ORIGINAL PAPER

AN OVERVIEW OF ISSUES CONCERNING STUDENTS' AND TUTORS' INVOLVEMENT IN THE "DESIGNING TEL COURSE"

LAURA MONICA GORGHIU [1], GABRIEL GORGHIU [2], MIHAI BÎZOI[2], ANA-MARIA SUDUC[2], RADU LUCIAN OLTEANU[1], CRINELA DUMITRESCU[1]

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Abstract. *The beginning of the 21st century recorded huge steps in the development of technology and innovative solutions that can be applied in all areas, including education. At present, beside technology, communication and collaboration represent important channels for successful activities or projects developed by educational communities, even they are worldwide located. In this respect, the partnership of the European LLP-KA3 transversal project no. 511733-LLP-1-2010-1-FI-KA3-KA3MP entitled "Enabling Creative Collaboration through Supportive Technologies" has organized the on-line course "Designing Technology-Enhanced Learning (TEL)". The paper presents the main considerations emphasized by the students concerning the Designing TEL course experience and the tutors' considerations related to how students accomplished their tasks working cooperatively, being creative in the dedicated 3D collaborative space and producing qualitative pedagogical and technological scripts.*

Keywords: *Technology-enhanced learning, on-line tutoring, on-line course, collaborative environments, 3D spaces, KA3-ICT project.*

1. INTRODUCTION

Since the beginning of the 21st century a huge number of innovative solutions have been recorded and applied in the new technology development. The number of new and more and more tiny devices that are produced in present is very high. There is a fierce battle between the manufacturing companies of different hardware and software products in order to obtain the market supremacy. As example, the implementing - in the last years - of the nano-materials and nano-technologies [1] leaded to more and more powerful products packed in a lower and lower dimension. As the prices of the new products became competitive and the customers have been satisfied by the quality-price ratio, the dependence of our society by the use of all those new gadgets became a reality. Of course, in order to use all those new technology products to their real value, we are forced to learn continuously how to manage them.

These changes occurring increasingly rapidly in our society and the labor market caused changes in the relationship between people's work and education. At present, a career requires new skills, including: independent acquisition and application of knowledge, problem solving, learning and use of collaborative skills, and professional multidimensional

[1] Valahia University of Targoviste, Faculty of Sciences and Arts, 130024 Targoviste, Romania. E-mail: lgorghiu@gmail.com.
[2] Valahia University of Targoviste, Faculty of Electrical Engineering, Electronics and Information Technology, 130024 Targoviste, Romania. E-mail: ggorghiu@yahoo.com.

cooperation / lifelong learning skills. Starting from those premises, the lifelong-learning, in general, and the requirements for continuous development of knowledge and professional skills, in particular, led to new ways of organizing of the learning. So, in this so-called Age of Knowledge, we need to help the students, learners and productive members of society to be informed on the latest news that appear in various fields, which can be achieved through cooperation and active participation in group activities and communities to which they belong. If the cooperation / collaboration between the communities' members become creative by using the new technologies, much higher results of learning will be expected.

It is well known that collaborative learning involves a challenge to a learner to engage actively, to process and synthesize information rather than memorize them [2]. In collaborative learning environments, learners are challenged equally emotional and cognitive, context in which they listen to different opinions that should correlate with their opinions and argue their own points of view [3]. In such contexts, learners gradually structuring their own set of knowledge and not merely ready to take organized structures presented in books or provided by the teacher. Thus, the modern teaching/learning methods based on new information and communication technologies that have begun to be used in the educational process in recent decades have led to the formulation of new concepts. Different studies have shown that learning technology can enhance individual and collaborative cognitive activities of the group [4], if the following statements have in view: a) technology can act as a communication tool that facilitates interaction; b) technology can act as a source of knowledge and resources to represent and develop ideas, reflections; c) technology can act as a mediation tool to help students focus on the issues discussed; d) technology can act as a visualization tool to objective thinking, providing opportunities to reflect on their thinking by writing and submitting individual achievements [5].

Thus, the new technology-enhanced learning invites the learners to personalized interpretation and assigning new meanings in knowledge, critical evaluation and decision, the reasoning and argumentation, synthesis and conceptualization, originality, creativity and innovation.

