should be revised and realised in accordance with learning outcomes that are clearly design orientated. Furthermore, a study programme of costume design on a degree level is not sufficient for its graduates to acquire all the necessary knowledge and skills to pursue a professional career of costume designers for theatre, film and TV productions. Therefore, the development of a study programme of costume design offering a good broad base for the future costume designers at the undergraduate level should be considered. The same applies to the study programme of Theory and Culture in Fashion that needs to be developed on the undergraduate level as well.
- It is recommended that **graduate university study programme Textile and Fashin Design** considers realizing modules of Fashion Design and Costume Design as artistic study programmes or modules within an artistic study programme, while current module Theory and Culture of Fashion should be realised within the appropriate scientific field of humanities. The Textile design module could be realised either as an engineering study programme (with full and thorough change of the courses offered within the currently design-orientated module) offering sufficient technical knowledge to its students (technical science: textile technology: textile and clothing design), it could be organised as an art and design orientated study programme (according to the current course structure within the module) or as an interdisciplinary course with clearly outlined learning outcomes regarding both technical science and arts. In either case, a clear managerial decision has to be made whether the Faculty will conceive the course as scientific, artistic or interdisciplinary. Graduate courses should be offering more extensive in-depth knowledge and skills without skipping the necessary basic knowledge in all of the artistic and scientific fields that should form a broader base (acquired at the undergraduate level) for the adoption of knowledge upgrades and more independent research and encouragement of self-initiated projects devised by students themselves at the graduate level.
- It is recommended for **undergraduate university studies in Textile Technology and Engineering** to work on linking learning outcomes from similar subjects.
- It is recommended that the **graduate study programme Textile Technology and Engineering** decreases the number of defined learning outcomes. It is advised to perform this in a way that first study programme level outcomes should be defined, and only then starting from programme level outcomes the course level outcomes should be clarified. The Faculty should consider the reorganisation of graduate study programme TTE because of low number of enrolled students and very high number of

unemployed alumni. If they want to keep five narrow specialisations, they should allow more flexibility, change the ratio between obligatory and elective courses and merge some courses to prevent fragmentation or repeating of content in different courses.

- It is recommended for undergraduate professional study of Textile, Clothing and Footwear Technology (TOOT) in Varaždin that learning outcomes of some courses need to be redefined according to Bloom taxonomy and Dublin descriptors. Due to very low number of enrolled students, it is suggested to work more on the promotion of this study or perform a reorganisation.
- It is necessary to make the study in Varaždin more attractive and enable students in Varaždin to use excellent laboratory equipment located in Zagreb.

Quality grade
Satisfactory 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
Achieving the learning outcomes at the level of the course is checked by grading and evaluating the student during the course and at the exam. Checking of achievement of learning outcomes is performed trough colloquiums, seminars, presentations, group and individual project task and written and oral exams. Examples of written tests and seminars that verify the acquisition of learning outcomes were given. Some students participated in student practice, which also contributes to the achievement of learning outcomes. The final success in the achievement of learning outcomes is also checked through final and graduate theses. Graduate and final theses are available in the DABAR database.

Teachers participated in several workshops for the improvement of teaching skills and competences. Students evaluate teachers work through surveys and positively evaluated surveys are an obligatory condition for the future election to a higher scientific-teaching title (position). The teaching process is continuously improved with the results from scientific research. Examples of the connection between scientific research and classes for the improvement of teaching processes are given (EVIDENCE: 5.5. Primjeri dokaza).

Recommendations for improvement
- Continue with the evaluation of learning outcomes at the course level.
- Continue with mentoring of students final and graduate theses.
- Continue with the improvement of teaching skills.

High 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

Procedure for proposing and revising study programmes is established. The Quality Assurance Committee collects information from students and teachers trough surveys and "round table" are continuously organised with employers and professional organisations. Last programme revision was performed in 2014/2015 and in 2015/2016. External stakeholders commented that they are not familiar with the improvement and revision of study programmes based on their comments. The same was declared by students and alumni. They perceive the survey as an additional administrative job.

Representatives of the companies which mostly employed students from the Faculty confirm that they are satisfied with student knowledge and background. Even though their knowledge is mostly theoretical (encyclopedic), students succeed to adapt in process with time. External stakeholders are willing to participate in the improvement of study programmes at the Faculty. They confirm good collaboration with the Faculty.

Recommendations for improvement
- Continue with collecting information from students, employers, professional organisations and alumni for the improvement of study programmes.
- Perform the revision and improvement of study programmes based on the obtained information.
- Improved version of study programmes should be publicly available.
- Report of changes in study programmes should be drafted continuously.

Quality grade
Minimum level of quality

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

Analysis

ECTS credits are defined on the level of each course and they correspond to students' activity and their workload. But, in the self-analysis, the part concerning ECTS allocation did not contain relevant evidence nor did it indicate their existence. No relevant feedback was received in the conversation with the ECTS coordinator regarding the ECTS allocation, thus the Expert Panel concludes that ECTS coordinator is not qualified in the area that she is in charge with.

Some professors have stated that they conduct an analysis of student workload on their courses in collaboration with students. But according to evidence, the last adjustment of ECTS credits was performed during programme revision (last audit was performed in 2014/2015 and in 2015/2016). The Faculty obviously needs to work on this standard more.

It is suggested to reconsider the number of ECTS credits awarded to each of the courses and to amend them if necessary to ensure that they remain in line with student workload. Also, students should be provided with feedback on the results of the analysis of the collected data related to the award of ECTS credits and related and implemented changes. It would be convenient to develop a procedure for proper calculation of student workload.

Recommendations for improvement

- It is suggested to define a procedure for proper calculation of student workload in compliance with ECTS credits.
- ECTS coordinator needs to be educated more regarding the allocation of ECTS points in accordance with actual student workload.
- Continue working on the assessment of the alignment of student workload and defined ECTS credits and collect feedback information from teachers and students.
- Report of changes in study programme should be continuously drafted.

Quality grade
Minimum level of quality

2.6. Student practice is an integral part of study programmes (where applicable).

Analysis

Student practice is obligatory only at professional study programme. However, students, alumni and external stakeholders commented that student practice should be introduced as obligatory at undergraduate and graduate level. Namely, student practice helps students with future employment.

4 ECTS credits are given for student practice at graduate and undergraduate study, while at professional study 10 ECTS points are awarded. Students were not provided with funding for the internship. During practice, students need to compile a Report on the professional practice. Evidences were given as well as examples of contracts with employers.

Centre for Career and Professional Practice was established in 2020.

Recommendations for improvement
- Introducing student practice as obligatory at undergraduate and graduate level would help students be adequately prepared for the labour market.
- Activities related to student practice should be continuously recorded by the Centre for Career and Professional Practice. The Centre should focus on finding appropriate professional organisations for the implementation of student practice.

Quality grade
Satisfactory level of quality

III. 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 Faculty has published all criteria for admission or continuation of studies on the Faculty's website, but those standards are not in line with study programmes. Information on process of application is available on the website, as well as needed paperwork for applying to a higher year, which is beneficial to new and already enrolled students.

