



**Final Report of the Expert Panel for the Faculty of Organization and
Informatics Varaždin, University of Zagreb**
Expert Panel in the Re-accreditation procedure

4/29/2011



Expert Panel in the Re-accreditation procedure

Composition of the Expert Panel

Pursuant to Article 22 of the Act on Quality Assurance in Science and Higher Education, and Article 30 Paragraph 1 Item 4 of the Statute of the Agency for Science and Higher Education, at its 12th session held on 11 January 2011, the Accreditation Council of the Agency for Science and Higher Education appointed the following expert panel for re-accreditation of the Faculty of Organization and Informatics, University of Zagreb:

- Professor Maja Vehovec PhD, member
- Assistant Professor Mato Brautović PhD, member
- Professor Andreas Knorr PhD, member
- Professor Airi Salminen PhD, member
- Vedrana Hitner, member

On 20 March 2011, Assistant Professor Mate Brautović was unanimously elected chair of the panel by all the members.

Members of the Panel

Professor Maja Vehovec, PhD

Maja Vehovec PhD is a tenured scientific advisor at the Institute of Economics in Zagreb, and a full professor at the University of Rijeka. She obtained her PhD in 1992 at the Faculty of Economics, University of Rijeka, and her master's degree in 1993 at the Faculty of Economics, University of Zagreb. In 1996 she completed postdoctoral studies at Cornell University, Johnson Graduate School for Management, Ithaca, New York, United States. She is the author of more than 50 scientific papers and articles in the field of economic sciences.

Assistant Professor Mato Brautović, PhD

Mato Brautović, PhD is an assistant professor at the Department of Communication, University of Dubrovnik. He is an associate at the Faculty of Political Sciences, University of Montenegro and the College of Journalism and Communication, University of Florida. In 2009/2010 he was a Fulbright visiting scholar at the College of Journalism and Communication, University of Florida. He obtained his PhD at the University of Zagreb, and his master's degree at the Faculty of



Political Sciences in Zagreb. He authored more than 20 scientific papers and articles in the field of information and communication sciences.

Professor Andreas Knorr, PhD

Andreas Knorr, PhD is a full professor at the Department of Economics: National and International Economic Policy, German University of Administrative Science Speyer. He obtained his doctoral degree in 1993 at the University of Bayreuth, Germany. He is the author of more than 100 scientific papers and articles in economic sciences. He participated in more than 70 international evaluations of study programmes and higher education institutions.

Professor Airi Salminen, PhD

Airi Salminen, PhD is a full professor at the Department of Computer Science and Information Systems, University of Jyväskylä, Finland. She obtained her PhD in 1989 at the University of Tampere, and her master's degree in 1971 at the University of Helsinki. In 2000/2001 she acted as a Visiting Professor at the University of Waterloo and in 2006/2007 at the University of Toronto, both in Canada. She has published more than 100 scientific papers and articles in the fields of information systems, computer science, and information science.

Vedrana Hitner

Vedrana Hitner is a third year student at the Faculty of Economics, University of Osijek. She won the Rector's Award for Best Students in the academic year 2008/2009.



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Panel Report

Faculty of Organization and Informatics

Faculty of Organization and Informatics was established in 1974 from former College of Economics in Varaždin (founded in 1962). Since 1975 the Faculty is a constituent of the University of Zagreb.

In the period from 1989 to 2006, the Faculty only had information science study programmes. It currently carries out undergraduate study (two specialisations) and graduate study (four specialisations) from the field of information science. In collaboration with the Faculty of Economics in Zagreb, in 2006 the Faculty of Organization and Informatics launched a joint three-year university undergraduate study 'Economics of Entrepreneurship', and in 2010 it was granted a license for an independent two-year university graduate study programme 'Economics of Entrepreneurship'. The Faculty also carries out two specialist post-graduate studies from the field of information sciences, and one from the field of economics. The Faculty has its own doctoral studies in information science. In 2002 it obtained a license for professional study programme 'Application of Information Technology in Business', which was initially carried out as a two-year, and then as a three-year programme.

Since 2007, the Faculty is a co-owner of Technology Park Varaždin, which is located in a building given by the City of Varaždin.

