



**REPORT
OF THE EXPERT PANEL
ON THE
RE-ACCREDITATION OF
University of Zagreb School of Dental Medicine**

**Date of preliminary site visit:
25 April 2022.**

**Date of online re-accreditation:
27 – 29 April 2022.**

July 2022

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INTRODUCTION

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

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

The Agency's Accreditation Council appointed an independent Expert Panel for the evaluation of the University of Zagreb School of Dental Medicine.

Members of the Expert Panel:

- Prof. Maria Cristina Manzanares Céspedes, MD, PhD, Faculty of Medicine and Health Sciences, University of Barcelona, Spain, Panel chair,
- Prof. Michael Escudier, PhD, Faculty of Dentistry, Oral & Craniofacial Sciences, King's College London, United Kingdom of Great Britain and Northern Ireland,
- Prof. Dr. Dr. h.c., Mutlu Özcan, PhD, University of Zurich, Center for Dental and Oral Medicine, Clinic for Reconstructive Dentistry, Swiss Confederation,
- Assoc. prof. Sunčana Simonić-Kocijan, PhD, Faculty of Dental Medicine, University of Rijeka, Republic of Croatia,
- Assoc. prof. Ivan Galić, DDS, MSc, PhD, the School of Medicine, University of Split, Republic of Croatia
- Alessia Bučić, Faculty of Dental Medicine, University of Rijeka, Republic of Croatia, student.

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

- Management,
- Board for quality assurance,
- Vice Dean for teaching and students,
- Heads of departments,
- Full-time teaching staff,

- ECTS Coordinator,
- Vice-Dean for International Cooperation / ERASMUS coordinator
- Vice-dean for Business
- Head of the Ethics Committee
- Head of library
- Students,
- Alumni,
- External stakeholders,
- Vice Dean for Science,
- Heads of research projects,
- Teaching Assistants and postdoctoral researchers.

Croatian Expert Panel members went to the preliminary site-visit on 25 April 2022 during which they had a tour of the work facilities, laboratories, library, IT classrooms, student administration office and classrooms, and attended sample lectures, where they held a brief Q&A session with students.

During the preliminary site visit, the Expert Panel examined the available additional documents and study program descriptions (learning outcomes).

The Expert Panel drafted this Report on the re-accreditation of the University of Zagreb School of Dental Medicine on the basis of the University of Zagreb School of Dental Medicine self-evaluation report, other relevant documents, preliminary site visit 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, preliminary site visit to the University of Zagreb School of Dental Medicine, online meetings and writing of the Report, the Expert Panel was supported by:

- Matan Čulo, coordinator, ASHE,
- Frano Pavić, assistant coordinator, ASHE,
- Marija Omazić, interpreter at the preliminary site visit and during the online meetings,
- Dijana Ćurković, 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:

University of Zagreb School of Dental Medicine

ADDRESS:

Gundulićeva 5, 10 000 Zagreb

DEAN:

prof. dr. sc. Zrinka Tarle

ORGANISATIONAL STRUCTURE:

**According to the Self-evaluation report page 7*

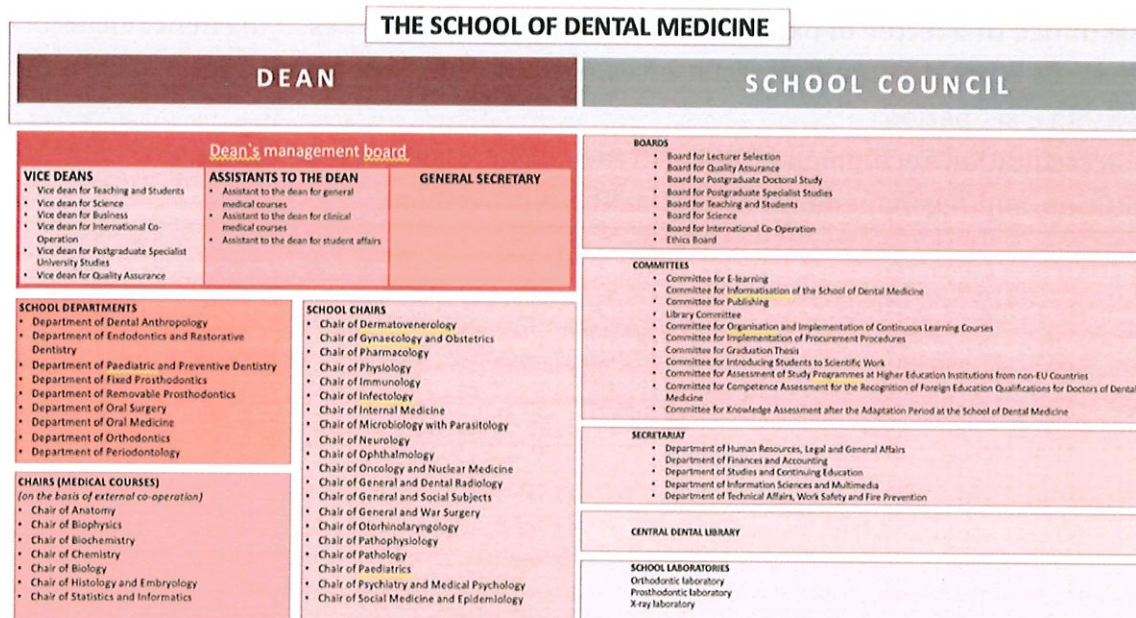


Figure 1. Organisational structure of the School

STUDY PROGRAMS:

**According to the Self-evaluation report intro*

Name of the study program	Title	Type of study	Scientific field	Holder	Duration (years)	ECTS	Full-time or part-time	Location	Year of the 1st accreditation	Level of the Croatian Qualifications Framework
Dental medicine	Doctor of Dental Medicine	Integrated undergraduate and graduate university study	Biomedicine, dental medicine	School of Dental Medicine University of Zagreb	6	360	Full-time	Zagreb	2008	7.1
Dental Medicine	Doctor of Science (PhD)	Postgraduate doctoral study	Biomedicine, dental medicine	School of Dental Medicine University of Zagreb	3	180	Part-time	Zagreb	2008	8.2
Dental Medicine	University Master of Dental Medicine	Postgraduate specialist study	Biomedicine, dental medicine	School of Dental Medicine University of Zagreb	2	120	Part-time	Zagreb	2007	7.2
Dental implantology	University Master of Dental Medicine	Postgraduate specialist study	Biomedicine, dental medicine	School of Dental Medicine University of Zagreb	1	60	Part-time	Zagreb	2016	7.2

NUMBER OF STUDENTS:

**According to the Analytic supplement page 2*

Table 3.1. Number of students per study programme for the evaluated academic year

Study programme name	Full-time students	Part-time students
Dental Medicine (1606), integrated undergraduate and graduate university study programme, Zagreb	616	0
Dental Medicine (1607), postgraduate specialist university study programme, Zagreb	0	41
Dental Medicine (1608), postgraduate (doctoral) university study programme, Zagreb	0	250
Dental Implantology (1609), postgraduate specialist university study programme, Zagreb	0	77
Total	616	368

NUMBER OF TEACHERS:

**According to the Analytic supplement page 5*

Table 4.1.a Staff Structure - FOR UNIVERSITIES in the evaluated academic year

Staff*	Full-time staff		Cumulative employment		External associates	
	Number	Average age	Number	Average age	Number	Average age
Full professors with tenure	-	-	31	58,58	4	59,33
Full professors	2	48	26	54,92	20	57,22
Associate professors	14	42,5	28	52,86	10	52,33
Assistant professors	11	41,36	26	48,46	16	43,07
Scientific advisor (permanent/ with tenure)	-	-	-	-	-	-
Scientific advisor	-	-	-	-	-	-
Senior Research Associate	-	-	-	-	-	-
Research Associate	-	-	-	-	-	-
Teaching grades	1	48	-	-	1	0
Assistants	8	32,25	16	41,91	3	35
Postdoctoral researcher	2	38	8	38,57	-	-
Employees on projects	-	-	-	-	-	-
Expert assistants	-	-	-	-	-	-
Technical staff	39	49,28	24	57	12	0
Administrative staff	25	53,22	-	-	3	0
Support staff	7	55,67	-	-	-	-

SHORT DESCRIPTION OF THE EVALUATED HIGHER EDUCATION INSTITUTION

The University of Zagreb School of Dental Medicine (UZSDM/SFZG) is the finest, the oldest, and the most prestigious academic dental institution in Croatia. Our study program is largely practice-based, involving considerable clinical experience and modern technologies. It is the only autonomous higher education institution in the Republic of Croatia to provide programs for doctors of dental medicine. The history of the School of Dental Medicine, within the aegis of the University of Zagreb, involves three phases of development:

- The initial period as the higher education institution, from 1922 to 1948;
- Founding and enacting of the Department of Odontology at the School of Medicine, University of Zagreb, from 1948 to 1962;

- Founding and thriving of the School of Dental Medicine from 1962, throughout more than five decades.