2. BACKGROUND

Taking into consideration the mentioned facts, Valahia University Targoviste, in its quality of partner in the frame of the European LLP-KA3 transversal project no. 511733-LLP-1-2010-1-FI-KA3-KA3MP entitled "CoCreat - Enabling Creative Collaboration through Supportive Technologies" (http://www.cocreat.eu) [6] has organized the on-line course "*Designing Technology-Enhanced Learning (TEL)*", coordinated by the University of Oulu. The objectives of the course (http://www.oulu.fi/let/node/11372) [7] were oriented to making students familiar with the key concepts; learning the theories and approaches of designing technology-enhanced learning; developing practical skills of setting up, implementing and evaluating the use of TEL systems and tools; designing of a prototype of a TEL course. The activities of the course have been developed on a 14 weeks period. The target group of the TEL course involved students from four EU countries: Romania, Finland, Estonia and Norway. The participants were divided in twelve international working groups, having general tasks but also particular ones.

The TEL course structure involved the following steps: phase I - warming up, phase II - decision about the working methods; phase III - writing a pedagogical script; phase IV - writing a technical script; phase V - implementing the virtual course; phase VI - evaluation. During the phases, the scripts of the twelve international groups of learners were different.

Thus, groups 1-4 had to participate in the first two phases to prompted discussions, then during the phase III and IV they had to work with functional roles and at the last two phases they were involved in loosely structured virtual discussion. At the same time, groups 5-8 were involved in loosely structured virtual discussions during the first two phases of the course, then they have been involved in prompted discussions during the phases III-IV and in the last two phases they worked with functional roles. For the last four groups (9-12) only basic instructions have been provided, the learners being forced to study without scripts. During the course activities, the students had the possibility to select the proper technology for communication and collaboration inside the group (*Moodle*, *Wiki spaces*, *Blogs*, *Wordpress* and *Google Docs*). In order to motivate the learners to follow the TEL course activities and enhance the creative collaboration, the *3D SecondLife space* was used by the tutors and learners. The feedback from the course participants have been obtained by filling-in the on-line questionnaires and by the discussions organized in *SecondLife*, Moodle and other small-groups' working spaces. In the following part of the paper, some issues related to the tutor's experience during the TEL course are presented.

3. FINDINGS AND RESULTS

Designing the prototype of a TEL course by each group of learners involved specific tasks and activities which had to be well structured in time. The main stages of TEL course designing were: pedagogical script, technical script, course platform and implementation, peer evaluation. To achieve the goals mentioned above, specific task / topics were established:

1) Getting familiar with the course environments (*SecondLife*, *Moodle*, *Face-to-face* - environments);

2) Get to know each other (by using *Moodle* environment);

3) Discussion about working methods (in *Moodle* and/or *SecondLife* environments);

4) Pedagogical script of the course;

5) Technical script of the course;

6) Building up a course platform;

7) Peer evaluation.

From the tutor's point of view, stages 2 and 3 are very important due the fact that it was the first approach that involved the students in relation to their tutor. For the tutor, it was relevant to know or have an idea about the following issues:

- What do they want to learn during the course? What are their goals?
- Which subjects they are especially interested in the field of technology-enhanced learning?
- What are their earlier experiences and knowledge about technology-enhanced learning?

Fig. 1 illustrates an example of how a student introduced himself/herself, and the expectances mentioned by one student, in the forum created by the tutors' team in the *Moodle* student's space, in order to get to know each other.

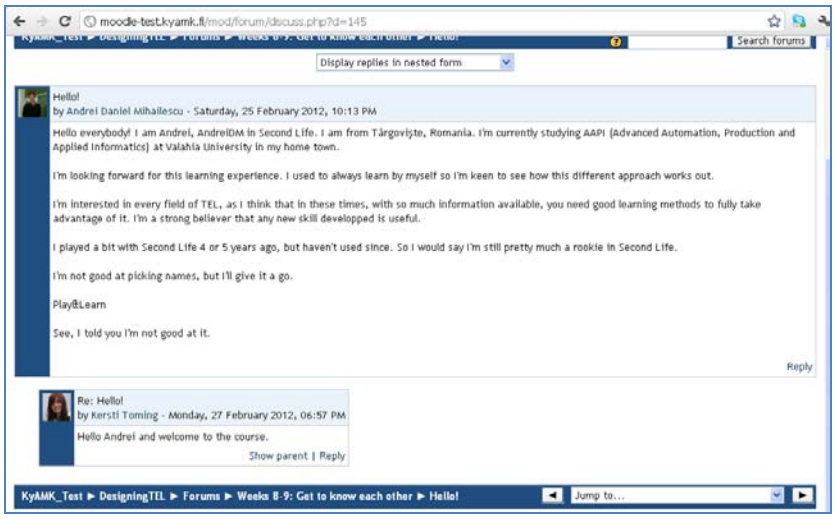


Fig. 1. Introducing himself/herself and illustrating the course expectances by a certain student involved in the *Designing TEL* course.

