eCOMMUNICATION IN eLEARNING

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Abstract

The article brings several opinion on application e-learning tools in mostly face-to-face formal teaching. It especially focusses on different types of interactions: interactions among students, students and teacher, interaction with materials and objects, but also, visual representations, etc. Interaction Design is a discipline present since 1980s and it deals with "shaping digital things for people's use". Many online course designers build their courses intuitively without having computational background and digital pedagogy background. Not all "traditional" teachers are ready to build and run e-courses is what practice shows. The author analyses the survey and interviews realized with e-tutor and e-students and suggests the ways how to help teachers to create more interactive courses.

Keywords: Interaction, e-course, Material, Tutor, Student

Introduction

Dib (1988) in his text dealing with formal and informal education defines or characterizes the formal education as "a systematic, organized education model, structured and administered according to a given set of laws and norms, presenting a rather rigid curriculum as regards objectives, content and methodology. It is characterized by a contiguous education process named, as Sarramona remarks, "presential education", which necessarily involves the teacher, the students and the institution. … "... "Formal education institutions are administratively, physically and curricularly organized and require from students a minimum classroom attendance. There is a program that teachers and students alike must observe, involving intermediate and final assessments in order to advance students to the next learning stage."… "The methodology is basically expositive, scarcely relating to the desired behavioral objectives - as a matter of fact, it is but seldom that such targets are operationally established." The text written in 1988 does not correspond to the current reality and helps us to understand the shift and progress that has been made in education. The formal education is not exclusively face to face teaching as well as the laws allow (to certain

extent) freedom of choice of methods, tools and even the content (within the frame stated).

Formal education universities and educational institutions (as well as companies implementing long-life teaching, professional development courses) are intensely expanding their e-courses understanding their positives (e.g. economic values, no travel needs, no premises needs, time independence, no geographical barriers, speed, etc.) what is a natural reaction to the technology development. Even though it might sounded in 1988 as a science fiction the truth is that there are various ways of how to transfer education to the learner instead of physical presence of the learner in the classroom where the teacher, classmates and materials are present.

Distance education is not new to us. The term distance education is frequently understood as a full synonym of e-learning what is not correct. Different forms of distance education were present in Slovakia too. The radio/TV programmes, correspondence course (EŠKK have been here since 90ties).

Digital area brought different means of communication and information transfer what allowed introducing new technology to teaching and learning as well. Starting with data ftp transfer, email exchange, web presentation multimedia presentations and learning management systems or content management system, we nowadays face an enormous increase of MOOC (massive open online courses) offering what is a form of distance education offering a wide spectrum of course that could be labeled with different tags (non)-formal course, (non)-credited course etc.

1 Types of interaction in e-courses

There are different types of online courses that can appear to be text-based only that usually do not support cooperation and critical thinking, they do not develop communication skills, however they rather offer material for self-study with possible delayed feedback given by the tutor. This is where we have to carefully consider what the difference between an online teaching/learning and publishing the documents is. There are teachers who use different platforms (including L(C)MS) to publish materials to students to support their face-to-face lessons, or materials for self-study that would be in older times given printed to students for further study. On the other hand, in online courses different types of interactions and feedbacks are expected (not just learner–material interaction). Watts (2010) defined three main types of interaction in an online distance learning course:

- learner-to-content interaction
- learner-to-learner interaction
- learner-to-instructor interaction.

This model was also suggested by Moore (1989) who provided the definition of three modes of interaction: learner-content or subject of study, learner-instructor, and learner-learner. Learner-content interaction implicates the student interacting with the subject of study. Learner-instructor interaction deals with the instructor making presentations, demonstrating and practicing skills, modeling values, organizing and evaluating student learning, and providing feedback and support. Students derive learning from interaction with their peers via debate, collaboration, idea manipulation, and incidental learning.

Tutor/E-moderator is one of the key factors influencing the success of a course. Tutor helps course participants in the initial stages to get familiar with system, other participants. Tutor makes himself visible when needed, he is resource, guide and facilitator; he creates the opportunities for students to cooperate, he suggests activities in a way that students can interact with materials, he makes learning autonomous and learner centered; he gives the feedback. He has to have social skills to be good at communicating with participants, challenging discussions and keeping students motivated as well as technical skills (at least basic skills in working within the system). Tutor, designer and graphics designers, course administrator are not always the same person. The realization of the course starts sooner before students log in for the first time and it is not over when the students pass the last exams.