The modern society's ever increasing focus on cognition has also been recognized by the School of Dental Medicine, University of Zagreb. Thus, in the past ten years, it has become the profession's main foundation in the Republic of Croatia, thanks to its structure, teaching organization, and its curricula. By signing the Bologna declaration in 2001, at the Ministerial Conference in Prague, Croatia committed itself to modifying its system of higher education by the year 2010, so as to comply with the Bologna principles. The preparations for implementing the Bologna Declaration at the School of Dental Medicine presented many a challenge, and requirements that needed to be met. Consequently, this period saw numerous changes on all levels of the School's functioning.

The milestones in the advancement of the School of Dental Medicine, University of Zagreb, and its functioning during the past two decades have been:

- 1999/2000 – The very first complete self-evaluation of the School of Dental Medicine was made as a basis for assessment and efficacy of the syllabus and the study program.
- 2001 – An evaluation was performed by the DentEd international visitation team, which operated under the auspices of the Association for Dental Education in Europe (ADEE).
- 2008 – The second complete self-evaluation of the School of Dental Medicine was made. Consequently, a visitation was carried out, and the license obtained.
- 2010 – A review of integrated undergraduate and graduate university study program was made (Dental Medicine), dealing with the compliance of the study program with the Directive 2005/36/EC of the European Parliament and The Council for the recognition of professional qualifications.

In 2006, the postgraduate doctoral study program was initiated, and as of the academic year 2013/2014, the doctoral studies are also performed in English language. In 2006, the School of Dental Medicine was given a guarantee by the University of Zagreb, whereby the organization of the study programs was ensured, and as of the 21st of February 2008, the concerned ministry issued the license for the postgraduate doctoral study program in Dental Medicine.

In 2014, an internal evaluation was performed for the postgraduate doctoral study program in Dental Medicine, resulting in issuance of relevant license.

BRIEF ANALYSIS OF THE INSTITUTIONAL ADVANTAGES AND DISADVANTAGES

ADVANTAGES OF THE INSTITUTION

1. Long tradition and a large number of teachers as well a solid collaboration with experts in dental medicine and a wider scientific community
2. High level of student satisfaction and involvement in scientific and social projects
3. High quality and increasing numbers of publications and outcomes
4. New clinical facilities and enhanced academic services
5. Large patient population available for teaching and training

DISADVANTAGES OF THE INSTITUTION

1. A greater range of comprehensive clinical care must be implemented.
2. The current legal framework limits severely the recruitment and career progression of young academia, that require a formal review in collaboration with the relevant authorities.
3. Practical assessment should include qualitative data (competency) added to quantitative data (number of procedures/hours of presence).
4. A greater variety of assessments should be used throughout the program and an appropriate formal, evidence based, standard setting procedure adopted to determine passing thresholds.

LIST OF INSTITUTIONAL GOOD PRACTICES

EXAMPLES OF GOOD PRACTICE

1. Maintenance of a longstanding tradition of public service
2. Constant efforts made by the School to improve the clinical environment and the quality of teaching staff
3. The ongoing maintenance of a longstanding, highly ranked scientific journal - *Acta Stomatologica Croatica*
4. Supporting the student's social and academical initiatives
5. Encouraging and supporting students engaging in research activities

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

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

Analysis

- The Panel agrees in that the higher education institution has thoroughly implemented the recommendations from the previous evaluations in terms of the internal quality system, the study programs, the Student's counselling and mentorship, the professional development activities for the professors and the development of various initiatives to increase the academical strengths of the School.
- The higher education institution maintains an active policy of academic integrity and freedom, in line with its longstanding tradition of social responsibility.
- The strategic goals and the mission of the higher education institution are aligned with social needs.

Recommendations for improvement

The School must overcome the existing difficulties in recruiting, training and retaining teaching as well as administrative staff, mostly due to the regulations on the staff management in the HEI and the National Public Service.

Quality grade

Satisfactory level of quality

II. Study programs

Analysis

- In order to attain the general objectives of the study program according with the mission and strategic goals of the higher education institution and the needs of the society, the school has made an effort to align the learning outcomes described in the Analytic Supplement to Self Analysis with all relevant EU and Croatian regulations.
- Evidence of the study program's achievements by the graduating students is provided. Clinical practice activities have been regularly increased and its assessment improved.
- Feedback from all stakeholders is obtained to feed the assessment procedures for the study programs in order to ensure the equilibrium between students/teachers workload and ECTS points.

Recommendations for improvement

The School must constitute a taskforce including all School stakeholders to design an Education Strategic Plan to ensure that the feedback reported so far will result in improvements in future study programs.

Future study programs would benefit to be defined according with the set of knowledge, competences and skills the ESG establishes for the design of the HEI programs, as well as to apply the recommendations of the „Graduating Dentist“ ADEE Project.

Quality grade

High level of quality

III. Teaching process and student support

Analysis

- The HEI and the School have made an effort to define, apply and disseminate the requirements of the study program and the criteria for both admission and permanence.
- In a similar manner, information about student's progression is gathered, analyzed and applied to improve both students achievements and School performance. Diplomas and Diploma Supplements are provided and contribute to the employability of the graduates.
- Student-centered learning has been progressively adopted by the different departments and specialties of the School. Student support is provided on a personal basis by the Teaching Staff and Faculty Direction.
- The School has made a notable effort to facilitate international experience for students, as well as to attract international students.

Recommendations for improvement

The school should adopt a collaborative effort across the different specialties to create a more personalized approach for student learning in order to increase and demonstrate the attention paid to the quality of clinical work, and the monitoring of the progress and independence of students in working with patients.

The Dental School should consider the development and implementation of a structured support system for students, both affected by singular problems and pertaining to vulnerable groups.

The School and the HEI should establish a steering group to develop the Diploma Supplements following the General guidelines established in the Paris Communiqué Appendix IV.

Quality grade

High level of quality

IV. Teaching and institutional capacities

Analysis

- The HEI's greatest strength is the large number of employed teachers and teaching associates and their favorable ratio to the number of students.
- The procedures for teacher recruitment and professional advancement are transparent, objective, and based on criteria of academic excellence. This reinforces the notable effort made by the teachers to excel in their academic development.
- The HEI provides significant support, especially to young teachers and assistants, through paid doctoral studies and dental specialist degree. The school provides formative activities for teaching competencies, study tours and access to professional congresses.
- The current equipment, size of clinics, and IT service meet the minimum education needs in clinical dentistry. At the same time, the space for research and living of students, assistants, and teachers limits the young faculty professional development.
- The management of financial resources made by the School is to be commended, since the funds obtained have been dedicated to improve the quality of the clinical teaching, as well as to the acquisition of research and teaching equipment.

Recommendations for improvement

The school should ensure an appropriate governance structure incorporating a personnel development review, job planning and appraisal processes to ensure that the effort made by young academia is recognized and rewarded.

The existing plan to expand the HEI space by means of a new building and upgrading the existing ones would facilitate the implementation of teaching, research and clinical innovative projects.

Quality grade

Satisfactory level of quality

V. Scientific/artistic activity

Analysis

- The panel agreement in the consideration of the commitment of the School teachers with the achievement of highest quality in their respective scientific research is unanimous.
- The School teachers actively conduct scientific work and publish the results of their research in peer-reviewed scientific journals of the highest quality. Their collective production has significantly increased as well as the impact of their results, both in terms of scientific and clinical relevance and in terms of educational expertise.
- The social relevance of the research conducted by the school professors relates with the transfer of knowledge to national industries. In a similar manner, the participation of school professors in numerous national and international Committees and Scientific Societies attest the relevance of their contributions.

Recommendations for improvement

The sustainability of the School's research activities would be reinforced by the planned expansion the HEI space and the upgrading the existing infrastructure. The implementation of such teaching, research and clinical innovative projects is heavily depending on space and on the human and material resources allocated.

To promote the scientific and professional excellence of the HEI in the country and abroad to a greater extent. Through available university, national and European projects, provide additional teacher education and ensure the equipment of the space and the procurement of scientific equipment.

Quality grade

High 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 HEI has established a functional system of quality assurance including all aspects of its activity, and supports them with documents.
- Study PROGRAMS : ESG 2015¹ guided the School Regulations on Quality Assurance of the School of Dental Medicine University of Zagreb (I#8²) in compliance with the Quality Assurance System of the University of Zagreb (I#13²).
- Teaching process: teacher's assessment by means of student's questionnaires (response rate 50%) carried out each semester and reporting all courses (pre-grad, post-grad and CPDs). The Feedback is provided to the Faculty Council and the Board of Teachers.
- Student's support: based on personal contact with the teaching staff and reported to the Dean.
- Although at time of reaccreditation there is no a comprehensive strategic plan documented, HEI provides documents and surveys of quality assurance system, that is regulated by the State and the University bylaws and the Quality Assurance Policy of the School of Dental Medicine University of Zagreb. It defines the principles of system establishment, way of working, and the implementation of activities and assessment of the quality assurance system.
- In order to improve its activities, the HEI collects and analyses data using SWOT analysis, surveys on the assessment of classes and teachers and presents proposals to the School Council (i.e. inclusion of selective courses).
- All levels of the HEI's stakeholders and employees are involved in the implementation of quality assurance activities
- There is a limitation of new employments since Government of the Republic of Croatia fixes the overall disposable coefficient of the School, which limits the School capacity to recruit and retain staff.