As a tutor it was a bit difficult in the beginning to assemble the students' team, due the fact there are also other factors to be taken into consideration: students involved in a TEL course group team are both co-located and distributed in different locations (Finland, Romania, Estonia and Norway), there are specific technology that some students are already familiar with and others didn't experience yet, the equipment and connectivity that students had access was different.

In fact, the tutor had to consider how technology can support learning by providing a tool (or a group of tools) in order to assure:

a) *access to course resources*: what type of material should be supported (text, multimedia), who should get access to it and if is there any specific learning tool that students should access;

b) *communication among students*: support for synchronous (i.e. students talking to each others like in face-to-face meeting - in the *SecondLife* environment, chatting and instant messaging tools, virtual meetings) and asynchronous communication (i.e. when students are not present at the same time - *e-mail*, *blogs*, *Twitter*);

c) *collaborative work*: students need support for working together (synchronous or asynchronous), discussing and coordinating their activities (e.g. fixing meetings, defining plans), awareness in the cooperative work stages (e.g. who is doing what, how is work progressing).

During the stages 4 and 5 (*pedagogical and technical scripts of the course*) in order to get different perspectives to discussion, students had a certain role in their own team: *initiator-contributor* (starts the discussion, propose new ideas or approaches to group problem solving and also may suggest a different approach to procedure), *information seekers*, *information givers* and *evaluation-critics* (makes an effort to judge the evidence and conclusions that group suggested).

The tutors considered that it was better to let and encourage the students to assume their own role in the team as they consider (based on their knowledge and previous experiences), and only to support the team on the proposed goal than to give to each team member a certain role. Fig. 2 presents the assumed roles and activities by the members of a certain group.

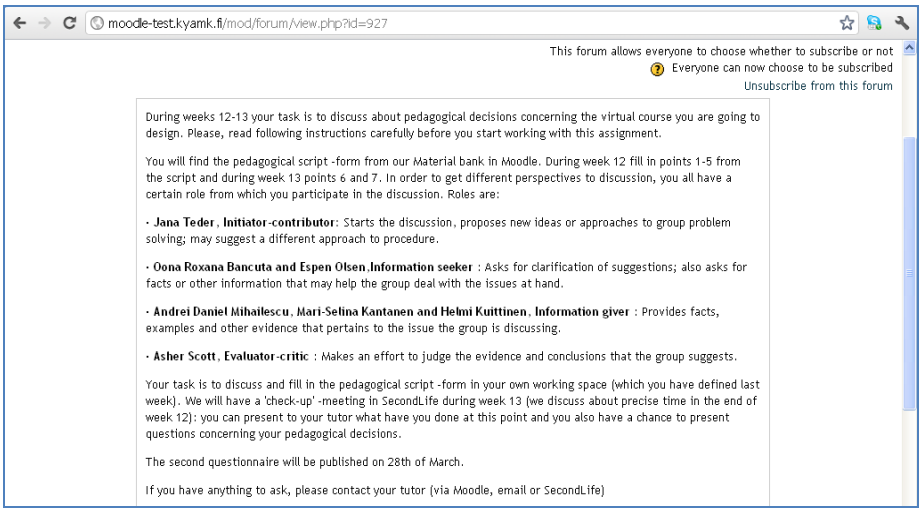


Fig. 2. Assuming roles in the working group for developing the TEL course.

All the pedagogical decisions have been made in such way that the special characteristics of the target groups were taken into consideration. The group member's contribution in the team work was heterogeneous depending mainly on their knowledge on designing a course. The members who are prospective teachers and have a pedagogical background were more active, the team work being most supported by their contribution. The members without having any idea about the course structure, pedagogical techniques, etc. were less active. In fact, this was the main reason for dropping out of the course of some students in this phase. It was noted that many course attendees - when they decided to participate to this course - were attracted by the technical part of the course. *SecondLife*, *Moodle*, *Sloodle*, etc. represent technologies that made them excited and wishful for attending the course. When they faced the pedagogical part of the course, some of them dropped out, while some other studied more and learned for the first time how to design a course.

During the "*Designing of the technical script of the course*" stage, each group had to decide which environment was the suitable one to be used in the frame of the implementation phase. Figs. 3 – 5 present the elements which were taken into consideration by a group of students, during the designing of the technical script.