The Faculty comprises four organisational units: a scientific-teaching organisational unit, a library, organisational unit for innovation and lifelong learning, and organisational unit of the Department of joint operations. Scientific-teaching organisational unit performs its activities through sub-units, i.e. departments (Department of Economics, Department of Organisation, Department of Quantitative Methods, Department of Theoretical and Applied Foundations of Information Sciences, Department of Computing and Technology, Department of Information Systems Development, Department of Foreign Languages and General Educational Disciplines), Unit for technical support in instruction and Scientific research unit.

Faculty operates in two locations: in a several hundred years old building of a former Jesuit monastery (currently in a dispute over the ownership), and in the building of the former music school. Outside Varaždin, the Faculty carries out professional studies in rented facilities in Sisak, Zabok and Križevci.



Revenues from the university and the Ministry of Science, Education and Sports (MSES) accounted for approximately 46% of total Faculty revenue in 2008, 54% in 2007 and 60% in 2006. The remaining income came from educational activities, and local and international projects.

Description of the work of expert panel

All members of the expert panel went through a mandatory training that was held on 20 March 2011 in the Agency for Science and Higher Education, where they were informed of their tasks, procedures and purpose of re-accreditation. After the training, the panel held its first meeting and appointed Assistant Professor Mato Brautović for chair. At the suggestion of Professor Andreas Knorr, each panel member took one part of the evaluation standards for further preparation before the visit to the Faculty of Organization and Informatics in Varaždin. Site visit to the Faculty of Organization and Informatics took place according to protocol that was submitted seven days earlier. Three representatives of ASHE also took part in the site visit: Ivana Borošić and Davor Jurić as coordinators, and Goran Briški as an interpreter.

The site visit was carried out according to the following schedule:

Monday, 21 March 2011

09:00 to 10:00 Meeting with the Management Board
10:00 to 11:30 Meeting with the Self-Evaluation working group, including the QA Committee
11:30 to 11:45 Internal meeting of the expert panel
11:45 to 12:45 Meeting with the heads of departments
12:45 to 13:45 Meeting with the teaching assistants and junior researchers
15:00 to 16:00 Meeting with students
16:00 to 16:15 Internal meeting of the expert panel
16:15 to 16:45 Meeting with the Management Board
Working dinner at the hotel in Varaždin, preparation for the next day and work on the final draft of the report

Tuesday, 22 March 2011

09:00 to 10:00 Meeting with the Vice-Dean for Academic Affairs and Quality Management, and heads of study programmes (undergraduate, graduate, professional and postgraduate)
10:00 to 10:30 Meeting with students of Economics of Entrepreneurship (at the request of the panel)
10:30 to 11:00 Meeting with the Vice-Dean for Research and heads of scientific projects



10.00 - Tour of a displaced location in Zabok, conducted by Professor Andreas Knorr
11:00 to 11:15 Internal meeting of the expert panel, discussion
11:15 to 12:30 Tour of the faculty - classrooms, libraries, student services, computer labs, organisational unit for innovation and lifelong learning
14:00 to 15:00 Internal meeting of the expert panel
15:00 to 15:30 Meeting with the Management Board
Working dinner at the hotel in Varaždin, work on the final draft of the report.

During the meetings and tours, interviews were conducted with representatives of the administration, teaching assistants, junior researchers and other employees of the Faculty of Organization and Informatics, as well as students. The Management Board provided all the required documents. No member of the panel received, nor was offered any gifts by management or other employees of the Faculty of Organization and Informatics Varaždin before, during or after the site visit.



A detailed analysis based on the standards and criteria for re-accreditation

Management and Quality Assurance at the Higher Education Institution

1.1. The Faculty has a strategy for quality assurance and conducts student surveys. There is a Quality Assurance Committee at the institution. External stakeholders are not formally involved in quality assurance process, and the panel recommends that they become more formally involved. The Faculty is passive regarding strategic planning and it needs to focus on its strategic and comparative advantages over other similar programmes in the Republic of Croatia.

