The role of e-learning in LIS education: students' evaluations

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Abstract - The application of e-learning at Croatian universities has increased rapidly, with the introduction of the Bologna process to create the European Higher Education Area. The application of digital media for teaching and learning makes distance education for LIS professionals at the Faculty of Humanities and Social Sciences, University of Zagreb, possible. E-learning and traditional classroom learning have been combined to deliver library and information science (LIS) education. The aim of our research was to obtain a general overview of the LIS graduates' expectations and experiences using Omega, a specific learning management system

I. INTRODUCTION

Just a superficial search of the numerous web sites maintained by universities all over the world shows that over the past decade digital media have enriched the teaching and learning experiences among university students and lecturers. In response to the changing professional requirements on the one hand and the educational reform well known as the Bologna Process on the other LIS education is undergoing considerable change. The European University Association report demonstrates "that there has been extraordinary change in European higher education, and that institutions are engaging seriously with the implementation of these reforms. Yet the report also points out that the cultural impact of the Bologna process has often been under-estimated, that there remains much work to be done throughout society, and that the European Higher Education Area will continue to be "work in progress" well beyond 2010" [1]. This report provides the most comprehensive view based on the responses of some 900 European higher education institutions in 2007. A brief realistic account of the situation in new European member states implementing Bologna is given. A position paper by A.-M. De Jonghe discusses in 2010 the readiness of traditional universities to become quality universities. They have been more than slow in integrating ICT in their teaching and learning. The

author points out that e-learning is just an aspect of e-quality label that universities should strive for and says: "Quality e-learning requires institutional change, continuous introspection, and innovation, as well as critical awareness of the weaknesses to be overcome. Decision makers in universities have to be involved in discussions and convinced about the real possibilities of ICT. This should be done in a non-technical way and in the context of their own cultural context, taking into account their current preoccupations. It is necessary to overcome the gap between the converted and the non-believers. If this process is neglected, bottom-up ICT initiatives in teaching and learning will not blossom"[2]. The position paper recognizes that the transformative power of ICT has still not been fully grasped and that the acceptance of ICT in the process of transformation of universities depends on the support of organizations like the European University Association (EUA) and the European Network of Quality Agencies (ENQA) in charge of promoting higher education. Let us mention that e-learning involves learning that is delivered, enabled or mediated by electronic technology, for the explicit purposes of training and/or education. It does not include standalone technology-based training such as the use of CD-ROMs in isolation [3]. Implementation of ICT into education and training is encouraged as early as 2001 by the European Council Resolution on e-Learning. It invites the Commission to pay particular attention to the implementation of the eLearning action plan and to the concrete future objectives of education and training systems in line with the objective set by the Lisbon European Council that EU becomes the world's most competitive and dynamic knowledge economy by 2010[4]. E-learning has, therefore become an important component of formal and non-formal education. The

advancement of e-learning at universities is also influenced by the introduction of learning management systems. In addition to ICT initiatives, terms like learner oriented teaching, learning outcomes and satisfaction have been mentioned in the academic life both by students and teachers more and more frequently.

Nowadays academic life is subject to evaluation procedures more often than before. It depends increasingly on design of e-learning environments, programs and activities. Models of e-learning are still being developed. The five-stage model developed by Salmon would suit according to our views the practical needs of LIS education best where teaching takes place both in virtual environment and face to face. This model envisages the following stages: access and motivation, online socialization, information exchange, knowledge construction and development [5]. The experiences of e-learners can vary hugely depending on their skills and support they receive.

One of the indicators of the quality of implementation of e-learning system in the educational system is taken to be students' satisfaction. In a survey carried out in 2006, more than 3000 students from various Austrian universities were asked how often they use learning management systems in their courses. In the social and business sciences, 60% of students reported using systems 'sometimes' or 'frequently'. In other subjects, at least 30-40% of students reported using such systems 'sometimes' or 'frequently'[6]. The aim of another research in Austria was to obtain a general view of students' expectations of, and experiences in e-learning. This question was addressed by surveying 2196 students from 29 Austrian universities. The results of the study suggest to influence students' motivation and goals by adopting instructions accordingly and emphasize the importance of continuing education and training for instructors [7].

Unfortunately, in Croatia such a comprehensive investigation has not been conducted at the national level although learning management systems were introduced in the past decade at all universities in the country. At the Faculty of Humanities and Social Sciences, University of Zagreb, the open-source course management system Moodle has been used since the academic year 2000/2001. Students' attitudes and satisfaction with the use of Omega, a customized version of Moodle since the year 2004/2005, were examined in a survey conducted in 2007. Majority of the students were from the Department of English

(34%), Sociology (29%) and Information Sciences (20%). The results indicated positive attitudes towards Omega [8]. LIS students' evaluation of the Omega learning system has not been carried through until now at the Department of Information Sciences. This was the reason why the authors decided to conduct a survey.