Recommendations for improvement

There is a need for HEI Strategy plan to structure all the activities carried out to ensure the functionality of the internal quality plan, including:

- A protocol should be implemented to ensure student's wellbeing and equity/equality, particularly aimed to under-represented and vulnerable groups.
- The questionnaires about teaching/teachers would benefit to be:
 - Complemented by questions specifically referred to the Dental School;
 - preceded by a formative activity for the students, including self-assessment questions;
 - carried out simultaneously with self-assessment and peer-reviewing procedures for the professors.
- Research strategy would benefit from a governance structure mapping the priorities and adopting a more inclusive approach respect to the areas of research.

Quality grade

Satisfactory level of quality

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

Analysis

The HEI has analysed and implemented the recommendations for improving quality in accordance with the last re-accreditation document.

- **The Higher Education Institution Management and Quality assurance** system has been improved by the implementation of most of the recommendations from the previous accreditation process to the School of Dental Medicine:
 - A set of Documents define and report the strategic goals of the School: Strategic Program of Scientific Research of the School of Dental Medicine University of Zagreb for the period 2015-2019 (0#1²) as well as the Dean's Work PROGRAMS (0#2, 0#3²), in terms of the continuous improvement of science, profession and education, as well as their impact on social processes, consistent promotion of high academic and

human values in general, and increasing space capacities of the School in accordance with the HEI's strategic plan.

- The School has made an effort to adapt its administrative procedures and a clear improvement in the access to external financing has been evident by ways of various international and national research projects.
 - The program for visiting professors has enriched the teaching and research activities of the school both in terms of academic results and on scientific production (PhD Thesis, published articles) as well as in invitations to participate and present results in international associations (EDSA, ADEE) and meetings.
 - The School invites representatives of various potential employers (public and private institutions providing dental care, industries), as well as alumni to act as mentors for the future practitioners.
 - Despite the financial and administrative limitations, the School has made an effort in create and maintain a system to improve the professional development of the academic as well as the administrative staff by ways of Awards (St Apollonia Medal; Faculty and state awards) and through participation in the benefits of the Research Projects (international stages).
- **The study programs** are monitored by a Board for Quality assurance with participation of internal and external stakeholders, as well as the employability of the graduated students. A notable success has been made by the increasing of the School space capacity, that will allow the installation of new clinical services as well as the ampliation of the laboratorial facilities. The introduction of the six-year program as well as the Community Practice partnerships constitute an effective way to implement interprofessional clinical practice and increase the preventive clinical training of the students.
 - The School systematically collects and analyses data using various methods like SWOT analysis, surveys on the assessment of classes and teachers.
 - **Student's counselling and mentorship** activities have been implemented all through the cursus, either by regular courses of by meetings with potential employers and alumni that act as mentors. The participation of students in the assessment of the teaching has been expanded to all courses, even if is limited

to questionnaires at the end of the course (see point 1.1.). The feedback received by the students about their performance is seen as satisfactory, as well as the opportunities for consultation with the professors. The introduction of the elective course "Project" has enabled the students to actively participate in research initiatives.

- **Professional development activities for the professors** have been implemented, including workshops aimed to the internationalization of the teaching activities, design of e-courses, and the implementation of the Croatian Qualification System, as well as a training event on Evidence-based Dentistry (2018). Assistance to congresses and scientific meetings is also encouraged, as well as summer schools. The distribution of working hours dedicated to teaching (lectures and practical activities), administrative tasks and scientific work has been adjusted, but the legal regulation strictures still are a limiting factor for the professional progression of young academia.
- **The Faculty has developed a Strategic Program for Scientific Research (2015/2019)**, that permitted to allocate the School resources to participate in collaborative projects at European Level (Biodegradable implants for Bone Tissue Engineering) as well as to participate in Research programs at HEI institutional and national level.
- **The English program as well as the active ERASMUS Program** have contributed to the improvement of the international profile of the Faculty.
- **The „Project Program for the Objectivization of Spatial Needs of the School of Dental Medicine”** is perceived as a clear improvement of the space constrictions signaled in the previous accreditation report.
- **The difficulties in recruiting, training and retaining administrative staff**, mostly due to the regulations on the staff management in the HEI still exist
- **The School has made an effort to increase its income** by ways of implementing new programs, both at graduate (English) and postgraduate levels (specialists, CPDs) have contributed to the improvement of the Faculty income, as well as to the promotion of young academia.

Recommendations for improvement

The recent experiences during the pandemic have proven the interest and effectivity of on-line teaching and research-oriented activities, that could enrich and facilitate the existing program for visiting professors as well as the options for PhD co-directions and International Grade, Master's and PhD Thesis and Programs. Training

events and activities both aimed to the professor's professional development and to the student's teaching could also be obtained by online collaborations with international partners (HEIs, Research projects and Institutions, International Associations, Industry...)

The School should structure a model to ensure equity and inclusivity in career progression for the teachers: selection (results, notes, papers, presentations, faculty awards); recruitment (overcoming the financial difficulties); support, formative activities and rewards for young academia (mentoring, self-evaluation, mentor's evaluation).

Quality grade

High level of quality

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

Analysis

- The Faculty doesn't have its own Code of Ethics since all ethical issues are defined in accordance with the Code of Ethics of the University of Zagreb (I#64²)
- The School has functional system of resolving all irregularities, based on the School Ethics Board, that receives and reports to the Dean the ethical issues and concerns. The decision on eventual sanctions is reserved to the Dean.
- A compulsory course on ethics has been integrated in the Graduate program.
- All authorized lectures, student and teacher scientific papers and thesis undergoes a review by an anti-plagiarism software for establishing authenticity of the paper.

Recommendations for improvement

The Faculty could use the creation of its own Code of Ethics as a collaborative, consensual training academic activity^{3,4}.

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 HEI organize and provides all necessary information about social activities, teaching and scientific events, via the HEI (<http://www.unizg.hr/>; <http://www.unizg.hr/homepage/>)
- as well as the School website, both in Croatian and in English language (<https://www.sfzg.unizg.hr/en>)
 - Information of all activities and study programs in Croatian are available on HEI website.
 - Information for students of postgraduate doctoral study of Dental Medicine and Integrated undergraduate and graduate university study of Dental Medicine in English can be found on the School's website in English
 - Enrolment criteria, quotas at study PROGRAMS are published both at School and University websites. Information on study PROGRAMS is also available through the websites of the Register of Study PROGRAMS and the National Information System for Application at Higher Education Institutions.
 - Printed brochures and guides are also provided (see: Guide for students I#91²; School of Dental medicine I#92²)
- Teachers' participation in various national and university boards are publicly available on websites of the University, foundations, councils or agencies.
- School constantly participates in scientific-technical assemblies and public scientific-popular events.
- Through the Dean's Annual Report public is informed about study performance, performance analyses, the number of awarded and graduated students.
- Employment rate of graduated students is reported in the School's Documents, and originates in the official data from the Croatian Employment Service

Recommendations for improvement

The information provided by the English language version of the Faculty's website is mainly addressed to potential students. Some more information about research, development and innovation and international cooperation programs could help to disseminate these and other initiatives.

Quality grade

Satisfactory level of quality

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

Analysis

- HEIs and Health Sciences Faculties have a strong impact in the community. First of all, by ensuring oral health contribute to general health and population wellbeing. Moreover, the relationship between GDP per capita and universities is not simply driven by the direct expenditures of the university, its staff and students. The effect of universities on growth is mediated through an increased supply of human capital and greater innovation. Furthermore, higher historical university presence is associated with stronger pro-democratic attitudes⁵.
- School's Professors participate in decision making at various levels of the Croatian Higher Education and Science System, about which the public is informed through the websites of the University, foundations, councils and National agencies.
- The school participates in scientific presentations to specialists and general public (the Science Picnic, Summer Schools, etc), as well as through appearances in public media, to increase public's awareness on Oral Health Issues and promote prevention.
- The school has developed projects to improve oral health in special needs patients, in association with the Croatian Association of the Blind and other local partners, involving 60 students and professors, and has edited a care guide aimed to healthcare workforce entitled „Persons with Visual Impairments – Our Patients“.
- The Zagreb Dental School Student's Association has been very active in its international engagement by organizing and participating in numerous initiatives: Symposium of Students of Dental Medicine, Student Congress, Virtual World Congress of Dental Students, Summer School, EDSA Summer Camp Dubrovnik, EDSA Visiting Program, Sonda – magazine by the undergraduate students of dental medicine. The General Secretary of EDSA is a student of the Zagreb Faculty.