1.2. The organisational structure of the higher education institution stems from the history of the institution and its effectiveness is questionable. The Faculty should consider whether the organisational structure fits its mission and vision, with regard to scientific disciplines formalised through departments and types of programmes carried out.

1.3. Programmes are in line with Bologna reforms and the baseline of the Croatian Qualifications Framework.

1.4. Quality assurance is implemented in all study programmes except for professional studies where there are no formal quality assurance procedures. The panel recommends that this form of quality assurance is introduced in all study programmes. The Management Board of the Faculty commented that few students participate in student surveys because of the comprehensiveness of questionnaires. However, this issue can be addressed at the level of the Faculty, since they have an option of changing the content and mandatory status of student surveys. In addition, what should be introduced is the possibility of informing students on survey results. This would make students more aware of the importance of survey and of need for quality assurance at the institution.

1.5. Quality assurance should not be reduced to just student surveys; it is also necessary to establish teacher support and provide them with pedagogical training.

1.6. There are formal regulations in place for the highest level of ethical behaviour in educational and scientific activities. It is also necessary to establish informal ways of improving ethical behaviour.



Study Programmes

2.1. Quota is partially aligned with community needs and Faculty's resources for implementation of quality teaching. Although they consult the Croatian Employment Service in obtaining information on the number of unemployed FOI graduates, the Faculty should be more involved with the labour market in terms of defining quota and other aspects of programme planning. The ratio of full-time and part-time students should also be improved in favour of full-time students.

2.2. A system for the recognition of previously acquired competences is in place, and is implemented at the request of individual students.

2.3. Developed learning outcomes are of high quality, and clearly and in great detail describe knowledge and skills after the completion of study programme. They are better defined for university programmes, and some improvements should be carried out for the professional studies. The panel particularly commends the procedure for establishing learning outcomes for study programmes and the use of ICT for this purpose.

2.4. Assessment of students is in accordance with the defined learning outcomes. The Faculty checks whether everything is done according to the plan, but should introduce evaluation of student assessment and exam procedures.

2.5. ECTS credits provide a reasonable estimate, but there is some room for improvement. The Faculty consults students regarding ECTS credits. Such practice is very rare, and the Faculty is exemplary in that respect.

2.6. The content and quality of study programmes is in accordance with internationally recognised standards, and with its Diploma Supplement the Faculty provides for international recognition of its diplomas.

2.7. Teaching methods are appropriate and suitable for different learning styles. In this respect, the Faculty stands out in comparison to similar institutions and programmes in the Republic of Croatia.

2.8. Teachers provide adequate amount of additional material for study programmes.

2.9. System of internships is implemented for one part of study programmes. The institution is aware that some improvements are needed in this regard, such as longer internships.



Internships should also be introduced to undergraduate programme. Coordination between employers and professional study programme is inadequate and the institution should find ways to include external stakeholders in the professional study programme.

2.10. There are formal procedures for proposing, approving and implementation of new programmes. Procedures are implemented through the Committee for the revision of curricula.

Students

3.1. Information packages clearly inform prospective students on the level of study programme, qualifications and title acquired. The Faculty participates in the university fair and it has a good web site, a Facebook page and Twitter profile. Some improvements could be made with regard to providing additional information on further education and employment. It is necessary to make these information packages available in English as well.

3.2. Criteria and procedures for enrolment are published and applied consistently for scientific studies, but not for professional studies. In the future, State Matura exam should be a prerequisite for professional study programmes as well.

3.3. Competences are checked through elective State Matura subjects. Elective subjects are in accordance with the required competences of future graduates.

3.4. The institution provides support to students in their extra-curricular activities. However, it is necessary to make some improvements to student standard, with regard to the quantity and quality of accommodation and restaurants. Two separate marks are given for this criterion - one for extra-curricular activities, and the other for student standard.

3.5. There is no counselling and professional guidance service, and the panel recommends that one is established. Although the system of mentorship did not prove functional in the past, the panel recommends that mentorships are re-introduced with revised regulations.

3.6. The Faculty conducts student survey, but not on all levels. Feedback on student survey is provided to teachers, and the Faculty has an appeal procedure in place.

