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Evolution of Professional Ethics Courses from Web Supported Learning towards E-Learning 2.0

Katerina Zdravkova¹, Mirjana Ivanović², and Zoran Putnik³

¹ University Ss Cyril and Methodius, Faculty of Natural Sciences and Mathematics,
Institute of Informatics, Skopje

^{2,3} University of Novi Sad, Faculty of Natural Sciences and Mathematics,
Department of Mathematics and Computer Science, Novi Sad
keti@ii.edu.mk, {mira,putnik}@dmi.uns.ac.rs

Abstract. Skopje and Novi Sad share several joint courses in Professional Ethics at undergraduate level and at postgraduate level. These courses have been delivered to almost 1000 students from 14 different target groups. For seven years, teaching, learning as well as assessment have been steadily growing from traditional Web supported learning, through blended learning, towards Web 2.0. This paper presents all the stages of the courses evolution using several learning management systems, and the effort to enhance teaching, learning and active contribution of all the actors in the educational process. Particular attention is paid to our latest experience using Moodle and its social networking aspects in education. This survey reveals all the activities during the course delivery including student workload, grading system, and teacher's efforts to maintain the courses. Student encouraging impressions regarding the content delivery and assessment, their personal opinion about the impact of e-learning 2.0 to quality and quantity of acquired new knowledge, and sincere suggestions to persist in the same direction are the greatest assurance that social networks are currently the best way to deliver computer ethics courses. At the same time, it seems that this approach is the most exhausting and the most challenging for the teachers, but at the same time, the best balance between the effort undertaken and the results obtained.

Keywords: Web supported learning, Blended learning, Social networking.

1 Introduction

Almost 15 years ago, Markus [1] concluded that despite integration of multimedia and first e-mail etiquette, negative social impact of new technology "may not prove easy to eradicate". In their survey from 2003 [2], Morahan-Martin and Schumacher claimed that Internet use caused loneliness. And, they were not sole. Negative social impact of information technology was usually predominant. Starting from 1997, when Jay Cros [3] coined the term e-learning, i.e. Internet-enabled learning computer technology, Internet became one of the basic media for teaching and learning content. Traditional face-to-face education lost its role, and many students decided to attend on-line classes. And, some students became even more alienated than previously.

First attempt to “socialize” Internet users was the site Classmates.com [4]. Launched too early, it couldn’t get high attention, but soon later, social networking sites made a revolution between Internet users. It was high time to switch from Web 1.0 to Web 2.0. Recent research made by Nielsen Online [5] reports that top 10 social networking sites had almost 76 million unique visitors in September 2008. Compared with 33 million visitors in September 2007, the average growth is 167%.

In Web 1.0 a few content authors provided content for a wide audience of relatively passive readers. Web 2.0 is already transforming our social lives and is quickly becoming a competitive tool for education [6]. Very important conclusions connected to usage of social networks in education are given by De Weaver [7]. A survey conducted on a large group of students and instructors, revealed that newer forms of activities, like collaborating and sharing information to a community, are less popular though. Social software has the potential not only to enhance particular aspects of teaching and learning, but also to significantly contribute to the creation of new forms of these activities. Bryant [8] summarises potential developments in this area as: ‘The adoption of social software tools, techniques and ideas will be the most important and visible example of the use of emerging technology in education over the next few years’. Another example of related work is reported by Franceschi [9], where a suggestion for improvement of social networks within e-learning systems has been given. The last, but not the least research is done within Comtella project [10, 11, and 12]. It is an impressive example of the implementation of Web 2.0 in blended classes, based on self-developed peer-to-peer file and bookmark sharing system aimed to share papers in several courses, including a professional ethics course.