Recommendations for improvement

Although within project „Biodegradable Implants for Bone Tissue Engineering“ by Topomatika d.o.o., Izit d.o.o. the HEI managed to use some resources from European Development Funds in order to contribute to the strengthening of the ability to manufacture products that might have potential of the internationalization of Croatian economic activity, contribution in development of the economy is still indirect in the sense of ensuring oral health. HEI should encourage as well as facilitate researcher's participation in economy relevant projects.

The Alumni association must be invited to participate in the social engagement of the School.

Some of the social engagement activities of the students could constitute an ERASMUS+ project ("Learning mobility in the field of youth", and "Virtual Exchanges in higher education and youth" Key Action1⁶)

Quality grade

High level of quality

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

Analysis

- Zagreb Dental School CPDs and Master's program proves that general goals of the lifelong learning programs are in line with the mission and strategic goals of the higher education institution
- By organizing multiple courses, symposia and congresses addressed to modern trends in dentistry in collaboration with national stakeholders, the HEI shows that learning programs are in line with social needs. Also, Zagreb Dental School plans to implement three new PGDS based on need for lifelong learning and modernization of study programs.
- Zagreb Dental School postgraduate programs are submitted to a revision involving all stakeholders every year in order to follow the latest findings in dental medicine.

Recommendations for improvement

To increase visibility of institution on international level post graduate specialistic studies might be also available in English.

Quality grade

High level of quality

II. Study programs

2.1. The general objectives of all study programs are in line with the mission and strategic goals of the higher education institution and the needs of the society.

Analysis

- Although there is not an Education Strategic Plan of the School, all study programs are defined in the successive Dean's Work Program (II#2, II#3²).
- The student enrolment quota is defined based on the needs of the overall number of inhabitants in Croatia and the usable space and human resources of HEI, determined by the Act on Scientific Activity and Higher Education and the Statute of the University of Zagreb (II#5, II#6²).
- Quality of study programs and international visibility is proved by the fact that over 70% of graduate students are employed in a short period after graduation and that over 10% of them work abroad.

Recommendations for improvement

The Faculty could use the creation of its own Education Strategic Plan as a collaborative, consensual and inclusive training academic activity^{7, 8}

Quality grade

Satisfactory level of quality

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

Analysis

- Learning outcomes of the study programs are defined in accordance with the program described in the Annex V of the Directive 2005/36/CE⁹ on the recognition of professional qualifications, and follow the recommendations of the Association for Dental Education in Europe and the DentEd Thematic Network^{10,11}.
- The Learning outcomes achieved at the completion of the grade of Dental Medicine (IUGUS-DM) correspond to the level description of the Croatian Qualifications Framework¹² as well as the European Qualifications Framework¹³. Professors of the School have participated in the two versions of the Study

program of Dental Medicine in accordance with the CQF in 2016 and in the new professional standards designed by the Croatian Government.

- The learning outcomes of the Integrated undergraduate and graduate study programs are designed to create highly educated individuals with competencies needed for the labor market.
- The descriptions of the courses of the Study Program in English¹⁴ thoroughly describe the lecture topics, as well as the grading system and the exam questions, and very briefly the required knowledge and skills.

Recommendations for improvement

The learning outcomes described in the Analytic Supplement to Self Analysis² would benefit to be defined according with the set of knowledge, competences and skills the ESG recommends for the design of the programs¹.

The suggestions about new Domains as well as the definition of the Learning Outcomes reported in the „Graduating European Dentist“ Project documents^{15,16} could help the Learning Outcomes revision process of the School.

The external stakeholders signaled during the online meeting the need for clinical training of the students in Orthodontic procedures.

Quality grade

High level of quality

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

Analysis

- The overall student workload in terms of knowledge, skills and competences is constantly being monitored by exams (midterm, oral, written and practical); during seminars (papers and presentations), project assignments as well as preclinical and clinical diaries.
- Student surveys, institutional and external mentor's reports feedback from employees as well as research results and the public defense of a graduate thesis provide evidence of the achievement of the intended learning outcomes.

Recommendations for improvement

The Diploma Supplement document could benefit of a bilingual Croatian/English format to provide evidence of achievement of the required learning outcomes.

Consideration should be given to increase the variety of assessments (both summative and formative) used throughout the program and the adoption of formal, evidence-based, standard-setting processes e.g. Ebel¹⁷, Angoff¹⁸ to determine passing thresholds for assessments.

Quality grade

Satisfactory level of quality

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

Analysis

- The Quality Assurance Board and the Board for Teaching and Students assist the School management and the Heads of departments in the monitoring of the study program. The improvements (revisions of learning outcomes, and assessment methods, success level thresholds, clinical proficiency thresholds) are then presented to the School council.
- The School Council and the Teaching Board propose a series of amendments of the Study Program to the School Council approval.

Recommendations for improvement

Participation of all stakeholders (students, technical staff, young academia, external collaborators) in this process at a School level should be encouraged.

Quality grade

High level of quality

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

Analysis

- Student workload and the conformity of subject with the ECTS points more recent revision of IUGUS-DM study program in the academic year 2020/2021, by way of a survey questionnaire (anonymous and voluntary) that was responded by 2nd to 6th year students as well as by alumni.
- The survey's results were discussed by the School Council and the Teaching Board proposed a series of amendments of the Study Program to the School Council approval.
- Similar surveys and analysis are carried out when proposing new postgraduate specialist's and doctoral programs.

Recommendations for improvement

The school should consider these in combination with measures of quality and competence in the delivery of clinical care (See Point 2.3).

Quality grade

High level of quality

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

Analysis

- Since the last reaccreditation process, the clinical activities have become more integrated in the study programs: an increase in the number and activity for the clinical professors, as well as an increase of the clinical assessment procedures added to an immediate feedback on the student's proficiency.
- Student practice is obligatory form of education on last semester of the IPPSDM study. The student's perception on the assessment procedures is good, without sensible differences between first and advanced grades or between groups (Croatian language versus English language).
- In case of shortage of patients/techniques the School has collaboration agreements with private dental practices to carry on mentoring for student's clinical activities.
- Student practice consists of various clinical interventions that the student must carry on in accordance with the learning outcomes of individual clinical subjects.
- The evidence of completed procedures (KONTROLNIK) reports
 - Number of practical procedures
 - Level of competence shown
 - Consensus document with the participation of visiting professors;

Recommendations for improvement

The school should establish a coordination body to compare/assess the different assessment procedures in order to harmonize the clinical assessment procedures. These could include:

- An analysis of the patient's satisfaction
- Peer-review procedures
- Self-assessment procedures

This would facilitate the quality control as well as the harmonization for the assessment procedures at Faculty level, to include:

- Competence-based assessment
- Consensus about OSCE and MQC thresholds
- Harmonization of Clinical proficiency threshold

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 program, clearly defined, published and consistently applied.

Analysis

- The HEI Council adopted the conditions of enrolment at the HEI and the prerequisites for enrolment for each following academic year, which are publicly available on the website. The conditions are also delivered to each student in a study guide. The same information is timely in the national database of possible study programs, which can be accessed without restrictions by all interested parties.
- The HEI council decides on a possible transfer from another HEI and continuing studies every year for the next academic year. The doctoral and professional studies regulations regulate the conditions for enrolment and advancement during doctoral and postgraduate studies.
- Conditions for enrolment for the undergraduate program in the English language include the entrance exams in biology, chemistry and physics, and conditions for progress during studies are timely regulated by the rules and decisions of the HEI Council for each academic year.
- Horizontal mobility through the Erasmus+ program can be carried out in a shorter period, up to one semester, due to the specifics of study programs in different schools.
- The institution has a defined admission criteria that correlates with the learning outcomes achieved while attending the HEI.

- Candidates are informed of the enrolment criteria through the HEI's website.

Recommendations for improvement

Increase and actively encourage international student mobility e.g. the Erasmus+, Turing and other mobility programs.

Quality grade

High 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

- Each subject's progress and overall success are analyzed at the department during the academic year as well as the study program.
- The Study Regulations regulate the student's conditions, obligations, and progress, the necessary prerequisites for enrolment and completion of each course. In addition, the goals, level of competencies, and the minimum number of individual clinical activities that the student must achieve are specified for each subject.
- After each hour of lectures, seminars or exercises, the teacher records the student's presence in a special student booklet with his signature.
- The institution gathers data on student pass rates and student drop-out rates every academic year. The HEI uses this information to improve further the quality of teaching and the student pass rates.

Recommendations for improvement

Introduce additional evaluation of the student's progress in relation to the quality of clinical care and overall professional competency e.g. ethics, behavior, communication, treatment planning.