3.7. There are no statistics on the employment of FOI graduates. Alumni organisation AMAC FOI comprises 114 members - only 2% of the total number of graduates. The panel recommends that alumni service is established, as well as a register on the employment of graduates.



3.8. Students are involved in decision-making and the work of administrative bodies, and have an influence on decision-making and problem-solving.

3.9. System of informing is well developed. Cooperation is established with secondary schools and the media, and Faculty open days are organised. The panel recommends improvements in terms of a strategic approach to public informing, especially with regard to job opportunities.

3.10. Through their student representatives, students can voice their opinions and suggestions. They can also do that directly through a suggestion box, student forums, etc. The panel recommends establishment of formal ways of informing students on measures that have been carried out.

Teaching staff

4.1. The number and qualifications of teaching staff is in accordance with strategic objectives of the Faculty, and cover the core disciplines. Teachers' workload is adequate.

4.2. The policy of growth has been established in a satisfactory way without formal procedures. The Faculty has enough junior teachers.

4.3. The number of teachers is adequate. The panel recommends a competitive approach to hiring new teachers, by stimulating mobility and a greater flow of teachers.

4.4. Data shows a satisfactory ratio between the number of teachers required and teachers employed in relation to the number of students.

4.5. Regulations are in place for professional development of teaching and non-teaching staff, visits abroad and publishing papers. However, there is some room for improvement with regard to scientific excellence.

4.6. The Faculty follows national standards for professional advancement in higher education and science. However, there are no measures allowing an appeal against the decision regarding professional advancement.

4.7. Regulations defining teachers' workload provide a clear and equal distribution of duties (teaching, research, mentorship).



4.8. The Faculty ensures that teachers are not involved in other teaching engagements outside the institution for more than 30% of their weekly norm. Dean has the right to limit any work on the side if it influences work at the Faculty. This issue is taken care of systematically in a way that any work outside of the Faculty is regulated by contract.

Science, Art and Professional Activities

5.1. The Faculty has a strategy of research activities, vision and mission. However, the research focus should be more clearly defined, and those areas of research that are focus of development (ICT for enterprises and business, ICT for government and e-government, software engineering, ICT for learning and e-learning etc.) should be highlighted in the strategy. Also, the scientific production should be more oriented towards international than local community.

5.2. Effectiveness of scientific/research activities should be improved in terms of increasing the quality of scientific/research output in journals relevant to the area of research. This is to some extent hindered by teachers' workload and low national standards for professional advancements in some fields, such as economics. Much effort has been put in projects, but there are no visible research results. The Faculty should develop and improve mechanisms for increasing the efficiency of research activities. However, the panel recognises that efforts have been made to improve the internal conditions for higher quality scientific production.

5.3. The Faculty actively collaborates and plans cooperation with other scientific organisations and companies.

5.4. Research is included in the overall activities of the Faculty. Efforts are made to recognise the role of research and its contribution to the overall activities of the Faculty.

5.5. The Faculty provides an adequate support to its junior scientific staff.

5.6. The Faculty adequately supports and monitors the scientific productivity.

5.7. Professional activities are at a satisfactory level. The Faculty provides support to professional projects.



Mobility and International Cooperation

6.1. The Faculty enables and facilitates the mobility of students from other higher education institutions (especially with regard to the overall situation in Croatia).

6.2. Students have the opportunity to complete part of their programmes abroad.

6.3. The Faculty promotes and monitors the international mobility of its teachers.

6.4. Involvement in international organisations of similar institutions is not pointed out, but it exists on an individual level. The panel suggests a greater involvement in the work of international associations.

6.5. The Faculty makes efforts to improve conditions for attracting students from abroad. One of the main obstacles is the lack of a sufficient number of courses in English language. The Faculty is therefore at an early stage of development in this regard, but plans are made to introduce 8 courses in English.

6.6. The Faculty participates in Erasmus programme. The panel recommends engagement in other EU Lifelong Learning programmes.

6.7. Other forms of inter-institutional cooperation are well developed.

Resources: professional services, facilities, equipment and finances

7.1. The Faculty has sufficient resources for effective learning, but there is room for improvement. The library needs more space and working areas for individual and group work. Number of books in economics and entrepreneurship is insufficient for quality student work.