2 Related Work

The emergence of Web 2.0 technologies promotes the growth of service-based applications and greater user-control over content and connection [13]. Recent developments in web-based services and the enhancement of collaborative tools have fuelled the demand for similarly-specified educational software and services. A lot of universities across the world now deploy blogs, ePortfolios and educational social software for use by the academic community. In spite of the widespread support of these learning tools, still there is no adequate number of reports and analyses to appropriately validate the level of their utilization by tutors and students. But there are some publications bringing more or less optimistic results. The main analysis in [14] was based on observing student access and use of educational tools as well as on the anonymous recording of student experiences of using other social software in a non-educational context. More complex view of educational activities is given in [15]. They concluded that usage of social tools allow students to share capabilities and knowledge, bringing the synergetic effect to learning and life as well. Recent paper by Bernsteiner [16] presents the results of an empirical survey in order to highlight the benefits of the Web-based social software tools from the student’s point of view. As motivation is on different levels, the lecturers have to increase it during lessons. Fortunately there are students, who were highly motivated and were creating the content and adding them to the wikis [17].

3 Setting Up the Scene

In last decade, many LMS have been developed to support new education trends. Probably one of the most popular, particularly for educators, is Moodle with more than 28 million users, supporting the delivery of more than 2.5 million courses [18].

Starting from academic 2005/06, both institutions presented in this paper switched from static LMS to Moodle (Skopje), or from static usage of Moodle to social networks (Novi Sad), showing that static LMS at both institutions become obsolete. Encouraged by the appreciation of more than 3500 active participants at both institutions, we can claim that the success of social network strategy in e-education utilized in our institutions is evident. One additional note should be made here – while most of the research papers, and experience reports present positive attitudes and opinions about social networks in general [19] and their usage within e-learning [20], there are some negative positions too [21].

4 Evolution of the Courses: From Static Form to the Social Network

The development of educational technologies in last decade directs to think at learning as both a personal and collective experience. Cooperative and the collaborative learning promote the use of social tools in order to involve all e-learners in building a common knowledge.

4.1 Stage One: Web Supported Learning

First delivery of the course on ethics at undergraduate level started in October 2002 in Skopje. All the contents were prepared by the teacher and by students. Presentations were oral, and they were followed by small discussions during the lecture. The contents were periodically uploaded on a static course site. Mutual communication between students and the teacher was either face-to-face, or by e-mail. Similar course in Novi Sad for the first time was realised in October 2005. While presented to the students through oral lectures and PowerPoint presentations, the whole teaching material was published on a web-site using Moodle. A greater interest in the topics presented within the course and methods of course delivery, was confirmed by higher number of students in each new school year.

Moodle was used for static presentation of teaching material, but since Bologna principles required class attendance, it was more of a material repository, than used for some profound purposes. Although discussions, as a valuable social element of learning were announced at least a week in advance, feedback of all the students independently of the generation was rather poor. Discussions were directed by the teacher, usually involving very few participants. Forums were the only elements of social networks used for publication of announcements of important events, and e-mail correspondence of students with lecturers. They were selected as primary way of communication as they were mostly topic (not people) focused.

4.2 Stage Two: Blended Learning

Beginning of the course for first generation of postgraduate students in Novi Sad and in Skopje started in 2006, when Moodle was implemented, initially aiming to augment face-to-face lectures. Initially, Moodle was mostly used as a repository of teaching materials, either as a fixed collection of files, or as an active set of animated e-lessons. Still, the repository was in its essence static. Communication was aimed towards teachers and teachers only. While lecture attendance was part of the obligatory requirements for the new generations of students, e-communication was still an idea worth introducing, as an attempt in perfection of the course.

In order to avoid exhausting oral examinations, an e-test with 250 questions was designed in Skopje. Initially weak results soon became impeccable. After a small investigation, it appeared that students who had already finished the e-test copied the questions and their correct answers, and distributed them to those who will have the exam later. This student fake showed that it was high time to change the delivery of the course, to enhance student active participation, and to change the grading scheme. In Novi Sad, similar repository of around 200 questions exists, but it is not used for e-testing, but within “regular” classroom tests instead. Since this assumes presence of the assistant, elements of cheating, while existing, were not that flagrant.