Quality grade

Satisfactory level of quality

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

Analysis

- The HEI conducts different types of teaching methods for the education of dental medicine students in all study programs, from lectures and seminars to preclinical and clinical exercises to individual work of mentors with students, one on one.
- The HEI is constantly improving the quality of the teaching methods used and new teaching methods have been introduced since the last re-accreditation.
- Students can evaluate both teaching and teachers for each subject through anonymous student surveys after the end of each semester. The results of the surveys are discussed on quality and teaching committees, and measures for improvement are proposed and implemented.
- Additional free workshops and summer internships are organized for students to increase their knowledge and competencies in clinical work. Students are more involved during lessons and are even involved in research projects.
- A considerable amount of financial resources is used for modernizing the HEI.
- Extracurricular activities of students are expressed through the student association, publishing a student magazine, organizing and participating in student activities in the country and abroad, such as participation and multiple high positions in the European Dental Student Association, EDSA.

Recommendations for improvement

The school should adopt a collaborative effort across the different specialties to create a more personalized approach for student learning in order to increase and demonstrate the attention paid to the quality of clinical work, and the monitoring of the progress and independence of students in working with patients.

Quality grade

High level of quality

3.4. The higher education institution ensures adequate student support.

Analysis

- Support for undergraduate students is provided through informing their rights and obligations from the first introductory lecture, consultation with teachers during classes, student representatives, senior student demonstrators, and Vice-Dean for Teaching and Student affairs.
- At the end of the study, students are instructed on future career opportunities. A meeting is organized with employers who employ the most significant number of future students, such as directors of health centers and large clinics. In addition, students are introduced to outgoing mobility possibilities.
- Particular problems of students are mostly solved with the help of the student office and through the Vice Dean for Teaching and Students. There is no history of special needs students. In such cases, in application of the HIE's rules, the problem is addressed to the Special office at University of Zagreb
- The Vice-Dean for Teaching and Students and Croatian students are a big support to the foreign students when it comes to clinical exercises and lectures. The person responsible for the students coming from abroad is the Vice-Dean for International Cooperation

Recommendations for improvement

The Dental School should consider the development and implementation of a structured support system for students. This support must include student's wellbeing as well as professional psychological institutional care (HEI/Health services) and should not depend uniquely on individual teaching staff.

Quality grade

Satisfactory level of quality

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

Analysis

- Particular problems of students are mostly solved with the help of the student office and through the Vice Dean for student issues. There is no history of special needs students. In such cases, in application of the HEI's rules, the problem is addressed to the Special office at University of Zagreb

- The Vice-Dean for Teaching and Students and Croatian students are a big support to the foreign students when it comes to clinical exercises and lectures. The person responsible for the students coming from abroad is the Vice-Dean for International Cooperation
- The HEI assigns a mentor to each student. The mentor's duties are the supervision of the student, career guidance and counselling when needed.
- Special needs for students are taken care of by the School Directive Team:
- Left-handed students: special chairs available
- TOC, dyslexia, other disabilities; Vice Dean/Administration on a personal/individual level

Recommendations for improvement

The school should consider to implement a structured support system to students from vulnerable and underrepresented groups, since there is not a formal University procedure.

- Students whose parents have a lower level of education
- Students from lower-income families
- Female students in the technical field, male students in the humanities
- Students with children
- Students with disabilities
- Students who commute to their place of study
- Students who are children of Croatian Homeland War veterans
- Students from the Roma minority
- LGBTQ+ students
- Students from alternative care systems
- Homeless students and students at risk of becoming homeless
- Students with asylum/refugee status
- Institutional aspects of vulnerability

Adaptation of methods should be considered if a student belonging to the specified populations is registered in the future.

Quality grade

Satisfactory level of quality

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

Analysis

- The re-accreditation panel was presented with extensive documentation of the activities carried out by the HEI in encouraging outgoing and incoming student mobility.
- The HEI informs the student about the possibilities of Erasmus+ mobility of study stay (SMS), student internships in a timely manner via the website, directly to students via email, through student representatives and by organizing Erasmus+ Info Day. The application procedure for departure is transparent and is carried out by a committee of 3 teachers.
- The HEI has signed Erasmus+ contracts with nine partner institutions. The HEI has also signed direct contracts for teacher and student mobility with other dental schools.
- Upon the students' return, all acquired ECTS credits are recognized based on a signed cooperation and harmonization of ECTS credits with the foreign partner schools.
- All outgoing and incoming mobility and administrative procedure conducted by the HEI was evaluated very positively by the students who participated in the exchange.

Recommendations for improvement

The school should establish a coordination body to propose new learning activities that could be carried out in collaboration with other HEIs both in Croatia and internationally, such as:

- Optional courses to be carried out Online
- Summer courses
- Bootcamps

Quality grade

High level of quality

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

Analysis

- In 2017, the Integrated undergraduate and graduate university study in English was introduced, which opened numerous opportunities for the University to enroll international students.
- Domestic and foreign undergraduate students have the same study program, conditions for advancement, exams and graduation. All notices for the study of dental medicine in English are also available in English.
- English speaking students can communicate in English with the person in charge for student affairs and the Vice-Dean for the study in English.
- Croatian language courses are available for foreign students during the first and second year. The purpose of this course is to help the students learn the basic dental terminology in Croatian needed during the higher years.
- Students are assisted in the notification of high school diplomas and student exchanges through the Erasmus+ program, or through direct higher education agreements with other dental schools.
- International students are involved in improving the studies in English by giving their feedback through surveys and questionnaires at the end of every semester.
- The HEI has a particular program for learning the Croatian language for foreign students during the first and second years of study.

Recommendations for improvement

- There is still potential for further growth of the HEI; for example, postgraduate specialist and doctoral studies can be introduced in English.
- Enhance international cooperation. Make the School more internationally visible with the help of visiting professors (Person-to-Person and online).
- Encourage School teachers to be visiting professors at other universities and provide them with appropriate benefits.
- The Croatian website for international cooperation is rich in information but is difficult to find on the faculty website. There is nothing about

international cooperation on the School website in English; it is a significant omission

Quality grade

Satisfactory level of quality

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

Analysis

- Curriculums are published on the HEI's website at the beginning of every academic year. As a result, the students are aware of their duties and responsibilities and are familiar with assessing their assignments.
- Through the performance plans of each course, students are informed about the learning outcomes and the process of assessing their knowledge and achievements. Exam terms are available in advance and published on the HEI's website. The assessment method is adjusted to the learning outcomes.
- In addition to knowledge of the basic and clinical medical subjects, the increase of knowledge, improvement of clinical work and independence in decision-making is very rigorously monitored.
- The highest stage of education is the independent work of the student under the mentorship of a dentist in the public sector or the owner of a private practice during the last year of undergraduate studies.
- The teacher's signature confirms the student's attendance in all types of classes in a small booklet that must be presented at the end of the class.
- The student's progress in clinical work is assessed by the total number and stage of independence of performing predetermined clinical procedures. The exam, terms, objections to the exam, and grades are explained in detail in the regulations of study programs.

Recommendations for improvement

The school should establish a coordination body (including students¹⁹, teaching staff and technical staff) to analyze and propose new Assessment methods, such as the ones proposed in the GED Documents²⁰.

The school should establish a coordination body to compare/assess the different assessment procedures in order to harmonize the clinical assessment procedures. These could include:

- An analysis of the patient's satisfaction
- Peer-review procedures
- Self-assessment procedures

This would facilitate the quality control as well as the harmonization for the assessment procedures at Faculty level, to include competence-based assessment (see point 2.6).

Practical assessment must include qualitative data (competency) added to quantitative data (number of procedures/hours of presence).

Quality grade

Satisfactory level of quality

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

Analysis

- Both the diploma and diploma supplement are issued upon graduation in Croatian and English for the Integrated undergraduate and graduate university studies. The issuance of the diploma in English further promotes the internationalization of the HEI.
- After the completion of doctoral and specialist studies, a certificate is issued in Croatian and in English upon request.
- The diploma and the supplementary document for the undergraduate study were prepared according to the guidelines of the European Commission, the Council of Europe and the UNESCO European Center for Higher Education.
- Subsequent study documents and copies are issued according to a predetermined and published price list to issue official documents.

Recommendations for improvement

The School and the HEI should establish a steering group to develop the Diploma Supplements following the General guidelines established in the Paris Communique Appendix IV ²¹.

Quality grade

High level of quality

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

Analysis

- The HEI collects data on alumni employment through the state agency that monitors employment and by direct surveys of Alumni.
- The number of students admitted to the HEI reflects the needs of society and the labor market and the HEI's available teaching and space capacities.
- The Alumni association is praiseworthy and facilitates the HEI to stay in contact with former students that are dispersed all around the globe.

Recommendations for improvement

In the future, it will be necessary to monitor in detail the employment and professional progress of former students, especially in the international environment of the open European labor market.