Decision-making procedures regarding criteria for admission and continuation of studies are clear and well developed. The Faculty continuously follows all the criteria. Study programme TMD has well defined submitting procedure where students' artistic abilities are tested and marked.

The Faculty has good inclusion of students from other universities through their mobility programmes, as well as providing students from vertical mobility with the possibility to pass examinations in order to enrol to graduate studies on their Faculty. The Committee for student transfers and register of equally valued courses proposes the transfer decision further to the Faculty council where the final decision on each individual transfer is then discussed and made, but no formal written exam is required. Achievements that are made in the framework of international exchange programmes for student are recognised in accordance with study agreements. After the approval of ECTS coordinator data is transferred to ISVU system. Teachers conduct informal surveys on the satisfaction of foreign students, but there is no formal survey conducted which could and should be changed.

Horizontal mobility is allowed on the Faculty and students can apply for elective courses on another higher education institution. With the obligatory information and applications which are valid and approved by the Vice-dean for Education at the proposal of the ECTS coordinator, students can proceed with horizontal mobility. All students upon passing the exam on another higher education institution are obliged to provide the parent faculty's student office with evidence of the passed exam, which then provides the assessment of the elective course in ISVU system.

Upon request, students can be rewarded ECTS points gained in the framework of extracurricular activities and credits are then entered in the Diploma supplement upon approval of ECTS credits working group of the University of Zagreb, in accordance with

the Ordinance on the allocation of ECTS credits and upon approval of the Vice-dean for Education from the Faculty.

The Faculty does not pay much attention to the attraction of new potential students. During the last evaluation process, it was suggested to the Faculty to reconsider their enrolment quotas due to the likeliness of it to exceed national demand, which has happened in the last 5 years. Even though the Faculty is apprehensive about lowering their enrolment quotas due to the complicated process needed to get them up again if needed. That decision should be reconsidered and brought up with the University of Zagreb, so that future graduates can be competitive on the labour market. The professional study in Varaždin should monitor their enrolment quotas carefully and act accordingly if the number of enrolled students next year doesn't increase (vocational school program which will provide them with potential new students).
All necessary tables are provided in the Analytical supplement.

Recommendations for improvement
- The Faculty should rethink the number of STEM subjects in their study programmes if they tend to promote themselves to students from vocational schools.
- If the Faculty is not willing to reduce the number of STEM subjects in future study programmes, then "zero semester" should be provided for students from vocational schools.
- Art and science programmes should be more clearly separated to provide future students with the possibility to choose their specialisation (students from fashion design should be unburdened from unnecessary subject in technical areas and should be provided with more digital literacy for future employment).
- The Faculty should reconsider their enrolment quotas or put their efforts in developing more English or other foreign language programmes to attract more students from abroad – the number of professionals exiting the Faculty would be too high for the labour market if all the quotas were fulfilled.
- Promotion of the Faculty should be highly increased in media (social media), especially professional study in Varaždin.
- More formal surveys should be conducted to provide more input from students from other faculties and universities.

Quality grade
Miniumum 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
The higher education institution has clear procedures for monitoring students' progress and all the data from those surveys are available in the ISVU system and in their systematic analysis, but the Faculty does not act to confront those problems. Information regarding enrolments on the Faculty in the last 5 years are available and organised, as well as data on student progress from first to second year on each of the programmes. In tables 3.2.2 and 3.2.3 provided in the evidence can be seen that the duration of the studying is quite high. Management and teachers think that part of the problem could be that students who opt for studying abroad (ERASMUS+ or CEEPUS programmes) often miss obligatory exams and therefore they often must take an additional semester to fulfil their duties on the parent faculty. It was also suggested it could be due to student coming mostly from vocational schools and those students often have a problem with passing necessary exams from STEM subjects, and therefore the dropout rates are high. The Faculty has conducted an additional summer school for students in the past and that practise should be considered if "zero semester" is not included in future study programmes. Mechanism for analysing student performance and pass rates are well established, but adequate measures are still not made regarding the data. The mentorship programme which was introduced as a measure to prevent high drop-out rates should be reconsidered as it doesn't seem to yield satisfactory results. Some assistants expressed the opinion thet there should be something done to ensure equality in student knowledge of STEM subjects (already proposed "zero semester"). Since the Faculty has good relationship with the real sector and gathers a good amount of information from the sector, that information should be taken in seriously to fulfil economic employment needs, as the Faculty is trying to be as successful as it can on the labour market.

Recommendations for improvement
- More should be done to insure lower student dropout rates, for e.g. organisation of official student study groups or introduction of the earlier proposed "zero semester".
- Mobility window would be beneficial for reducing the duration of studying.
- Management should implement more opinions from real sector and alumni while working on new study programmes.

Quality grade
Miniumum level of quality

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

Analysis

The Faculty provides students with various methods of teaching, especially encouraging them during the pandemic. The Faculty provides students with different ways of getting their knowledge and expertise by encouraging them to work in groups (on the Faculty and with groups from other higher education institutions), by introducing them to on-line learning via Merlin learning platform were most of the classes, due to the current situation, are performed. The Faculty supports and actively participates in the e-learning strategy of the University of Zagreb. Teachers had been working on upgrading and improving their competences by partaking in various workshops and courses on on-line teaching and learning outcomes.

Students with disabilities are provided with a "friend student" who helps them during the semester and teachers are actively trying to provide them with all the help they might need. Students struck by family tragedies or health issues are given a prolonged period to perform their duties needed for the completion of their studies, if the period of their absence is no longer than a month.

Students warned panel members about lack of knowledge in using digital programmes for design and therefore focusing on digital literacy of the students would be advised. There are no formal surveys conducted among students for them to voice their concerns. It is especially worrying that there was no official survey done of student satisfaction with on-line classes since the begining of COVID-19 pandemic.

The Faculty encourages students' responsibilities and their autonomy by encouraging them to take part in volunteer work (providing them with extracurricular activities noted in their Diploma supplements) or by encouraging students to take part in projects (scientific or artistic) or for example student organisations. Students from engineering study seem to have more opportunities to show their excellence, so equalising opportunities for design students by increasing the number of art projects on the Faculty level would be beneficial. Excellent student works are accordingly rewarded.

Recommendations for improvement

- Students need more knowledge in digital literacy to ensure their employability-students themselves think they are not knowledgeable enough in that area (especially students from fashion design).
- More formal surveys with students to ensure their satisfaction, especially with on-line and distance learning.
- Increasing the number of applications for art projects on the Faculty level would ensure equal number of opportunities for students of the design programme to those which students studying on the engineering programme have.

Satisfactory level of quality

3.4. The higher education institution ensures adequate student support.

Analysis

Study regulations and all the important information considering consultations for students are available on the Faculty's website. The website is quite unorganised and study regulations are extremely hard to find on the website. Students are provided with allocated mentors at the beginning of their studies and mentors provide studenst with guidance during the whole duration of their studies. Consultations are available for all study programmes and the consultation time and contacts are displayed on the Faculty's website and presented during introductory lectures of classes. Student with disabilities are provided with a "friend student" and there is a coordinator for students with disabilities on the Faculty, which is in contact with the Office for students with disabilities of the University of Zagreb. Students are provided with psychological counselling at the University of Zagreb.

