

Study Visit

**“Improving learning and teaching through
institutional collaboration supported by ICT”**





CARNet

Croatian Academic and Research Network – CARNet (<http://www.carnet.hr/en>)

is an umbrella institution in the education and science system, established by the Croatian government with the purpose of providing the most advanced information and communication infrastructure. CARNet's activities can be divided into three basic areas: Internet service provision, stimulation of information society development and education for the new era. CARNet operates in close conjunction with the Croatian Ministry of Science, Education and Sports.

CARNet has extensive experience in (inter)national collaboration with education and labour market stakeholders and supports 1 612 educational institutions (ranging from elementary to HE) in their ICT-supported collaboration activities. In addition to providing support, CARNet itself participates in numerous projects of institutional collaboration on all levels of education. One of CARNet's flag projects is the E-Islands, which enables branch elementary schools on Croatian islands to connect to central schools via broadband and participate in classes real time over a videoconference system.

CARNet is also one of the partners in the development of the central national information system for online applications to higher education institutions

www.postani-student.hr.



Improving Learning and Teaching by Institutional Collaboration Supported by ICT (Oct. 10-14, 2011)

From 10-14 October 2011 CARNet organised a study visit

“Improving learning and teaching by institutional collaboration supported by ICT”

The gap between limited resources and high expectations for education in the 21st century in the Croatian educational context is increasingly bridged by innovative institutional collaboration supported by ICT. The goal of the study visit was to show best practice examples of collaboration between educational institutions, from primary and secondary schools to higher education and commercial institutions, with emphasis on the innovative use of ICT for the improvement of quality and efficiency of learning and teaching.

During the five days of the study visit the participants had an opportunity to visit 10 Croatian educational institutions that use advanced ICT in order to collaborate and improve the learning and teaching they provide.

The study visit was funded by the European Commission as a part of the Transversal activities within the Lifelong Learning programme and the funds awarded by the Croatian national Agency for Mobility and EU Programmes (http://mobilnost.hr/index_en.php).



Institutions Visited

The University of Zagreb

The University of Zagreb (founded in 1669), with its over 50,000 full-time undergraduate and postgraduate students, is the oldest and biggest university in South-Eastern Europe. The participants visited four major institutions in the University of Zagreb.

www.unizg.hr/homepage

The University of Zagreb University Computing Center (SRCE)

is a public entity founded in 1971 as computing center of the University of Zagreb. While it is the oldest infrastructural institution of the academic and research community in the area of application of information and communication technologies (ICT), SRCE is still one of the key subjects in planning, designing, construction and maintenance of the leading edge computing, communication and information infrastructure of the research and higher education system in Croatia. SRCE actively participates in several EU e-infrastructures projects. SRCE is an expert centre for ICT and centre for education and support in the area of ICT application. The E-learning Centre at the University Computing Centre has respectable experience in providing and maintaining e-learning tools and technologies for the members of the academic community as well as in providing support to users of e-learning.

www.srce.unizg.hr/homepage

Faculty of Electrical Engineering and Computing (FER)

is the largest technical faculty and leading educational and R&D institution in the fields of electrical engineering, information and communication technology and computing in Croatia. FER has developed valuable international cooperation with many research institutions around the world, either directly or through inter-university cooperation. The number of international projects in the academic years 2010/2011 reached 31, 13 of which are FP7 projects, 8 bilateral projects, 3 TEMPUS projects, 1 NATO project, 1 ERASMUS MUNDUS and 1 IPA project, which makes Faculty of Electrical Engineering and Computing one of the most internationally active institutions in Croatia.

Since the academic year 2003/04 FER conducts a joint distributed project-based course "Distributed Software Development", in cooperation with Mälardalen University, Sweden. Starting from a pilot project, where basic knowledge and experience in the development and maintenance of distributed courses was gathered, the course has grown into a long-term cooperation and currently runs for the 9th consecutive year. The course offers software engineering students the opportunity to work on real-world distributed projects, having to utilize several technologies and e-learning concepts to accomplish their project work, while dealing with various communication, cultural and organizational challenges.

www.fer.unizg.hr/en

Faculty of Organization and Informatics (FOI)

operates within the University of Zagreb. Its core research and educational fields are: ICT application in business, engineering of business processes, organization and management in ICT driven companies, decision theory, technology enhanced learning. To date Faculty has been actively supporting and advancing usage of ICT in teaching and learning process. By introducing e-learning in education FOI plans to achieve the following strategic goals: improve the quality of educational processes and learning outcomes, to empower students to actively participate in the knowledge society, provide better and wider access to education and boost the research in the field of e-learning. FOI also actively participates in EU funded projects and programs, commercial projects funded by industry/business or public sector institutions, and scientific projects funded by the state that were in line with national research and scientific policy.