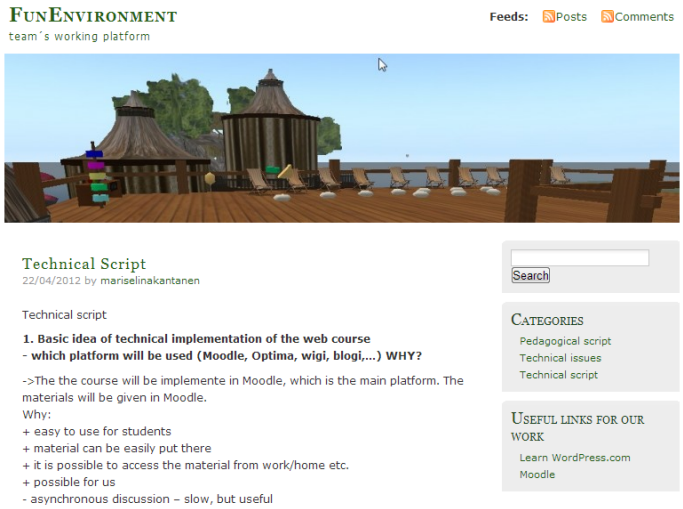
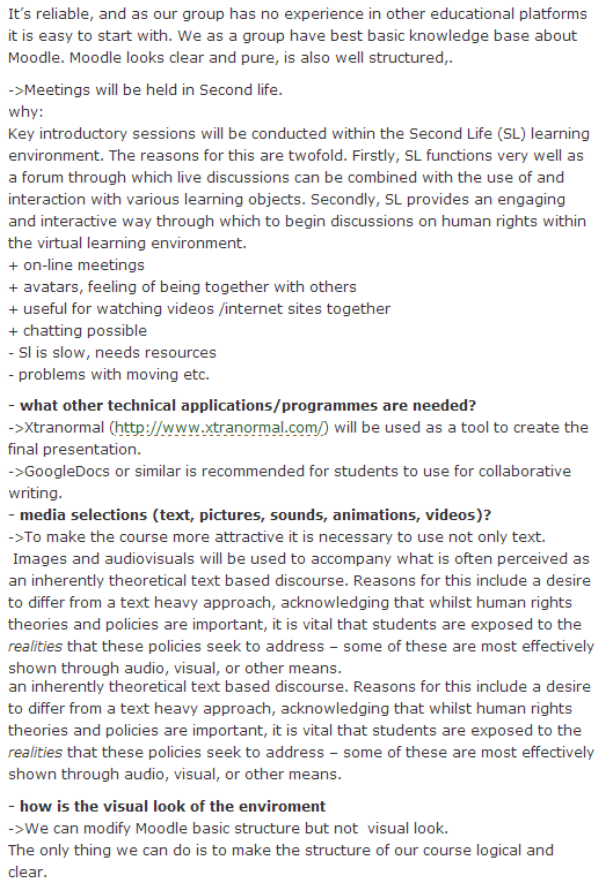


Fig. 3. Introducing the basic idea of technical implementation of the web course.



It's reliable, and as our group has no experience in other educational platforms it is easy to start with. We as a group have best basic knowledge base about Moodle. Moodle looks clear and pure, is also well structured,.

->Meetings will be held in Second life.
why:
Key introductory sessions will be conducted within the Second Life (SL) learning environment. The reasons for this are twofold. Firstly, SL functions very well as a forum through which live discussions can be combined with the use of and interaction with various learning objects. Secondly, SL provides an engaging and interactive way through which to begin discussions on human rights within the virtual learning environment.
+ on-line meetings
+ avatars, feeling of being together with others
+ useful for watching videos /internet sites together
+ chatting possible
- Sl is slow, needs resources
- problems with moving etc.