Students are knowledgeable about all possibilities for student mobility and are educated about those possibilities by the coordinators for ERASMUS+ and CEEPUS programmes. The students can also get advice on mobility from the International Relations Office on the Faculty. The International Relations Office also provides counselling for teacher mobility possibilities. The Faculty established the Centre for student practice in 2020, but student practice is still not preformed on the Faculty for all study programmes.

For technical issues students can contact CARNet or ISVU coordinators. Students are introduced with those opportunities via services provided from the Student's Office and through contacts provided on the Faculty's website.

The Faculty's library provides around 8000 units of material appropriate for students and academic staff of the Faculty. The library can be found through the library catalogue and the electronic resources portal for Croatian academic and scientific community, as well as large number of other useful readings for users. Information about working hours of library and reading room are available on the Faculty's website.

The Faculty has qualified administrative and technical staff. Nevertheless, from the meeting with the ECTS coordinator it was apparent that the ECTS coordinator is not educated enough about how ECTS credits are assigned.

Every year the Faculty conducts a survey on the satisfaction of students and employees with the work of administrative and technical staff.

Recommendations for improvement
- The ECTS coordinator should go through more education about how ECTS credits are assigned.

- Regulations on study and results of student satisfaction surveys are extremely hard to find on the website and therefore the website should be reorganised.
- Surveys on student's and employee's satisfaction with administrative and technical staff should be conducted more often, i.e. after every semester to eliminate any possible issues as soon as possible.

Quality grade
Satisfactory level of quality

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

Analysis
Students with disabilities can get help and information from the Office for disabled students at the University of Zagreb. As an additional help, the Faculty adjusts to individual needs of students of vulnerable or underrepresent groups. The procedure for adjusting the processes of teaching or examinations is in accordance with the procedures on the University of Zagreb.

The Faculty acts in accordance with the General Data Protection Regulation (GDPR) and seeks consent from students to enter data into the ISSP system in order to obtain scholarships. Required adjustments for individual students are known only to the teachers and asistants involved in the teaching process.

For students with disabilities the Faculty adjusts the examination and teaching process according to students' needs and Faculty's capability. The Faculty has an elevator and devices to overcome any architectural barriers so students with disabilities can move easier throughout the building.

The University of Zagreb supports the Faculty with the course "Peer support for students with disabilities" („Vršnjačka potpora studentima s invaliditetom") and an expert from the University of Zagreb Faculty of Education and Rehabilitation as an assistant. Students can enrol in this course from their home Faculty at all levels of their studies. The course consists of two parts: a preparatory workshop and the provision of peer support, regular group consultations (monitoring) and evaluation. It lasts for one semester and awards 5 ECTS credits. Students who wish to enrol in the course are required to be familiar with a student with disabilities such as a student with impaired vision, hearing or motor disorder in need of peer support and that student needs to agree to receive support from the student enrolling the course ("pair"). It is necessary that students attend the same study programme and the same study year.

In accordance with the Ministry's recommendation, the Faculty Council decided to exempt students from the earthquake affected area of Sisak-Moslavina County from paying tuition fees.

- It would be helpful for students with disabilities to have a designated person on their parent faculty who is directly responsible for any questions or concerns (name of that employee could be highlighted on the website with their contact).
- Because of the severity of damages from Petrinja earthquake, the Faculty should consider to exempt students of paying tuition for the next academic year as well (students from earthquake-stricken areas).

Quality grade
Satisfactory level of quality

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

Analysis

The Faculty enables many ways of students' mobility. They are part of CEEPUS and ERASMUS+ programmes for many years and they constantly encourage students to take part in international cooperation activities. The Faculty also offers students' mobility through bilateral exchange based on interfaculty agreements or projects. There is also the possibility of short termed international mobility through winter or summer schools. The Faculty has established an office (IRO TTF) operating for over 10 years which is responsible for strengthening and encouraging international cooperation and student mobility. The Faculty continuously partakes in student exchange, even throughout the pandemic of COVID-19. The Faculty encourages its students to partake in mobility programmes by introducing them with all the mobility possibilities (horizontal and vertical) on their first introduction class. Students are often reminded of their mobility possibilities through faculty's website and via e-mails. Both incoming and outcoming students get invited to panels where they can share their experiences with other students who are interested in mobility. For any additional questions on student mobility students are provided assistance from IRO TTF office.

CEEPUS is a mobility programme for academic exchange of students and professors from Central Europe and it's realised through a multilateral agreement establishing cooperation in the field of education and training. The current coordinator of the programme is University of Maribor, Faculty of Mechanical Engineering in Slovenia. Students can register through the coordinator on the Faculty who helps them with the required documentation. When it's finalised, CEEPUS mobility is registered with ISVU and listed in the Diploma supplement (3 ECTS credits). CEEPUS mobility includes winter/summer schools and short-term mobility. The number of students involved in

this mobility programme slightly decreased, but it is to believe it was mostly probably because of the pandemic.

The Faculty also partakes in Erasmus+ EU programme for education, training, youth and sport which enables students to study abroad for longer periods of time. Students can study abroad up to 12 months for each level of study. This programme provides students with an opportunity to complete their undergraduate or graduate thesis as well as their professional practice abroad. Erasmus+ traineeship can be carried out by students in companies, organisations, institutions or other entities with a legal status and active on the labour market or in the education field, as well as in higher education institutions with Erasmus Charter for Higher Education. The Faculty signed 32 interinstitutional agreements for students and 2 for teacher exchange. The list of foreign universities included in the programme and the information about the programme are published on the Faculty's website. Students can apply for the programme once a year through a competition called by the University of Zagreb for the next academic year. The help and advice about the process are provided from ECTS and Erasmus coordinators and members of the IRO TTF. The function of ECTS, Erasmus and IRO TTF offices and coordinators is to ensure thet students pick mobility courses with the maximum compatibility to their parent faculty courses. During the evaluation, it seemed that the ECTS and ERASMUS coordinators were far less knowledgeable about the possibilities and pros of mobility then the Head of IRO TTF.

When students return from mobility, the courses they attended are recognised as elective courses. If students have completed their professional practice and it is not recognised as part of the study programme, the practice is entered in ISVU system and added in the Diploma supplement. Candidates for mobility are chosen through an established procedure carried out by the Committee on the Faculty level based on established criteria. Upon further evaluation the ranking lists are then submitted to the University of Zagreb, which then allocates the decided number of Erasmus+ scholarships. The basic principles of mobility of both incoming and outgoing students at the level of University of Zagreb, rights and obligations, role of the ECTS coordinator and similar issues are all regulated by the Ordinance on International Mobility. Students are required to sign a Learning Agreement (LA) as a basic document for the recognition of ECTS credits acquired abroad. LA is also signed by parent faculty and the institution abroad. Recognition of completion of activities during the mobility period is carried out according to LA. If there is a need for adjustment of the LA, it can be modified with the consent of all signatories in the period no later than 30 days upon student's arrival to the foreign university. When students complete their programme abroad, they are required to submit the Transcript of records with earned ECTS credits to the ECTS coordinator who then evaluates the achieved success at the foreign institution. IRO TTF and the ECTS coordinator are then required to inform the students about the recognition of the credits.