Quality grade

High level of quality

IV. Teaching and institutional capacities

4.1. The higher education institution ensures adequate teaching capacities.

Analysis

- The HEI's greatest strength is the large number of employed teachers and teaching associates and their favorable ratio to the number of students. Since the last re-accreditation, the number of teachers has increased, which has enabled individual work and work in small groups of students, especially in dental clinical work.
- An additional number of teachers are employed by contract in teaching basic medical subjects who are employees of medical and other faculties of the University. Teachers' workload is thoroughly regulated by state regulations, collective agreements, decisions and regulations of the University and the HEI itself.
- Teaching associates must achieve professional and scientific competencies before being able to be employed in teaching professions, such as completing a specialization in the dental or medical field, defending a doctoral dissertation and publishing a sufficient number of scientific papers.

Therefore, the HEI encourages teachers and associates to do scientific work and publish teaching materials.

Recommendations for improvement

The school must establish a program to provide educational and pedagogical competencies for all teaching staff, in accordance with internationally recognized standards.

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 excellence.

Analysis

- Selection, and employment, are based on a clearly defined state legal procedure, regulations, and decisions of universities and faculties.
- Academic advancement and re-election of teachers are based on essential academic prerequisites such as election to a scientific title in their field of work, and according to the additional prerequisites achieved by the HEI since the last advancement.
- Furthermore, additional criteria are considered when selecting candidates, such as the number of scientific publications and conference papers, previously evaluated classes, contribution to the work of various HEI committees, leadership, and cooperation in international, national and University scientific and professional projects.

Recommendations for improvement

The school should ensure an appropriate governance structure incorporating a personnel development review, job planning and appraisal processes to ensure that:

- International scientific and teaching cooperation is encouraged and a criterion of excellence, by way of a regular annual evaluation of the quality of teachers' teaching, and scientific work.
- Introducing a mechanism for annual self-monitoring of each teacher's results regardless of academic level (annual personal performance report)
- The whole School, but also individual departments/chairs, should at the beginning of the year make a plan of scientific, teaching and other activities

for their employees, and at the end of the year analyse the realisation of the plan, that must systematically assess the teaching load of teachers and their outcomes.

- Given that the advancement of existing teachers and employment of young teachers depend on the available coefficients and that there is an inverted pyramid concerning the *ratio* older teachers/young teachers, it is recommended to introduce a system in which only the best teachers will advance and use the remaining coefficient to employ new young teachers (assistants)
- Introduce at the faculty and national level an authority that will take care of the validation of the method of knowledge testing
- Introduce an authority that will take care of the pedagogical competencies of teachers
- Improve administrative support for teachers in applying for and realisation various projects
- Improve the support system for teachers who publish university teaching literature as it is an essential resource for successful study
- Make university teaching literature published by faculty teachers more easily accessible to students (students can borrow it from the library, but they should also be able to buy it directly at the School)

Quality grade

Satisfactory level of quality

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

Analysis

- The HEI provides significant support, especially to young teachers and assistants, through paid doctoral studies and dental specialist degree. Many teachers have improved their teaching competencies in the school, study tours and professional congresses at the European Union level. The quality control of teachers is carried out for each subject, for the year of study. At the same time, the self-analysis of the HEI states that before each subject at the department level.

- The harmonization of student examination criteria is discussed at teacher meetings. In order to facilitate the work of teachers and harmonize the criteria for grading classes, a booklet was made for all dental schools in the country, with all clinical procedures and the minimum number of procedures that students must perform to complete their studies.
- Some teachers have spent a short or long period at Universities abroad, either as teachers or scientists, participating in international science projects with the support of all HEI professional services.

Recommendations for improvement

Provide teaching education to all teachers and especially assistants to harmonize the quality of lectures and the criteria for evaluating students (See point 4.3).

Increase the mobility of both outgoing and incoming teachers between Universities, especially to harmonize learning outcomes in different study programs at the same level of education.

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 PROGRAMS, ensuring the achievement of the intended learning outcomes and the implementation of scientific/artistic activity.

Analysis

- The current equipment, size of clinics, and IT service meet the minimum education needs in clinical dentistry. At the same time, the space for research and living of students, assistants, and teachers is modest to provide as much space as possible for clinical work.
- The lack of space is partially reduced by the shift work of teachers, which provides students with access to patients during the maximum daily period.
- The HEI is investing significant resources in maintaining the existing infrastructure and has made significant progress since the last re-accreditation to expand the space for teaching and research. Since the last re-accreditation, the space has been increased by 392 m² by renting or purchasing with own funds. The panel was presented with a plan to expand the HEI space by building a new building and upgrading the existing ones to an additional 2000 m². It should round off the HEI's needs for conducting all study programs and all types of professional education that the HEI conducts.

Recommendations for improvement

Increase the HEI's space, provide more space for the stay and work of students and staff and equip it with modern digital and simulation solutions in education in clinical dentistry.

Quality grade

Satisfactory 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

- According to the statements of students and teachers, the library of the HEI is well equipped with scientific and professional books and is of great help when searching for specific professional and scientific literature.
- In addition to an extensive library fund of printed scientific journals, books, graduate, professional and doctoral theses, it provides access to citation databases and electronic editions of dental journals and books for which the HEI is subscribed. Furthermore, the library acquires and borrows scientific papers, journals and books from other libraries in the country or abroad for the needs of teachers or students.

Recommendations for improvement

Provide access to additional packages of e-dental journals and e-books for learning and training. Library staff should be encouraged or further educated to assist teachers and students in searching for all evidence from the literature when writing review articles or systematic review articles.

Quality grade

Satisfactory level of quality

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

Analysis

- The HEI's good financial sustainability is maintained by planning and securing new funds on a market basis because state funds are pre-set and even reduced due to the need to save state budget funds.
- Additional funds are provided through tuition fees for dental studies in English, specialist and doctoral studies and professional courses, as well as through national and international scientific projects.
- Earned funds are used to maintain and purchase new equipment, purchase and equip space, and purchase materials used in teaching.

Recommendations for improvement

- HEI administrative staff could be trained and dedicated to the analysis and dissemination of EU and other external funds, in order to actively look for funding opportunities and programs and collaborate in its obtention and management.
- Provide additional funds from the city and the state needed to construct and equip new premises and provide new funds from the European Structural Funds for building and equipping faculties.
- Provide funds from European scientific funds for equipping faculties with scientific equipment through University, state and European scientific funds.

Quality grade

High 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

- Teachers actively conduct scientific work and publish the results of their research in peer-reviewed scientific journals in dental medicine in the WOS Core Collection and other citation databases, such as Scopus and PubMed.
- The number of published scientific papers is continuously increasing, and the share of papers in the first two quarters has significantly increased.
- The HEI analyses scientific productivity every year and actively encourages and rewards the publication of papers in journals with a high impact factor in its field.
- Scientific activity is reflected in many published dissertations and final professional papers for the defense of which it is necessary to achieve ECTS credits from scientific productivity, which includes the publication of results at scientific congresses and the publication of letters and articles in scientific journals.

Recommendations for improvement

Increase each teacher's scientific visibility, and progress should be monitored annually, especially teachers in the highest titles who are expected to provide the most significant scientific stimulus to young researchers.

Quality grade

High 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

- Through its study programs, integrated study for dentists, postgraduate professional studies, and doctoral studies, the HEI educates quality experts in clinical, professional work of individuals who actively want to participate in scientific research in an open international environment. In addition, new

professional studies aim to acquire new knowledge and competencies from specific clinical and social skills and knowledge.

- Some scientific groups in the HEI carry out research projects on the development and application of dental materials and participate in the education and installation of national guidelines on preventive and treatment procedures in dental medicine. The teachers of the HEI are, in large numbers, the leading people of national professional societies and hold many responsible and honorable duties in international professional societies in dental medicine.

Recommendations for improvement

Increase incoming and outgoing mobility of teachers, increase international activity in professional societies as well as in international projects, such as COST, HORIZON EUROPE, involving industries as well as HEIs.

Quality grade

High 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

- HEI teachers' scientific, teaching and professional work has been recognized and awarded many times for mentoring awarded students by the University and for individual teachers with numerous annual national awards. In addition, international professional societies have recognized and awarded some teachers for their engagement and scientific contribution.
- Furthermore, the HEI's international scientific indexed journal (ASCRO) encourages national and international cooperation in research and young dental scientists from Central and Southern Europe.

Recommendations for improvement

Encourage and increase dental teachers and assistants' national and international engagement in professional and teacher associations. Increase mobility and international professional, teaching and scientific cooperation.

Quality grade

High level of quality

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

Analysis

- The HEI has a considerable teaching and research potential expressed in the number of professional staff, many of whom have stayed or been further educated and trained in the best European dental schools.
- Numerically considerable research and scientific production and professional work with patients and education integrate the public health service from the basic to the most complex level and all stages of dental education in one place in low spatial conditions.