- what other technical applications/programmes are needed?
->Xtranormal (http://www.xtranormal.com/) will be used as a tool to create the final presentation.
->GoogleDocs or similar is recommended for students to use for collaborative writing.
- media selections (text, pictures, sounds, animations, videos)?
->To make the course more attractive it is necessary to use not only text. Images and audiovisuals will be used to accompany what is often perceived as an inherently theoretical text based discourse. Reasons for this include a desire to differ from a text heavy approach, acknowledging that whilst human rights theories and policies are important, it is vital that students are exposed to the *realities* that these policies seek to address – some of these are most effectively shown through audio, visual, or other means.
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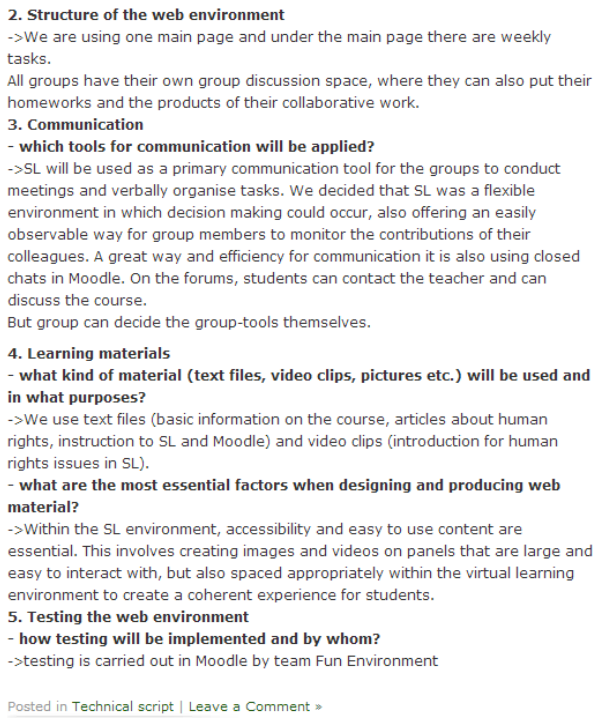
- how is the visual look of the enviroment
->We can modify Moodle basic structure but not visual look.
The only thing we can do is to make the structure of our course logical and clear.

Fig. 4. Introducing the needed technical applications and selected media for implementation of the web course.



2. Structure of the web environment
->We are using one main page and under the main page there are weekly tasks.
All groups have their own group discussion space, where they can also put their homeworks and the products of their collaborative work.
3. Communication
- which tools for communication will be applied?
->SL will be used as a primary communication tool for the groups to conduct meetings and verbally organise tasks. We decided that SL was a flexible environment in which decision making could occur, also offering an easily observable way for group members to monitor the contributions of their colleagues. A great way and efficiency for communication it is also using closed chats in Moodle. On the forums, students can contact the teacher and can discuss the course.
But group can decide the group-tools themselves.

4. Learning materials
- what kind of material (text files, video clips, pictures etc.) will be used and in what purposes?
->We use text files (basic information on the course, articles about human rights, instruction to SL and Moodle) and video clips (introduction for human rights issues in SL).
- what are the most essential factors when designing and producing web material?
->Within the SL environment, accessibility and easy to use content are essential. This involves creating images and videos on panels that are large and easy to interact with, but also spaced appropriately within the virtual learning environment to create a coherent experience for students.
5. Testing the web environment
- how testing will be implemented and by whom?
->testing is carried out in Moodle by team Fun Environment

Posted in Technical script | Leave a Comment »

Fig. 5. Describing the structure and the communication possibilities of the web environment, and presentation of the available channels to introduce learning materials, inside the web environment selected by the group.

From the technical script point of view, the tutor must pay attention that the form of the on-line material had to be explicit, well justified and clearly based on the course materials (whether the script has included a description and a detailed and realistic timetable for testing the course platform).

During the "*Building up a course platform*" stage, the tutor had to take into consideration if the implementation process follows the pedagogical and technical scripts, if the course is functional (in terms of technology, content and pedagogy) and also if the technical implementation is creative and innovative (compared with previous implementations and traditional online courses).

As tutor in the last stage of "*Peer evaluation*" the attention was focused on the feedback (if this is comprehensive and critical as well as if it raises new perspectives, helping the development of the course). At the same time, the tutor must observe if there are multiple innovative suggestions in order to improve the course implementation.

4. CONCLUSIONS

The students' participation to the "*Designing Technology-Enhanced Learning (TEL)*" course, organized in the frame of the CoCreat project, was the first experience on creating a virtual course for most participants. The TEL course forced the students to use different environments to communicate and collaborate and choose the best solutions for presenting their own course.

The imagined structure of the TEL course, the way of structuring the group members and the way of assuming the roles of the members inside of each group led to a real development of creative collaboration between the members' group, forcing them to find innovative solutions to define the topic of the course, to design the learning materials and to use the selected web environments for implementing their own course.

Participating as tutor in the "*Designing Technology-Enhanced Learning (TEL)*" was a complex experience due to the different way of working within the different groups during the course duration, and the difference between the students' background and their knowledge related to the use of various environments proposed by the CoCreat project partnership.

However, even some students have dropped out of the course - most of them during the *pedagogical script stage* -, the partnership of the CoCreat project consider the experience of organizing the TEL course as a good one and decided to organize an improved edition.

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