II. RESEARCH

A research was carried out among the undergraduate students of information science and graduate students of library science of the Faculty of Humanities and Social Sciences in Zagreb. The research included the third year undergraduates, and the first and the second year graduates. The aim of this preliminary research was to obtain a general overview of the graduates' satisfaction with Omega, a distance learning tool, and to establish to what degree this tool makes studying easier for students. The authors assumed that Omega met the students' needs and helped making their study much easier.

A. Methodology

Four courses were researched by means of the survey method. Since some students attend two or more courses included in the survey, the attention was paid that such students would not complete the survey two times. The undergraduate and graduate students were asked to complete an anonymous survey questionnaire, consisting of 13 questions. There were only two questions, out of the 13, that required from students to write their own answers, other questions provided multiple choice answers for students to choose from. The first three questions were general questions aimed at getting data about students' gender, age and study groups. Questions 4 to 9 were related to Omega: is it used, how often, how many courses the student has on it, is this an e-learning tool, can Omega replace lectures. Questions 10 to 13 evaluated students' satisfaction with Omega, providing also answers about how much it makes studying easier, how satisfied they are with the content offered, and what is on Omega used by the students most, using grading 1 to 5, where 1 indicated the lowest grade of satisfaction, and 5 the highest.

B. Results

The total of 68 students completed the survey, out of which 12% male and 88% female students; 22% students were between 20 and 22 years of age, 66% between 22 and 24 years of age, and 12% at the age of 25 or 25+. Out of the total number of students, 16% were third-year undergraduates, 34% first-year graduates, 41% second-year graduates, and 9% did not write down the study year. All the students replied that

they used Omega: to the question about how often it was used, 24% replied every day, 66% replied 2-3 times a week, 9% replied 2-3 times per month, and 1% replied that Omega was used very rarely. As regards the number of courses a student has included in Omega, 55% of the students have most of the courses included in Omega, 35% have more than 5 courses in Omega, 6% have all the courses in Omega, and 4% have 1-5 courses in Omega. Asked whether the students were familiar with the e-learning concept, 94% of the students replied YES, and 6% replied NO. Omega is considered an e-learning tool by 91% of the students, and 9% of them do not consider it an e-learning tool. It is considered that Omega may replace lectures by 34% of the students, 65% consider that it can not, and 1% did not provide an answer to this question. The students' satisfaction with Omega was distributed as follows: 13% of the students evaluated Omega as excellent, 57% as very good, 28% as good, and 2% as satisfactory. Not one of them evaluated their satisfaction with Omega as negative. The students evaluated how much Omega makes their study easier, as follows: 28% of the students evaluated Omega in this respect as excellent, 50% as very good, and 22% as good. The satisfaction with Omega's contents was evaluated as follows: 9% of the students evaluated the contents as excellent, 57% as very good, 30% as good, and 4% as satisfactory. In the last question the students evaluated what contents they use on Omega the most, with grades from 1 to 5. The contents offered were the following: news forum, course description and reading list, presentations used in lectures, additional material related to the course, articles from the Faculty repository, submission of home-works and seminar papers, communication with the teaching staff, communication with students. Their use of news forum was graded as excellent by 19% of the students, by 24% as very good, by 24% as good, by 12% as satisfactory, by 20% as unsatisfactory, and 1% did not evaluate how much they used the news forum. Their use of course descriptions and the reading lists was graded as excellent by 31% of the students, by 25% as very good, by 28% as good, by 12% as satisfactory, and by 4 % as unsatisfactory. The use of presentations from the lectures was graded as excellent by 96% of the students, by 3% as very good, and 1% provided no evaluation. The use of additional material was graded as excellent by 21% of the students, by 26% as very good, by 37% as good, by 7% as satisfactory, and by 9% as unsatisfactory.
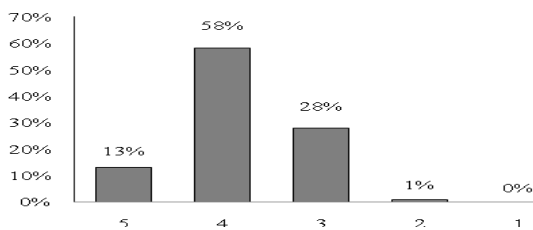

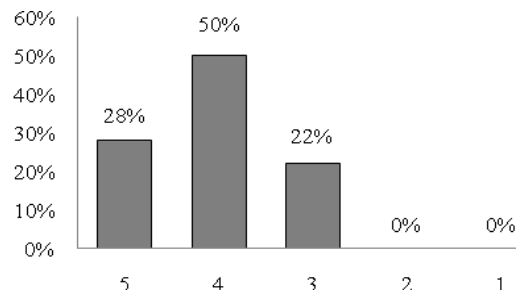**Chart 1.** Students' satisfaction with Omega