7.2. Laboratory equipment and protocols for its use comply with international standards. The main problem is lack of space.

7.3. The Faculty has a good way of utilising and ensuring technical support. They develop their



own technical and software solutions. The panel especially notes the Office for Lifelong Learning.

7.4. The Faculty collects and analyses data relevant to improvement of its activities. However, there is some room for improvement, especially regarding the additional data on alumni, cooperation with companies, employment opportunities and other stakeholders. We recommend using human resources for business intelligence and data mining.

7.5. The library does not have enough space or access for disabled persons. It is also necessary to resolve the issue of library for professional centre in Zabok.

7.6. There is a lack of some administrative staff (75:1 is the ratio of students and administrative staff), but it seems that the administration is functioning well and there is no need for employing additional staff.

7.7. The Faculty is financially stable and fairly autonomous. It is recommended that they finance their activities less from tuition fees (e.g. professional studies), and more from projects and funds allotted from MSES. For its part, the Faculty could conduct more research and international projects from which it can finance its activities.



Final thoughts and recommendations of the expert panel for the Accreditation Council

Advantages

Advantages of the Faculty of Organization and Informatics:

- Compliance of study programmes with Bologna process and Croatian Qualifications Framework baseline;
- Moderate ECTS credits and collaboration with students in their defining;
- Recognition of the acquired competences and developed learning outcomes;
- Number of teachers is satisfactory, and there is an excellent ratio of students and non-teaching staff;
- Quality of teachers in the field of information and communication sciences;
- Measures taken to stimulate teaching assistants and junior researchers to publish in international journals and participate in international scientific conferences;
- Inclusion of research in overall activities of the institution;
- Mobility of students, teachers and non-teaching staff;
- Financial stability and autonomy.



Disadvantages

Disadvantages of the Faculty of Organization and Informatics:

- It is necessary to better define mission and vision of the Faculty, with regard to scientific-teaching activities (specialisation);
- Insufficient inclusion of stakeholders in the development of strategic documents, defining quotas and development of study programmes;
- Enrolment quotas are not adjusted to social needs, there is no counselling and professional guidance service and the alumni organisation is not adequately developed;
- Collecting and analysing data used for the institutional activities should be at a higher level, considering the profile of personnel;
- Insufficient involvement in international associations of similar institutions;
- Insufficient number of papers published in international journals relevant to specific scientific areas;
- Insufficient number of international scientific projects;
- Historic reasons behind the current organisational structure; the institution is not structured according to the needs of teaching and research;
- Quality assurance is not implemented in some study programmes (professional studies);
- There are no internships at undergraduate and professional studies, and there are no measures for internship control;
- Insufficient quantity and quality regarding basic student standard of accommodation and restaurants.



Recommendations for quality improvement

The panel recommends measures for quality improvement in following areas:

- **Strategic management of higher education institution**
- **Scientific excellence**
- **Quality of performance of study programmes**
- **Improvement of student standard**

To achieve high-quality strategic management of higher education institution, it is necessary to better define mission and vision of the Faculty as a baseline for all strategic documents. Furthermore, it is necessary to include external stakeholders in the preparation of development studies, defining quotas and development of study programmes, and to adjust the organisational structure to the Faculty's mission and vision.

In order to improve scientific excellence, the Faculty should take action in the direction of joining international associations of similar institutions, continue to develop incentives to increase the number of papers published in international journals (indexed in CC and Web of Science) and increase the number of international (EU) scientific projects.

In order to increase the quality of study programmes, it is necessary to monitor quality on all study programmes (surveys), to introduce other measures of monitoring quality of internships and student assessment, and to establish quality control on programmes where it doesn't exist.

It would be good to publish the results of student surveys, at least in the form of an average, so that students are provided with some feedback.

The panel does not expect that student standards can improved by the Faculty alone, so this recommendation is directed at MSES as well. The Ministry should allot funds to improve this, for students, important part of study process.

If taken, these measures would lead to a significant improvement of the quality of Faculty of Organization and Informatics in Varaždin.