Traineeship recognition is defined in the contract on the implementation of Learning Agreement for Traineeship (LAT). As student practise is still not a significant part of majority of the Faculty's study programmes, a completed practice is added in the Diploma supplement. The data on students' satisfaction with the quality of support provided by the higher education institution on practical issues related to student mobility is collected through an anonymous survey by the University of Zagreb, but the Faculty itself does not conduct any formal survey during the academic year.

Students can acquire valuable competences needed for the work in an international environment. Additional financing possibility is presented for students whose physical, mental or health circumstances are such that their participation in the programme would not be possible without additional support. Erasmus+ programme covers part of student's living costs. The funding for the implementation of the Erasmus+ programme is provided by the Agency for Mobility and Programmes of the European Union, i.e. the European Commission. Students also have a possibility to take part in Erasmus+ exchange at their own expense, i.e. without financial support (zero-grant), and exercise the same rights and obligations as those students who have been granted financial support.

Since 2015, students are required necessary language assessment testing for Erasmus+ programme. Language classes and Online Linguistic support is provided for students. Assessment and the test results do not affect student's mobility. The test is also carried out at the end of the mobility period.

In the period of the past 5 academic years, 155 students of the Faculty listened to one elective course at 7 faculties of the University of Zagreb within the framework of horizontal mobility.

The total outgoing mobility over the past 5 academic years was 409 students, out of which 109 shorter and 48 cases of mobility longer than 3 months were exchanged internationally, together with 155 instances of horizontal mobility. The Faculty also hosted the stay of foreign teachers and experts at the Faculty held workshops, exhibitions and open-type lectures in English.

All the analytical data necessary for the evaluation was provided by the Faculty in the analytical supplement. The Faculty's biggest problem is a non-existent mobility window and by providing it the number of students interested in mobility would most probably increase.

The Faculty also provides students with the European engineering card, but it seems that students are not entirely acquainted with the possibilities it provides.

Recommendations for improvement

- As mentioned in standard 3.4., coordinators for ECTS and ERASMUS programme should take additional courses on the subjects they are responsible for so they can provide students with better rounded information.

- Also, in accordance with the previously stated recommendation (standard 3.2.), the Faculty should consider introducing a mobility window - more students might consider partaking in mobility programmes if their studies on the parent faculty are not postponed or affected by it.
- When student practise, as stated by the Faculty's staff, becomes part of the majority of study programmes, ECTS credits should be rewarded accordingly if students finish practise as part of a mobility programme (not only as part of the Diploma supplement).
- Additional information regarding the possibilities provided by the European engineering card should be given more thoroughly (additional on-line education classes could be helpful or round tables with alumni who are familiar with its usage).

Quality grade
Satisfactory level of quality

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

Analysis
All information necessary for the enrolment is available on the website in English. Some of the links on the website are not functioning properly. The higher education institution provides foreign students with information packages and instructs them to contact ERASMUS+ or CEEPUS coordinator if any additional information or help with the administrative work is needed. The Faculty has a decent number of students involved in incoming mobility and those students are mainly from France and Poland. No formal survey of satisfaction of foreign students is conducted, but teachers often stay in contact with the students and informally enquire their opinions. If foreign students are studying on the Faculty while surveys from the University of Zagreb are conducted, some teachers ask for those surveys to be translated so they can pass them to their foreign students. The Faculty has established an operating Office for international cooperation. There are available packages for foreign students. If a student shows interest in learning Croatian, they are instructed to Croatian language courses at the level of the University of Zagreb. Some classes on the Faculty are taught in English, but the number is quite low considering the tendency towards increased mobility.

Recommendations for improvement
- As mentioned in standard 3.4., ECTS coordinator should be educated more about the allocation of ECTS credits so he/she can have ready answers for any possible student questions about assignment of ECTS credits.

- More formal surveys conducted with foreign students would help the Faculty to eliminate any minor or major problems and it would also be beneficial for future forming of new study programmes (checking areas of interest, which classes would they like to take part, etc.).

Quality grade
Satisfactory level of quality

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

Analysis
Students of the Faculty are informed about the methods of evaluation of their work and other important criteria for the lecture in question on their introductory lecture. Most important information about the courses are also available on the e-learning system Merlin. Methods of evaluation are defined by the Statute of the University of Zagreb Faculty of Textile Technology, the Ordinance on undergraduate and graduate studies, the Ordinance on the undergraduate university studies final thesis, the Ordinance on graduate university studies final thesis and the Ordinance on the undergraduate professional studied final thesis, and also by the relevant acts of the University of Zagreb and Faculty of Textile Technology.

Testing student's knowledge, learnt skills and acquired competencies is in accordance with the learning outcomes and it is preformed by each individual course via written exam or/and oral exam. Some courses require students to pass their exams by evaluating students in a series of steps by using colloquia, seminar papers, presentations and projects as an evaluation method of students' work. During the pandemic, many teachers opted for using e-learning system Merlin as the main platform to test student's knowledge. The platform offers different methods of evaluation which can also be used for examining student's knowledge.

The teachers have an obligation to inform students about their success or failure (the mark) in the exam and if students request so, teachers must provide an insight into the written part of the exam. The Faculty has an established procedure when students have a complaint on the received grade on the course. If the student is not satisfied with the grade achieved at the exam, the student has the right, in accordance with the Statute and the Ordinance on undergraduate and graduate studies and based on an application form submitted to the Dean of the Faculty, to request a committee exam. The Committee exam is carried out before a committee of three members and the exam consists of a written and an oral part. The teacher is obliged to give their written exam to the committee for evaluation. The grade on the subject is then decided by the committee by a majority of votes.

Teachers try to adapt their examination processes in accordance with procedures for students with disabilities or students facing particularly challenging situations. The Faculty should increase the number of surveys so they can monitor percentages of passing exams more often, especially now when most of the classes are preformed on-line.

Teachers are provided and encouraged to attend workshops related to learning outcomes and evaluation methods. That practise should be continued and constantly applied to all of the Faculty's courses.

Recommendations for improvement

- Students seemed well acquainted and knowledgeable about their rights, but the Faculty should make an effort to highlight more clearly important documents on study process on their website.

Quality grade

Satisfactory level of quality

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

Analysis

After completing any of the programmes provided by the Faculty, students receive an appropriate Diploma and Diploma Supplement. ISVU system provides all the necessary information. Pursuant to Article 8 of the Ordinance on undergraduate and graduate studies of the University of Zagreb and Article 72 of the Ordinance on undergraduate and graduate studies of the University of Zagreb Faculty of Textile Technology (in Croatian), the Diploma Supplement is a public document in Croatian and English, enclosed with a certificate/diploma on the completed undergraduate/graduate study in order to provide detailed insight into the level, content of studies and the system and rules of studies at the Faculty. The content of the Diploma Supplement is established by the Minister, and its form is determined by the Senate of the University of Zagreb. The Diploma Supplement at the University of Zagreb Faculty of Textile Technology is issued in accordance with the law (Zakon o znanstvenoj djelatnosti i visokom obrazovanju – Act (NN 123/03, 105/04, 174/04, 02/07 Decision of the USRH, 46/07, 45/09 and 63/11), Article 84, paragraph 5), as well as with the instructions drawn up by the Ministry of Science and Education of the Republic of Croatia. It is free of charge and issued when students are promoted. The issuance of a copy is charged. The Diploma Supplement of the University of Zagreb Faculty of Textile Technology contains: data on the graduate holder, data on the qualifications acquired, data on the qualification level, data on the contents and results of the qualifications obtained, data on employment possibilities or inclusion in further

study programmes, additional information (awards, etc.), certification of the diploma supplement and data on the higher education system in the Republic of Croatia. The example of a Diploma Supplement provided in the Evidence by the Faculty confirms all the information stated in the self-analysis document.