4.3 Stage Three: Active Contribution of All the Participants

The experience gathered during the usage of Moodle from some other joined courses [22] showed that the inclusion of other elements available within LMS, like forums, chats, or e-mail usage, could create a more dynamic system, system known in contemporary research as a social network. This academic year, almost all the students participated in social network rather freely. Even those who are recognized as shy and silent persons during lectures, find themselves very involved in discussions, arguments, and even quarrels with other colleagues, when it comes to questions important to them. Yet, this does not come as a surprise, since the tendency of introvert students to reveal their opinions within electronic communication, when not faced literally with the rest of colleagues. Another point worth mentioning is the fact that created social networks influenced widening of topics in question. Even though at the beginning points to be discussed were strictly defined, very often discussions diverged to various directions, touching each matter connected to the original one that is interesting for students. As a natural improvement, forums were used to apply well-known technique of role-playing games. Students were given certain roles and were invited to participate in a scenario connected with some ethical and moral issues, discussing and defending opinions represented by their roles. During a fortnight, student teams actively defended their roles, with an average of 9.73 posts per student. Teachers were also involved in the discussions to direct them. At the end, using a supporting forum, student prepared team reports of their groups. This forum had 10.07 posts per student, showing the usefulness of on-line discussions. It took some time for students to start communicating and sharing opinions, but each year, it eventually came to this point. Probably because of shared experience with previous generations, time between those phases has been shortened.

5 Conclusion and Intended Evolution of the Courses

Obvious benefit of the steady evolution of our joint courses towards social software was the active involvement of all the students, including those who are usually idle. With new “socialised” approach, students were motivated, stimulated and sometimes provoked to reveal their own ideas. To support their assertions, they dug into different sources to discover other sources in favour of their opinion. Such research stimulated their intellectual capacities, and prepared them for future research. In many occasions, research was not directed to computers ethics only, but also to related areas.

Further great benefit of Web 2.0 in our course was the possibility of relaxed, and at the same time, efficient group collaboration. Using forums, students virtually met their colleagues, followed the development of the group project, and presented their findings. Research and group essay preparation progress was clearly evident at every moment, individual contribution was obvious, so nobody could object that his/her contribution was neglected, or the freedom of speech withdrawn.

Grading facilities of Moodle were another asset. At every moment, students could exactly know current result, including the information whether their contribution was successful, or not. Any of usual student complaints connected with the grading, such as underestimation of their workload, or overestimation of the others, was impossible since the entire communication and effort are completely overt to all the students and to teachers. And, completely transparent communication was an ideal way to judge personal achievements in relation to the achievements of the others.

Frequent discussions on different topics involving all the students and the teachers were the best way to be always in line with the newest events related to the course, including the breaking news. As a result, the awareness of students and teachers for the course increased. At the same time, the repository of teaching materials enlarged.

The last and certainly not the least advantage of Moodle was the impossibility to cheat and to fake personal outcomes. Namely, students couldn't finish the assignments behind schedule and claim that the deadline was not precise, or that they delivered the assignment on time, because all the closing dates were visible, and Moodle kept records of all their activities. Furthermore, even if somebody decided to do the assignments instead of another colleague (which is still common in the region), he/she could not replace the actual student in the forums.

Apart of these advantages, e-learning 2.0 brings some problems. First of all, technical prerequisites must be faultless, such as constant availability of the server, impeccable Internet connection, and a permanently high scalability. In the beginning of the academic year, occasional slow response, due to many users competing for the same resource close to final deadline happened. Hopefully, this problem was gradually settled, because students became more professional.

Social networking was exhausting both for the students, and for the teachers. Whenever students were not on-line, they could not actively participate. However, unlike students from the survey mentioned earlier on [21], our students were much more enthusiastic with e-learning 2.0. They never complained that fully transparent approach was a problem for them. However, social software in education is a treat to student privacy. We are aware that this is one of the weakest aspects, and it can't easily be resolved.

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