Recommendations for improvement

Incorporate and integrate proven digital technologies in dental education and train teachers to use simulation methods in clinical education.

Significantly increase the spatial conditions for research work in science and simulation / haptic technology in students' clinical education, postdoctoral fellows, and trainees.

Quality grade

Satisfactory level of quality

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

Analysis

- The established minimum scientific and professional competencies of most teachers achieved through active research, long-term work with patients and specialist training are a sound basis for knowledge transfer and guiding students in clinical training, from mastering basic professional concepts to independent work with patients.
- The HEI actively encourages students' scientific work through a system of rewarding the best students. Graduate, doctoral and postgraduate students can actively participate in undergraduate clinical teaching. All scientific equipment of the HEI is available, and its use for scientific research and application in clinical work is encouraged.

Recommendations for improvement

To promote the scientific and professional excellence of the HEI in the country and abroad to a greater extent. Through available university, national and European

projects, provide additional teacher education and ensure the equipment of the space and the procurement of scientific equipment.

Quality grade

High level of quality

APPENDICES

1. Quality assessment summary - tables

2. Site visit protocol

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

Quality grade by standard

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

<i>Quality grade by standard</i>				
<i>II. Study programs</i>	<i>Unsatisfactory level of quality</i>	<i>Minimum level of quality</i>	<i>Satisfactory level of quality</i>	<i>High level of quality</i>
2.1. The general objectives of all study programs 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 programs 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 programs it delivers.			X	
2.4. The HEI uses feedback from students, employers, professional organizations and alumni in the procedures of planning, proposing and approving new programs, and revising or closing the existing programs.				X
2.5. The higher education institution ensures that ECTS allocation is adequate.				X
2.6. Student practice is an integral part of study programs (where applicable).			X	

Quality grade by standard

<i>III. Teaching process and student support</i>	<i>Unsatisfactory level of quality</i>	<i>Minimum level of quality</i>	<i>Satisfactory level of quality</i>	<i>High level of quality</i>
3.1. Admission criteria or criteria for the continuation of studies are in line with the requirements of the study program, 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-centered learning.				X
3.4. The higher education institution ensures adequate student support.			X	
3.5. The higher education institution ensures support to students from vulnerable and under-represented groups.			X	
3.6. The higher education institution allows students to gain international experience.				X
3.7. The higher education institution ensures adequate study conditions for foreign students.			X	
3.8. The higher education institution ensures an objective and consistent evaluation and assessment of student achievements.			X	
3.9. The higher education institution issues diplomas and Diploma Supplements in accordance with the relevant regulations.				X
3.10. The higher education institution is committed to the employability of graduates.				X

<i>Quality grade by standard</i>				
<i>IV. Teaching and institutional capacities</i>	<i>Unsatisfactory level of quality</i>	<i>Minimum level of quality</i>	<i>Satisfactory level of quality</i>	<i>High level of quality</i>
4.1. The higher education institution ensures adequate teaching capacities.			X	
4.2. Teacher recruitment, advancement and re-appointment is based on objective and transparent procedures which include the evaluation of excellence.			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 programs, 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

<i>V. Scientific/artistic activity</i>	<i>Unsatisfactory level of quality</i>	<i>Minimum level of quality</i>	<i>Satisfactory level of quality</i>	<i>High level of quality</i>
5.1. Teachers and associates employed at the higher education institution are committed to the achievement of high quality and quantity of 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

Edukacija članova stručnog povjerenstva u virtualnom okruženju / Education of panel members in virtual form

	Utorak, 19. travnja 2022.	Tuesday 19 th April 2022
09:00 –	• Predstavljanje AZVO-a • Predstavljanje sustava visokog obrazovanja u RH • Postupak reakreditacije • Standardi za vrednovanje kvalitete • Kako napisati Završno izvješće • Priprema povjerenstva za posjet visokom učilištu (rasprava o Samoanalizi i popratnim dokumentima)	• Presentation of ASHE • Overview of the higher education system in Croatia • Re-accreditation procedure • Standards for the evaluation of quality • How to write the Final report • Preparation of the Expert Panel members for the site visit (discussion on the Self-evaluation report and supporting documents)

Preliminarni posjet Stručnog povjerenstva visokom učilištu / Preliminary site-visit of Expert Panel members to the HEI

	Ponedjeljak, 25. travnja 2022.	Monday, 25 th April 2022
8:50– 9:00	Spajanje dijela članova Povjerenstva na poveznicu (link) ZOOM	Joining the part of the Expert Panel members to the ZOOM meeting via link
9:00 – 10:00	Sastanak članova stručnog povjerenstva s dekanicom i prodekanima	Meeting of Expert Panel members with the Dean and Vice-Deans
10:00 – 10:10	<i>Pauza</i>	<i>Break</i>
10:10 – 11:00	Sastanak članova stručnog povjerenstva s Odborom za upravljanje kvalitetom	Meeting of Expert Panel members with the Board for Quality Assurance
11:00 – 13:30	Obilazak fakulteta (predavaonice, informatičke učionice, knjižnica, laboratoriji, studentske službe) i prisustvovanje nastavi	Tour of the Faculty (classrooms, computer classrooms, library, labs, student services) and participation in teaching classes
13:30 – 15:00	<i>Radni ručak</i>	<i>Lunch break</i>
15:00 – 16:30	Analiza dokumenata	Document analysis

16:30	Povratak članova stručnog povjerenstva kućama	<i>Return of members of the expert panel to their homes</i>
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Zoom sastanak članova stručnog povjerenstva / Zoom meeting of the expert panel members

	Utorak, 26 travnja 2022.	Tuesday, 26th April 2022
10:00– 12:00	Virtualni sastanak članova stručnog povjerenstva, diskusija o zapažanjima i impresijama s preliminarnog posjeta, dodatna priprema za online sastanke	Virtual meeting of the Expert Panel members, discussion of observations and impressions from the preliminary visit, additional preparation for our online meetings

Prvi dan reakreditacije u virtualnom okruženju / First day of re-accreditation in virtual form

	Srijeda, 27. travnja 2022.	Wednesday, 27th April 2022
10:20 – 10:30	Spajanje na poveznicu (link) ZOOM	Joining ZOOM meeting via link
10:30 – 11:30	Sastanak članova stručnog povjerenstava s prodekanom za nastavu i studente	Meeting of Expert Panel members with Vice-Dean for Teaching and Students
11:30 – 11:40	<i>Pauza</i>	<i>Break</i>
11:40 – 12:40	Sastanak članova stručnog povjerenstva s predstojnicima zavoda	Meeting of Expert Panel members with heads of departments
12:40 – 13:40	<i>Pauza, za ručak</i>	<i>Lunch break</i>
13:40– 14:40	Sastanak s nastavnicima (u stalnom radnom odnosu, osim onih na rukovodećim mjestima)	Meeting with full-time employed teachers, except those in managerial positions
14:40 – 14:50	<i>Pauza</i>	<i>Break</i>
14:50 – 15:40	Organizacija dodatnog sastanka o otvorenim pitanjima – prema potrebi	Organisation of an additional meeting on open questions, if needed

Drugi dan reakreditacije u virtualnom okruženju / Second day of re- accreditation in virtual form

	Četvrtak, 28. travnja 2022.	Thursday, 28 th April 2022
9:20 – 9:30	Spajanje na poveznicu (link) ZOOM	Joining ZOOM meeting via link
9:30 – 10:30	Sastanak s: • ECTS koordinatorom • Prodekanom za međunarodnu suradnju / ERASMUS koordinatorom • Prodekanom za poslovanje • Predsjednikom Etičkog povjerenstva • Voditeljicom knjižnice	Meeting with: • ECTS coordinator • Vice-Dean for International Cooperation / ERASMUS coordinator • Vice-dean for Business • Head of the Ethics Committee • Head of library
10:30 – 10:40	<i>Pauza</i>	<i>Break</i>
10:40 – 11:40	Sastanak sa studentima	Meeting with students
11:40 – 12:40	<i>Pauza za ručak</i>	<i>Lunch break</i>
12:40 – 13:30	Sastanak s alumnijima (bivši studenti koji nisu zaposlenici visokog učilišta)	Meeting with Alumni (former students who are not employed by the HEI)
13:30 – 13:40	<i>Pauza</i>	<i>Break</i>
13:40 – 14:40	Sastanak s vanjskim dionicima (predstavnici strukovnih i profesionalnih udruženja, poslovna zajednica, poslodavci, stručnjaci iz prakse)	Meeting with external stakeholders
14:40 – 15:30	Organizacija dodatnog sastanka o otvorenim pitanjima – prema potrebi	Organisation of an additional meeting on open questions, if needed

Treći dan reakreditacije u virtualnom okruženju / Third day of re-accreditation in virtual form