Recommendations for improvement
No recommendations for improvement.

Quality grade
High level of quality

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

Analysis
Even though the Faculty analyses the employability of its graduates, admission quotas are not quite aligned with the labour market and its needs. Even though on paper the enrolment quotas are said to be in line with labour market needs, the pandemic took its toll on fashion and textile industry, so those quotas should be reconsidered. Some actions have been made towards adjusting new planed programmes of the Faculty to current labour market needs. The Faculty should also pay some additional attention towards student's digital literacy, as it was mentioned to panel members, by both current students of the Faculty and alumni, that they are lacking knowledge in this area. Even though the Faculty on paper seams to maintain contact with alumni, the reality of the situation is likely quite different. During the meeting with the Expert Panel, the alumni expressed they would be glad to further and deepen their relationship with their former faculty. They even expressed a feeling of obligation to work with the Faculty to ensure its prosperous future, so it is Panel's opinion that an increased number of contacts and meetings with alumni would be beneficial. The Faculty puts students in contact with the real sector through student practise, which is currently only happening in Varaždin. With more improvements in the area of student practise, some job opportunities and networking will be possible for the students.

Recommendations for improvement
- Reconsidering enrolment quotas would be beneficial for the employability of future students.
- Introducing students with more digital media used in fashion and textile industry would help them with their competitiveness on the labour market.

- Increased contact and involvement of alumni in rewriting study programmes would give to the Faculty a clearer picture of the current state of the labour market.

Satisfactory level of quality

IV. Teaching and institutional capacities

4.1. The higher education institution ensures adequate teaching capacities.

Analysis
The teachers overload and number of teachers are not fully free, they are regulated on the highest level than the Faculty level is.

The information from the Faculty's self analysis documents and on line meetings with teachers show that the number of teachers as a whole is adequate. But there probably exist significant differences between the teachers focused on the technology courses and the teachers of design. The ratio of students to teachers is relatively very low (6.5 for teachers, 5.3 for external associates). The engagement of external associates is a good practice.

More than 80 percent of the teaching staff have permanent employment and are working full-time at the Faculty. They are appointed to scientific-teaching, artistic-teaching and teaching grades. The ratio between teachers and associates is approximately 70 to 30. They are working in five research areas: natural sciences, social sciences, humanities, arts and technical sciences, among them 10 percent in visual arts and 60 percent in textile technology research field. Teachers have appropriate qualification to perform teaching, scientific and artistic activities, as seen from bibliographic data and their presented research, artistic and teaching work. Most of the teachers and associates are teaching in two or more study programmes.

Number of teachers in study programmes and the ratio of students to full-time teachers:
- Textile Technology and Engineering undergraduate university programme: 60; 1:2;
- Textile Technology and Engineering graduate university programme: 58; 1:1,6;
- Textile and Fashion Design undergraduate university programme: 32; 1:6,8;
- Textile and Fashion Design graduate university programme: 31; 1:4,8;
- Textile, Clothing and Footwear Technology: professional undergraduate study programme: 43; 1:0,6.

A very favourable ratio ensures high quality of study, but also indicates the differences between study programmes. A high number of teachers at individual study programmes is connected to high number of courses, as the study programmes are organised in modules. The consequence is high workload for some teachers and associates. More than 50 percent of teachers have higher workload in standardised teaching hours than the prescribed limit for HEIs in the public sector. 30 percent of teachers hold more than 10 courses, 5 teachers 15 or more courses. The overload of some teachers was also highlighted during the interviews. It was also explained that same courses given at different specialisations within study programme and at different study programmes are carried out jointly, which means that the presented workloads are in reality lower.

Nevertheless, the workload of teachers and associates in some cases is not in line with the relevant regulations, legislation and policies. Also, the current practice seems to be inadequate in ensuring the appropriate distribution of time for teaching and scientific/artistic activities, as well as for personal development.

Recommendations for improvement

- Periodically make a screening between the teachers and the scientists and map the overload of every teacher. Discuss with the employees about these issues.
- Lower the overload of teachers with the help of associates or reorganise the teaching process.
- Find the balance between technical and artistic areas, pay attention to the different demands regarding the students/teacher ratio in the artistic area.

Quality grade
Satisfactory level of quality

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

Analysis
The teachers recruitment is done well, it is based for instance on the announcing in the well-known media. The online discussion with approx. 20 members of staff did not show any important problems in the procedures connected with the recruitment process. This part of the Faculty's life is on a very good level of quality.

Recommendations for improvement

- Pay special attention on the gender and discrimination aspects of the recruitment process.
- Extend the recruitment to other countries, help to arrange international teams.
- Periodically inform your employees about their rights and risks of possible discrimination in the recruitment process.

Quality grade
Satisfactory level of quality

4.3. The higher education institution provides support to teachers in their professional development.

The self evaluating documents describe the system of the employees support very well. The Faculty helps the teachers in the whole area of their working process and also helps them to use new educational technology. The cooperation with the University of Zagreb is also useful. The mobility support for teachers is also very good (Erasmus, etc.)

Recommendations for improvement
- Periodically inform the employees about the legislation connected with the higher education, inform them about their rights.
- Organise lectures and workshops for the teachers focused on the newest technology used in education.
- Make a system for helping teachers to work in the complicated conditions caused for e.g. by the Covid crisis.
- Organise informational workshops for the employees focused on the topic of international cooperation.

Quality grade
Satisfactory level of quality

4.4. The space, equipment and the entire infrastructure (laboratories, IT services, work facilities etc.) are appropriate for the delivery of study programmes, ensuring the achievement of the intended learning outcomes and the implementation of scientific/artistic activity.

Analysis

The space, equipment and entire infrastructure are appropriate for the implementation of teaching, research and professional activities. The self-analysis documents and the information from the online discussion with the teachers show that the infrastructure of the Faculty and especially the quality of the laboratories is on very high level. Some of the laboratories can be compared with similar one in the European or world scale in the field of textile engineering. A range of modern research equipment, including machines and analytical instruments are superior to many comparable HEIs in Europe. Lots of equipment was acquired through European and national projects. Moreover, they are constantly investing in new laboratories and equipment. They also developed unique, speciallyconstructed equipment. The main problem they are facing now is maintenance and servicing of expensive laboratory equipment, as they don't have extra funds for that.

They are trying to get money from structural founds, through project applications. In the future they strive to become an accredited laboratory for some methods in the textile technology field to secure equipment maintenance and funding of new equipment.