The Interactive Medical Education Centre (InterMeCo)

is a common virtual centre of Croatian medical schools and a rich student-centred learning environment that improved virtual mobility of Croatian medical students on all four medical schools in Croatia. It was developed within the framework of the European Union Tempus Programme "Standardization of medical education" that allowed national educational services to design and deliver online undergraduate elective courses. Originally, three online elective courses were created which supported problem-, project-, and decision-based learning and required students to work in small collaborative teams using problem-solving and decision-making activities. The goal was to foster teamwork and produce better outcomes than those potentially achieved through individual work. Until today, 9 additional courses were created, attended by 734 Croatian medical students. Elective e-courses may be a successful model of how faculty and students at higher education institutions can collaborate and integrate e-learning into their current curricula.

The University of Rijeka

The University of Rijeka was founded in 1973 as a logical expansion of higher education institutions in western Croatia whose roots date back to the 17th century when the Rijeka Jesuit gymnasium was established. Today the University of Rijeka counts over 19,000 students.

Its mission is dedicated to making strategic and development-oriented decisions on numerous issues regarding the functioning of the academic community and continued facilitation of international competitiveness in all areas of scientific, artistic and professional activities. Through active collaboration with the economic and business sector along with partnerships for community development the University endeavours to contribute toward the socio-cultural transition into a knowledge-based society.

Its vision targets the inclusion of the University of Rijeka within the top 500 European Universities, thus it has committed itself to dynamic development which systematically facilitates mobility and the development of research careers while providing each individual with an opportunity to express their talents and entrepreneurial energy.

Secondary medical school Ante Kuzmanić

Secondary medical school Ante Kuzmanić is a public vocational school located in Zadar, offering the following programs: nurse - medical technician, health laboratory technicians, midwives, physiotherapy technician, sanitary technician and pharmaceutical technician.

One of the school star projects is E-medica, a project of collaborative instruction between medical schools in Croatia and the region. The project was launched in 2005 and consists of five segments: exchange of students, E-medica portal, joint student projects, video conferences and annual gathering of project participants. Some 400 students and 40 teachers from all 26 medical schools in Croatia, one Slovenian and one Macedonian school participate in the project.

Both students and teachers are lifelong learners, motivated and educated in using ICT to exchange knowledge and experiences, cooperate with the local community, hospitals and other institutions. This way, the school becomes more interesting, more innovative and a more sustainable environment.

Primary school Rikard Katalinić Jeretov

Primary school Rikard Katalinić Jeretov is located on the northern Croatian coast in Opatija. It has over 600 students and the instruction is conducted in five dislocated school buildings. All classrooms have computers and an LCD projector.

The school is involved in several national and international projects that represent excellent examples of cooperation based on ICT. It is a part of the GLOBE programme - Global Learning and Observations to Benefit the Environment. Scientists who cooperate with the GLOBE programme have expressed great interest in students' measurements and observations. Communication between the students and scientists is conducted over the Internet and data collected in this way is public and available to everyone. The GLOBE programme leads to the modernization of teaching, especially in the field of natural science and geography and can serve as a model for the introduction of an effective educational environment. In addition the school will present its e-courses, elective informatics instruction, extracurricular multimedia activities, content catalogue, school e-papers, collaborative work on school documents and CMS.

Primary school Horvati

Primary school Horvati is one of the oldest primary schools in Zagreb, with over 300 pupils, in 4 upper and 4 lower grades. The school aims at making the use of ICT an integral part of instruction in order to make education more acceptable and interesting to pupils and to enable all the teachers to develop required competences. The teachers are continuously encouraged to introduce innovative methods and technology in their teaching.

Through active collaboration with different educational institutions in Comenius projects, videoconferences and e-learning, the students improve their knowledge, meet students from other countries and gain friends from all over the world. The school has held many videoconferences with students from all over the world (USA, Canada, China, France, Portugal, UK etc.), in which students of all ages participated.

The school management feels that it is vital for the students to become students of the world as well as that the teacher's role is to show them how to make the first step towards achieving that goal. In addition, the school is well known for successful inclusion of children with special needs in regular instruction.

Primary school Veliki Bukovec

Primary school Veliki Bukovec is situated in a rural area of Croatia, close to Hungarian and Slovenian border. However, the school is well connected to the world via ICT and provides its students with skills that give them better chances of achieving success later in life. The school is a positive, collaborative and encouraging environment; it shares its experiences and learns through learning networks. The school has an inclusion program for children with special needs and offers an adjusted program level.

The distinctive characteristic of the school is teaching ICT and foreign languages from the 1st grade, so all of the students are familiar with ICT and speak one or two foreign languages. The students learn using multimedia resources and practice online communication and collaboration in international projects.



Ready for Future Collaboration

To date CARNet has participated in various EU projects, ranging from technology research and development such as FLOSSWORLD, GEANT2 and GEANT3 - Multi-Gigabit European Academic Network, to implementation of ICT in education such as eVET READY - Self-evaluation of VET schools for e-learning.

CARNet is always ready for new challenges, collaboration and projects in the field of ICT infrastructure development and use of ICT in education.

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