	Petak, 29. travnja 2022.	Friday, 29th April 2022
8:50 – 9:00	Spajanje na poveznicu (link) ZOOM	Joining ZOOM meeting via the link
9:00 – 10:00	Sastanak članova stručnog povjerenstava s prodekanicom za znanost	Meeting with the Vice-Dean for Science
10:00 – 10:10	<i>Pauza</i>	<i>Break</i>
10:10 – 11:00	Sastanak s voditeljima znanstvenih projekata	Meeting with the Heads of research projects
11:00 – 11:10	<i>Pauza</i>	<i>Break</i>
11:10 – 11:55	Sastanak s asistentima i poslijedoktorandima	Meeting with Teaching Assistants and postdoctoral researchers
11:55 – 12:55	<i>Pauza za ručak</i>	<i>Lunch break</i>
12:55 – 13:40	Organizacija dodatnog sastanka o otvorenim pitanjima – prema potrebi	Organisation of an additional meeting on open questions, if needed
13:40 – 14:10	Interni sastanak članova stručnog povjerenstva	Internal meeting of the Expert Panel members
14:10 – 14:20	Završni sastanak s dekanicom i prodekanima	Exit meeting with the Dean and Vice-Deans
14:20 –	Interni sastanak članova stručnog povjerenstva – ocjenjivanje prema temama i standardima kvalitete	Internal meeting of the Expert Panel members – assessing assessment areas and quality standards

***all times are in CET**

SUMMARY

The panel received a comprehensive set of informative documents and webpages, and a well-written, extensively documented self-assessment document. The Croatian members of the panel were able to visit the School and share their experience, which, added to the provided information, permitted a complete assessment of the existing and future School infrastructures. Despite of the procedure being online, the Panel would like to thank all the participants in the process, including the Dean and her Team, the Department Heads, both experienced and young professors, the students and the administrative and technical staff for their trust and collaboration. Their input was very valuable for the panel's analysis and contributed decisively to the suggestions made in the report.

The University of Zagreb School of Dental Medicine is a prestigious institution with a long tradition of academic excellence and collaboration with the wider scientific community. The direction and the academia, constituted by a number of experienced specialists with a strong clinical and basic research experience, and a very dynamic group of young teachers, strive to maintain the high quality level of the School, in teaching, in clinical practice and social service as well as in research. The new clinical infrastructure will increase not only the number of patients treated but especially the quality of the clinical practice provided, while improving the results in research carried out by the students and academia. The students are very involved in the school's activities and eager to contribute to the numerous initiatives proposed, both in clinical practice, research, social engagement and international experiences.

Legal and regulatory rigidities limit the School opportunities to recruit and promote young academia, even if a notable effort is made to enlarge the budget by engaging them in CPDs, postgraduation and other learning and research projects. Space limitations have to be solved to install a comprehensive clinical care service, that would facilitate a much needed harmonization from the first-years and preclinical assessment procedures to the qualitative assessment of the competencies acquired during the clinical training of the students. This way, a program of various evidence-based assessment methods, with a coherent set of standards and thresholds, would facilitate the advancement of the students through the complete study program.

The panel considers that the effort made by the institution to reinforce the internal quality assurance system while maintaining its longstanding social role and academic reputation is commendable. The hindrance to the recruitment and promotion of young academia represented by the rigidity of the legal strictures on public employment is a problem that requires a strong political effort by all stakeholders to propose imaginative solutions.

The study programs are of high quality and well considered both by the students and by the future employers. A strategic plan including all the school's stakeholders would benefit the continuous improvement system established to adapt the programs to the future Oral Health needs of the patients.

A notable effort has been made to analyze quantitative data about the study programs and student's progression, as well as student's satisfaction. The natural advancement of this process would be to adopt a student-centered approach and to harmonize the clinical formative and summative assessment to certify the student's achievements and the competences acquired along the "cursus".

The Dental School teaching and institutional capacities constitute their major asset: a large number of well-prepared, excellent young and veteran academicians in a very equilibrated “ratio” with the student’s population. Their dedication to public service, and their involvement with science and arts in the wider sense are one of the major School’s strengths.

Such quality and commitment must be appraised and supported. The continuous improvement of the governance regulations and structure added to a solid financial support to provide the adequate means for the implementation of new, advanced clinical, research and teaching activities will sustain the School and the HEI, as well as the national academic community, while increasing their joint international profile.

¹ Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG, 2015)

² Self-Evaluation Report, University of Zagreb. School of Dental Medicine, March 2022.

³ McLoughlin J, Zijlstra-Shaw S, Davies JR, Field JC. The Graduating European Dentist-Domain I: Professionalism. *Eur J Dent Educ*. 2017 Dec;21 Suppl 1:11-13. doi: 10.1111/eje.12308.

⁴ Gadbury-Amyot CC, Simmer-Beck M, McCunniff M, Williams KB. Using a multifaceted approach including community-based service-learning to enrich formal ethics instruction in a dental school setting. *J Dent Educ*. 2006 Jun;70(6):652-61.

⁵ Valero A, Van Reenen, J. The economic impact of universities: Evidence from across the globe, *Economics of Education Review*, 2019, 68, 53-67, <https://doi.org/10.1016/j.econedurev.2018.09.001>.

⁶ <https://erasmus-plus.ec.europa.eu/program-guide/part-b/key-action-1/mobility-youth>

⁷ Field JC, Cowpe JG, Walmsley AD. The Graduating European Dentist: A New Undergraduate Curriculum Framework. *Eur J Dent Educ*. 2017 Dec;21 Suppl 1:2-10. doi: 10.1111/eje.

⁸ Riad A, Buchbender M, Howaldt HP, Klugar M, Krsek M, Attia S. Oral Health Knowledge, Attitudes, and Behaviors (KAB) of German Dental Students: Descriptive Cross-Sectional Study. *Front Med (Lausanne)*. 2022 Mar 11;9:852660. doi: 10.3389/fmed.2022.852660.

⁹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32005L0036>

¹⁰ Plasschaert AJ, Holbrook WP, Delap E, Martinez C, Walmsley AD; Association for Dental Education in Europe. Profile and competences for the European dentist. *Eur J Dent Educ*. 2005 Aug;9(3):98-107. doi: 10.1111/j.1600-0579.2005.00369.x.

¹¹ Cowpe J, Plasschaert A, Harzer W, Vinkka-Puhakka H, Walmsley AD. Profile and competences for the graduating European dentist - update 2009. *Eur J Dent Educ*. 2010 Nov;14(4):193-202. doi: 10.1111/j.1600-0579.2009.00609.x.

¹² <http://www.kvalifikacije.hr/en/about-croqf>

¹³ <https://europa.eu/europass/en/european-qualifications-framework-eqf>

¹⁴ https://www.sfzg.unizg.hr/en/integrated_study/study_english

¹⁵ <https://adee.org/taskforce/graduating-european-dentist>

¹⁶ Duane B, Dixon J, Ambibola G, Aldana C, Couglan J, Henao D, Daniela T, Veiga N, Martin N, Darragh JH, Ramasubbu D, Perez F, Schwendicke F, Correia M, Quinteros M, Van Harten M, Paganelli C, Vos P, Moreno Lopez R, Field J. Embedding environmental sustainability within the modern dental curriculum- Exploring current practice and developing a shared understanding. *Eur J Dent Educ*. 2021 Aug;25(3):541-549. doi: 10.1111/eje.12631.

¹⁷ Bourque, J., Skinner, H., Dupré, J., Bacchus, M., Ainslie, M., Ma, I., & Cole, G. (2020). Performance of the Ebel standard-setting method in spring 2019 Royal College of Physicians and Surgeons of Canada internal medicine certification examination consisted of multiple-choice questions. *Journal of educational evaluation for health professions*, 17, 12. <https://doi.org/10.3352/jeehp.2020.17.12>

¹⁸ Tormey W. Education, learning and assessment: current trends and best practice for medical educators. *Ir J Med Sci*. 2015 Mar;184(1):1-12. doi: 10.1007/s11845-014-1069-4.

¹⁹ Alqarni MA. Assessing dental students' professional satisfaction with operative dentistry teaching and curriculum: A study in Saudi Arabia. *Medicine (Baltimore)*. 2021 Jun 25;100(25):e26459. doi: 10.1097/MD.00000000000026459.

²⁰ Field JC, Walmsley AD, Paganelli C, McLoughlin J, Szep S, Kavadella A, Manzanares Cespedes MC, Davies JR, DeLap E, Levy G, Gallagher J, Roger-Leroi V, Cowpe JG. The Graduating European Dentist: Contemporaneous Methods of Teaching, Learning and Assessment in Dental Undergraduate Education. *Eur J Dent Educ*. 2017 Dec;21 Suppl 1:28-35. doi: 10.1111/eje.12312.

²¹

http://ehea.info/Upload/document/ministerial_declarations/EHEAParis2018_Communique_AppendixIV_952782.pdf