According to the self-analysis report, they have appropriate number of computer equipment, which is relatively outdated, but they try to regularly renew it. The problem they state is funding of specialised licensed computer programmes, so they are limited with the number of programmes they offer to students.

Though the Faculty has excellent research equipment in the textile technology field, which is available to students, they don't provide computer software, such as Adobe programmes which are one of the basic programmes for designers in the artistic field.

Also, it is not clear how students from dislocated unit in Varaždin have access to equipment located in Zagreb, because they are significantly less equiped with research instruments.

Recommendations for improvement

- Follow the newest trends in the field of laboratory instruments, buy new machines and measuring devices to keep the high quality.
- Support project applications focused on the acquisition of special laboratory equipment.
- Provide teachers and students with appropriate computer software, such as Adobe package, which are basic programmes for designers in the artistic field. Use special offers for universities to help them to work with such software, not only in the Faculty's computer rooms.

Quality grade
High level of quality

4.5. The library and library equipment, including the access to additional resources, ensure the availability of literature and other resources necessary for a high-quality study, research and teaching.

Analysis
The two libraries of the Faculty were not visited by the members of the evaluation team, therefore the analysis is based on the information from the Faculty's self-analysis documents and from the information provided by various stakeholders during the meetings. Two libraries are very small (26 and 124 m2) and the capacity is only approx. 20 learning seats. Such library capacity is very small in comparison with the number of students and also the number of documents is not very high. Nevertheless, the library provides sufficient literature available for studying. They are subscribed to national and

international scientific and professional journals and the access to relevant databases is provided. Students confirmed that they are satisfied with the literature provided.

The Faculty has a reading room for students which is separated from the library, offering to students a suitable working environment. A good solution is the interactive lobby between the student's reading room and library, enabling more activities for students. The library resources are appropriate to perform study programmes at all levels. Library resources support students and teachers not only for high-quality study, but also in their scientific, artistic and professional activities.

Recommendations for improvement

- Extend the capacity of the libraries; extend remote access to other libraries.
- Enable students and teachers to use more information sources and databases. Help the students to use databases and sources of IP.
- Keep the access to scientific databases up to date.

Quality grade
Satisfactory level of quality

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

Analysis

The Faculty is rationally managed. The Faculty's financing system is based on regulations. The Faculty's budget is based mainly on state support. Only a small part is represented by the Faculty's own income or projects funds. Such budget structure is good for the Faculty's everyday life, but cannot give a chance to focus a significant amount of money to new research ideas and areas.

Recommendations for improvement

- Increase the Faculty's own income.
- Increase the amount of money coming from other resources; try to get more money from private sources, companies, factories or Faculty's alumni.
- Cooperate with other universities and the industrial sphere in cooperative and collaborative research.

Quality grade
Satisfactory level of quality

V. Scientific/artistic activity

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

Analysis

The Faculty follows the scientific and artistic activity of teachers and associates and keeps records of publications and artistic productivity. The research areas they cover are five, with the majority in technical sciences (66%) and 10% in arts. This gives the Faculty a good base to perform interdisciplinary research. In annual reports the scientific/artistic activity is presented, but not really analysed.

The analysis of scientific activities presented in annual reports has shown that the number of publications in the period 2014-2019 was constantly declining and has improved in 2020. The total number of publications, number of citations and total h-index citations are quite low. In particular, the ratio of number of publications to number of teachers in the five-year period is bellow one in all categories of analysed publications. Teachers publish in peer-reviewed scientific publications, also in highest category, but there is a big discrepancy between teachers. Some strong performing individuals in the scientific research field which are leaders/associates of more scientific research projects and have a high number of publications, show that high quality and quantity of scientific research can be reached.

In the last five years, six doctoral theses were defended at the Faculty, all from the textile engineering field and involving the development of new textile materials, textile and clothing technology. Three doctoral theses, one in technical and two in natural sciences field, prepared by assistants employed at the Faculty were defended at other Faculties of the University of Zagreb. Most PhD theses reflect high quality of scientific research, confirmed by a large number of publications in high-quality peer-reviewed journals.

Teachers and associates employed at the Faculty are more active in the promotion of their scientific and artistic work at international and national conferences compared to other publishing activity. The ratio of peer-reviewed publications from scientific and professional events/conferences to number of teachers is close to 1 and is highest among all kinds of analysed publications activities. The Faculty organises and co-organises conferences, which gives a good opportunity for the active participation of all teachers.

In the art field, the main artistic activity in the last five years was done by presenting works at exhibitions in fashion and design, but also in fine arts and experimental film, in Croatia, USA, Argentina, Vietnam and across Europe. Complex artworks defined as

extraordinary achievements were not achieved. The number of artworks at artistic events with international or national merit is low, only 19 accomplished in the five-year period.

Recommendations for improvement
- The analysis of scientific/artistic activity should be performed annually in order to suggest actions for improvement.
- Considering the excellent research equipment, good space and number of teachers and associates there is a good possibility to increase scientific/artistic activity and that should be encouraged by the Faculty management.
- They all should work in order to improve interpersonal relationships in terms of networking, collaboration and the transfer of scientific excellence to less experienced colleagues.
- The number of publications in all categories, especially in high-level peer-reviewed journals should be increased in order to achieve higher quality and quantity of publications.
- More efficient procedures for encouraging high-quality scientific publications and artistic productivity with international merit should be implemented.
- More teachers should be involved in publishing activity.

Quality grade
Minimum level of quality

5.2. The higher education institution provides evidence for the social relevance of its scientific / artistic / professional research and transfer of knowledge.

Analysis
The Faculty is a member of and cooperates with several institutes, federations, clusters and various associations and societies, on international and national level. This gives a good insight into the development of textile and clothing industry. This knowledge could be beneficial by planning the cooperation with industry and the transfer of knowledge on a national level. An efficient support system for research and transfer of knowledge is present. They have established two organisational units, one for the transfer of technologies and one for research. Some examples of good practice of cooperation between industry/clusters/public sector and the Faculty were presented during interviews, although there is need to develop such collaborations further. Currently, they are not encouraging the development of start-ups and spin-offs.

The Faculty has one of the highest number of patents and innovations among members of the University of Zagreb. Although the number of patents and innovations is high, they are

the product of the work of a small group of researchers, and in the last five years period the number of patent applications and innovations is not so high.

In the last five-year period they have increased the artistic productivity and established a very good cooperation with academies, museums, theatres and other organisations. Through exhibitions of their artworks they make an important contribution to the visibility of the Faculty.

The Faculty organises an international conference every second year and a national conference every year, as well as forums and seminars. This gives a good opportunity for the transfer of knowledge and the establishment of new cooperations.

The Faculty is very active in the popularisation of science and in the promotion of scientific/artistic/professional work of the Faculty.

Recommendations for improvement
- Considering the high number of patents and innovations, their application and the transfer of knowledge should be done more efficiently, as well as continuous work on innovations and patent applications.
- The monitoring of the needs of the textile and clothing industry, society and labour market should be performed continuously and be part of the research strategy.
- Besides monitoring the needs of textile and clothing industry, as well as society needs, the Faculty should perform analyses of gathered data and give feedback to external stakeholders.
- Research related to society and industry needs should be more promoted and encouraged.
- The Center for transfer of technology (CTD) and research center (TSRC) should take a more active role in the transfer of knowledge.