Chart 2. How much Omega makes study easier

The use of articles from the Faculty repository was graded as excellent by 8% of the students, by 16% as very good, by 22% as good, by 35% as satisfactory, and by 19% as unsatisfactory. Using the possibility to submit home-works and seminar papers via Omega was graded as excellent by 50% of the students, by 29% as very good, by 15% as good, and by 6% as satisfactory. Using the communication with the teaching staff was graded as excellent by 3% of the students, by 16% as very good and good, and by 29% as satisfactory, and by 34% as unsatisfactory. No evaluation to this question was provided by 2% of the students. Using the communication with students was graded as excellent by 3% of the students, by 4% as very good, by 12% as good, and by 25% as satisfactory, and by 54% as unsatisfactory. There was also no evaluation to this question provided by 2% of the students.

C. Discussion

The results obtained show that the students use the distance learning tool, and that high percentage of them uses such tool relatively often (66% of the students use Omega 2-3 times a week). One of the reasons for such use may be also the fact that a great majority of the students, 55% of them, has the majority of the courses on Omega. These results show that e-learning has been accepted as a standard part of tuition. The survey shows that the students are familiar with the concept of e-learning, and they consider it supplementary to traditional learning (65% of the students think that Omega cannot replace lecturing). Based on the research results, we can determine that the students are satisfied with Omega, and that Omega makes studying easier. None of the respondents evaluated their satisfaction with Omega and with the Omega contents negatively. The contents found on Omega and used most often by the students are the following: presentations used in lectures, submission of home-works and seminar papers, course descriptions and reading lists. The contents on Omega used least often by the students are communication with the teaching staff and communication with fellow students, so that we presume that beside Omega they use e-mail, as well as social networks. Since the number of library science students makes quantitatively a significant part of the

processed sample, particular attention was paid to such students.

Therefore, when analysing only the replies given by the first and the second-year graduate students of library science, the results obtained are obviously very similar to the results of the complete sample. The percentage of students who use Omega 2-3 times a week is the same: 66% of the students.

It is surprising that there are 11% of students among the library science graduates who do not consider Omega to be an e-learning tool, although 92% replied that they were familiar with the e-learning concept, and that majority of them uses Omega relatively often.

As regards the user's satisfaction with Omega, the results of the graduate students sample are as follows: it was graded as an excellent tool by 15% of the students, by 64% as very good, by 19% as good, and by 2% as satisfactory.

It has been noticed that the percentage of students who evaluated Omega as excellent and very good is higher than the percentage on the entire sample. It is interesting that there are students who evaluated their satisfaction with Omega as satisfactory, and yet to the question about to what degree Omega makes studying easier, no one evaluated this aspect as satisfactory.

Having compared the results of the last question (i.e. the students were asked to evaluate what contents they used most) obtained from the entire sample, with the results obtained only from the graduate students sample, there are no significant differences to be noticed.

An analysis of the third-year undergraduates' results shows little departure from the results obtained from the graduate students. Due to the fact that the undergraduates sample is small, only 15 students, such results cannot be given in percentages. The analysis of replies showed that 8 students have most of the courses on Omega.

It is of particular interest that all the students replied they were familiar with the e-learning concept, and that Omega was an e-learning tool. The question comes to mind: how is it that there are graduates who do not know about e-learning, and why is it so? Asked to evaluate their satisfaction with Omega, 9 out of 15 students graded their satisfaction with Omega as good, but 12 students evaluated Omega as very good in making their study easier.

This means that Omega after all makes studying easier, but it still needs to be worked on. The contents on Omega used by the undergraduates most often are presentations from lectures and submission of home-works; the least used contents are the communication

with the teaching stuff and fellow students. These data are the same as the data from the graduates.

III. CONCLUSION

E-learning has become integrated in LIS curriculum at Faculty of Humanities and Social Science in Zagreb. A tool for e-learning at the Faculty is called Omega. A survey was conducted among students to see what their opinion on Omega was and whether Omega was making their studying easier. The results show that students often use Omega, that they have the majority of courses on Omega. The survey also shows that the majority of students are familiar with the concept of e-learning, considering it supplementary to traditional learning. The students are satisfied with Omega, and Omega makes their studying easier. The contents used most often by the students are the following: presentations used in lectures, submission of homework and seminar papers, course descriptions and reading lists. Comparing undergraduate and graduate students, the survey has shown that there are still graduate students who are not familiar with e-learning, while all the undergraduate students replied that they knew what e-learning was. Likewise, the satisfaction with Omega is greater among graduate students than it is among the undergraduates. The authors believe that this type of research should be conducted regularly on annual basis, thus enabling e-learning to be improved.

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