Quality grade
Satisfactory level of quality

5.3. Scientific/artistic and professional achievements of the higher education institution are recognized in the regional, national and international context.

Analysis

The number of scientific/artistic/professional projects at the Faculty has increased in the five-year period. At more than half of these projects they were the leading institution. The majority of projects, 80 %, are scientific, 20 % are professional and there were no projects in the artistic domain. This unbalance should be overcome. They have to encourage and support teachers from the artistic field to apply for more projects.

Although the number of projects seems to be adequate, a higher number of projects would lead to more achievements and financial support for research. Measures in order to motivate and involve more teachers to prepare project applications should be considered.

Scientific/artistic achievements of teachers and associates of the Faculty are seen through the quite high number of active participations at international and national conferences. They have participated as invited lectures, but only in few cases at international conferences with higher visibility.

Some individuals have obtained international and national awards, both in the scientific and artistic domain, which confirms the excellence of their scientific and artistic work.

The Faculty organises and co-organises conferences and teachers and associates of the Faculty are members of a vast number of scientific/artistic/professional boards of international and national conferences. They work as reviewers, chief editors or members of editorial boards in scientific journals.

Recommendations for improvement

- Develop measures to keep the continuity in the preparation of project applications.
- Besides scientific and professional projects, Faculty teachers should apply for projects in the artistic domain.
- Strive more to participate as invited lectures at international conferences.

Quality grade
Satisfactory level of quality

5.4. The scientific / artistic activity of the higher education institution is both sustainable and developmental.

Analysis

Currently, the Faculty does not have a valid research strategy document for 2021. According to information we obtained, they are preparing the research strategy for 2021-2027, which will be in line with the European research strategy and the Strategy of the University of Zagreb, but unfortunately, we couldn't see the draft of this document.

The Faculty has prepared a report on the implementation of the strategic research agenda for the previous period. They considered most of the recommendations they received and tried to implement them. They are aware of some weaknesses in the research field and have been working on them, such as low number of PhD coming from economy, lack of faculty staff in certain fields of expertise, underdeveloped research work dealing with the arts domain and low number of interdisciplinary research projects. Although they are working on this issues, after a five-year period they are still relevant and need to be addressed further.

Evidences show that there is much more international and interinstitutional cooperation than cooperation between teachers from core textile engineering, natural sciences and artistic field working at the Faculty, especially regarding cooperation within scientific research projects.

The Faculty has appropriate resources for scientific and artistic activities. The presented financial plan of incomes and expenses for two years shows that they are in balance, and with financing from projects the implementation of scientific/artistic activities is possible in the way they do it. Given the size and research resources, especially excellent research equipment in the textile engineering filed, the continuity in research is guaranteed, but it should be more developmental. The publication of scientific papers is funded mostly from projects, only those of the highest standard are funded by the Faculty. The Faculty should develop a strategy to encourage publication of all peer-reviewed scientific and artistic works.

By investing in spatial resources, equipment and appropriate literature, rewarding outstanding scientific/artistic achievements and supporting dissemination of results, the Faculty has provided a good basis for obtaining excellence in scientific/artistic achievements.

- The Faculty must prepare a strategic research agenda for 2021 immediately and work on the long term research strategy, which must be adopted as soon as possible.
- A more developed intra-institutional cooperation could play an important part for upgrading scientific research. Including teachers from the natural science research field and artistic research field could result in obtaining higher number of interdisciplinary projects and upgrade their research strategy.
- In artistic productivity they should strive to increase the number of artworks premiered at artistic events and try to achieve some complex artworks defined as extraordinary achievement.
- They should strive to secure more funding for publishing activity.
- Uniform ownership and awareness of research strategy among teachers should be encouraged.
- Mechanisms should be developed to encourage the involvement of the majority of teachers to be more proactive in the scientific/artistic activity.

Quality grade
Minimum level of quality

5.5. Scientific/artistic and professional activities and achievements of the higher education institution improve the teaching process.

Analysis

Excellent research equipment, in many cases consistent with the current state-of the art, is enabling students at all study levels to acquire very good knowledge in the textile engineering field. According to information we obtained, the equipment is available to students at all study levels. Students get acquainted with research equipment during practical work at some courses. Mostly PhD students confirmed the use of scientific research equipment within different courses. Teachers involved in scientific research projects explained that they include the knowledge obtained while working on projects into the topics of courses they teach.

It seems that the equipment in the artistic domain is basic and not enough supportive to give students digital competences they need by applying creative competences of art and design into their work. It is also evident that the study unit Varaždin which is performing undergraduate professional study has far less equipment for scientific/artistic research than the study programmes in Zagreb.

Students at all study levels are invited by teachers to participate in scientific/artistic projects. In some cases, students express their willingness to work on research topics or

propose topics by themselves. Research work is mostly part of their final thesis. Final thesis developed within projects are on high level. It seems that the involvement of teachers and students in the artistic domain is scarce.

Good and supportive research environment helps students to achieve learning outcomes. Students involved in scientific/artistic research activities develop also some generic skills.

Strong personal relationships between students and teachers result in good cooperation. Students at all study levels working on projects are co-authors of publications and exhibitions. Scientific/professional publications co-authored by students and presented at conferences provide visibility of students' willingness to acquire more knowledge and represents a good career start for them.

Recommendations for improvement
- Develop mechanisms to include more teachers/students from the artistic field into scientific projects in order to connect science and art, and apply outcomes in the teaching process.
- Teaching process and the achievement of learning outcomes for students in the artistic field would benefit if the Faculty provided more resources for artistic activities.
- Develop mechanisms to attract more undergraduate and graduate students in scientific/artistic/professional projects.

Quality grade
Satisfactory level of quality

APPENDICES

1. Quality assessment summary - tables

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

Quality grade by standard				
I. Internal quality assurance and the social role of the higher education institution	*Unsatisfactory level of quality*	*Minimum level of quality*	*Satisfactory level of quality*	*High level of quality*
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, scientific/artistic and social).			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		

Quality grade by standard				
II. Study programmes	*Unsatisfactory level of quality*	*Minimum level of quality*	*Satisfactory level of quality*	*High level of quality*
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 needs of the society.			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 study programmes (where applicable).			X	

Quality grade by standard				
III. Teaching process and student support	Unsatisfactory level of quality	Minimum level of quality	Satisfactory level of quality	High level of quality
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	

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

Quality grade by standard				
V. Scientific/artistic activity	*Unsatisfactory level of quality*	*Minimum level of quality*	*Satisfactory level of quality*	*High level of quality*
5.1. Teachers and associates employed at the higher education institution are committed to the achievement of high quality and quantity of scientific research.		X		
5.2. The higher education institution provides evidence for the social relevance of its scientific / artistic / professional research and transfer of knowledge.			X	
5.3. Scientific/artistic and professional achievements of the higher education institution are recognized in the regional, national and international context.			X	
5.4. The scientific / artistic activity of the higher education institution is both sustainable and developmental.		X		
5.5. Scientific/artistic and professional activities and achievements of the higher education institution improve the teaching process.			X	

2. Site visit protocol

	Četvrtak, 28. travnja 2021.	Thursday, 28 April 2021
10:00 – 13:00	Edukacija članova stručnog povjerenstva – priprema za sastanke	Education of the Expert Panel members – preparation for meetings

	Petak 30. travnja 2021.	Friday, 30 April 2021.
10:50– 11:00	Spajanje članova Povjerenstva na poveznicu (link) ZOOM	Joining the Expert Panel members to the ZOOM meeting via link
11:00 – 12:00	Sastanak članova stručnog povjerenstva u upravom fakulteta i tajnikom	Meeting of Expert Panel members with Dean, Vice-Deans and Secretary
12:00-13:00	Sastanak članova stručnog povjerenstva s Povjerenstvom za upravljanje kvalitetom	Meeting of Expert Panel members with Quality Assurance Committee

	Ponedjeljak, 3. svibanj 2021.	Monday, 3 May 2021
10:00 – 12:00	Interni sastanka članova stručnog povjerenstva – priprema za sastanke i refleksija na sastanke od petka	Internal meeting of the Expert Panel members – preparation for meetings and reflection on Friday meetings

	Utorak, 4. Svibanj 2021.	Thuesday, 4. May 2021.
10:00 – 10:45	Sastanka s prodekanom za nastavu i predstojnikom ustrojbene jedinice Varaždin	Meeting of Expert Panel with Vice-Dean for Education
10:45 – 11:00	*Pauza*	*Break*
11:00 – 12:00	Sastanak s nastavnicima (u stalnom radnom odnosu, osim onih na rukovodećim mjestima)	Meeting of Expert Panel members with full-time employed teachers, except those in managerial positions
12:00 – 12:15	*Pauza*	*Break*
12:15 – 13:00	Sastanak sa studentima svih studijskih programa	Meeting of Expert Panel members with students

13:00 – 14:00	*Pauza*	*Break*
14:00– 14:45	Sastanak s asistentima i poslijedoktorantima	Meeting of Expert Panel members with teaching assistants and postdoctoral
14:45 – 15:00	*Pauza*	*Break*
15:00 – 15: 45	Sastanak s alumnijima (bivši studenti koji nisu zaposlenici visokog učilišta)	Meeting with Alumni (former students who are not employed by the HEI)
15:45 – 16:00	Organizacija dodatnog sastanka o otvorenim pitanjima – prema potrebi	Organisation of an additional meeting on open questions, if needed

	Srijeda, 5. svibanj 2021.	**Wednesday, 5 May 2021**
10:00 – 10:45	Sastanak članova stručnog povjerenstava s prodekanom znanstveno-istraživački rad Meeting of Expert Panel members with Vice-Dean for Scientific and Research Activities	Meeting of Expert Panel members with Vice-Dean for Scientific Research Activities
10:45 – 11:00	*Pauza*	*Break*
11:00 – 11:45	Sastanak članova stručnog povjerenstva s voditeljima znanstvenih projekata	Meeting of Expert Panel members with leaders of research projects
11:45 – 12:00	*Pauza*	*Break*
12:00 – 12:45	Sastanak s vanjskim dionicima s kojima visoko učilište surađuje (predstavnici strukovnih i profesionalnih udruženja, poslovna zajednica, poslodavci, stručnjaci iz prakse, organizacije civilnog društva,...) te vanjski suradnici	Meeting of Expert Panel members with external stakeholders
12:45 – 13:45	*Pauza*	*Break*
13:45 – 14:30	Sastanak članova stručnog povjerenstva s • voditeljem prakse • voditeljem cjeloživotnih programa	Meeting of Expert Panel members with • Head of student practice • Head of lifelong learning programmes

	Organizacija dodatnog sastanka o otvorenim pitanjima – prema potrebi	Organisation of an additional meeting on open questions, if needed
14:30 – 14:45	Organizacija dodatnog sastanka o otvorenim pitanjima – prema potrebi	Organisation of an additional meeting on open questions, if needed

	Četvrtak, 6. svibanj 2021.	**Thursday, 6 May 2021**
10:00 – 10:45	Sastanak članova stručnog povjerenstava s prodekanom međuinstitucijsku i međunarodnu suradnju	Meeting of Expert Panel members with Vice-Dean for Interinstitutional and International Cooperation
10:45 – 11:00	*Pauza*	*Break*
11:00 – 11:45	Sastanka članova stručnog povjerenstva s • ERASMUS koordinatorom • ECTS koordinatorom	Meeting of Expert Panel members with • ERASMUS Coordinator • ECTS Coordinator
11:45 – 12:00	Organizacija dodatnog sastanka o otvorenim pitanjima – sastanak s prodekanom za nastavu	Organisation of an additional meeting on open questions – meeting with Vice-Dean for teaching
12:00 – 12:45	Interni sastanak članova stručnog povjerenstva	Internal meeting of the Expert Panel members
12:45 – 13:00	Sastanak članova stručnog povjerenstva u upravom fakulteta	Meeting of Expert Panel members with Dean, Vice-Deans and Secretary

	Petak, 7. svibanj 2021.	**Friday, 7 May 2021**
10:00 – 15:30	Interni sastanka članova stručnog povjerenstva – pisanje završnog izvješća	Internal meeting of the Expert Panel members – drafting panel members

SUMMARY

The Faculty of Textile Technology is an educational and scientific institution recognised nationally and internationally which successfully educates experts in the field of Textile Technology and Engineering at bachelor, graduate and postgraduate level and Textile Fashion and Design at bachelor and graduate level. The Faculty has one of the highest number of patents and innovations among members of the University of Zagreb. Most teachers work in the technical science, the field of textile technology, but their work is complemented by the work of teachers in the arts, science, social sciences and humanities, which allows achieving interdisciplinarity in teaching, research, artistic and professional activities. The Faculty wants to remain recognizable at national and international level through the internationalisation of studies and the modernisation of education. The Expert Panel noted that most employees, teachers, assistants and postdoctoral students are satisfied with their work, mostly everyone knows each other, and close cooperation between students and teachers indicates that students are satisfied with this way of working. The Faculty is currently equipped with good capital equipment for research, ensures good working conditions and achieves good cooperation with the industry and public institutions at national and international level. However, the Faculty is aware of and recognises its weaknesses/threats, such as lack of interest of future student to study in this profession and thus the problem of the decreasing number of enrolled students needs to be addressed. The Expert Panel reviewed the entire activity of the Faculty and gave recommendations for improvement. The first thing that needs to be addressed is to adopt a new development strategy and scientific strategy. Recommendations for the reorganisation and improvement of study programmes were also provided, which would contribute to the attractiveness and quality of studies. This opens a possibility for the Faculty to work on encouraging young people to study in the STEM and STEAM area, as well as to work on the internationalisation of studies. Equalizing the workload of teachers, merging similar courses into one and working on the promotion can result in increasing the number of enrolled students. The Faculty should specifically work more on achieving standard number one (Internal quality assurance and the social role of the higher education institution) which is marked with a minimum level of quality. All employees should be more involved in the implementation of quality assurance and the Faculty should constantly work on improving their study programmes by collecting information from stakeholders, students, alumni and teachers as well as through the analysis of market needs.