2 Salmon's Model of teaching and learning online through online networking

Salmon (2003, first edition published in 2000) introduced Model of teaching and learning online through online networking (see figure 1) that discusses the stages of the course realization focusing on the role of course-moderator. He divides the course into five stages. The purpose of the first stage (Access and motivation) Salmon "is to expose participants to the platform (not train them), and to enable them to become successful in using technology and see the benefits." Students can e.g. participate in Social for a introducing themselves, their hobbies, interests, motivation to join the course, or the tutor creates small groups and they can exchange emails. It is important to offer them support in case of various problems. Many courses offer e.g. different Technical and already mentioned Social fora but as personal touch is important also e-mail contacts are useful.

The second stage (Socialisation) aims at building trust, "we try to address with the critical issues of participation, emotions and time throughout the e-tivities". It is also the stage where we usually present the principles for online work and communication. It is very important that students understand the principles and rules of online education and as Salmon stresses that E-moderators must „use their skills to ensure that

participants develop a sense of community in the medium“. At stage 3 (information Exchange) „we first introduce the idea of using resources outside the e-tivity interchanges themselves“. Knowledge construction is stage number 4 that “includes a guide to online discussion, opening a topic, seeking information, building knowledge and closing down a topic.” The last, 5th stage is named Development and the it includes “a final ‘footprint’ and a relaxed ‘cyberbar’ area for saying goodbye and making arrangements to stay in touch“.

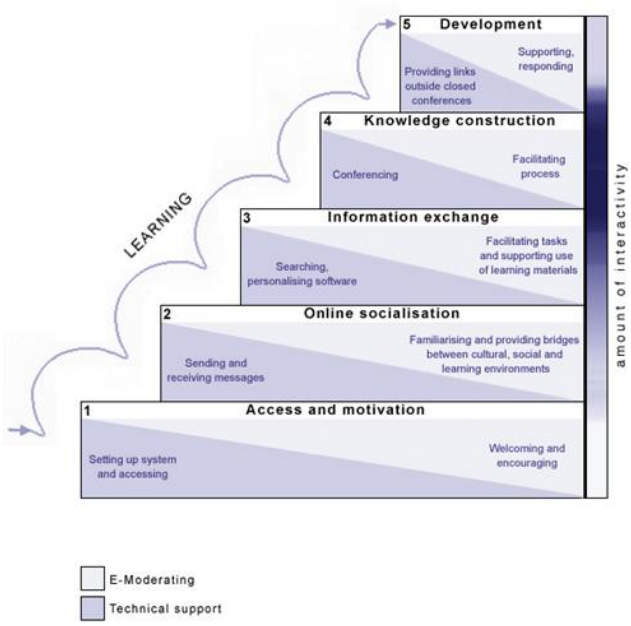

Figure 1 Model of teaching and learning online through online networking (Salmon, 2003)

3 Stages of the student participation in an e-course

While Salmon divides the course from the moderator’s perspective, Mark Lange (in Schone, 2007) defines the stages (he uses the term level) focusing on learner experience:

- Level 1 – Passive – The learner acts merely as a receiver of information. The learner may read text on the screen as well as graphics, charts and illustrations and navigate back and forth. (This would be e.g. presentation of materials for self-study.)
- Level 2 – Limited Interaction – The learner makes simple responses to instructional cues – such as scenario-based multiple choice and column matching. (E.g. simple activities (as to the technology used) with the immediate feedback given by computer.)
- Level 3 – Complex Instruction – The learner makes multiple and varied responses to cues. As well as multiple choice quizzes (Level 2)

the learner may be required to type into text boxes and manipulate graphic objects to test the assessment of the information presented. Scenario-based branching, where the progress through the information is based upon answers and decisions input by the learner, can be used.

- Level 4 – Real-time Interaction – The training session involves a life-like set of complex cues and responses. The learner is engaged in a simulation that exactly mirrors the work situation. Stimuli and response are coordinated to the actual environment. Sessions are most likely held in a collaborative environment with other learners and a facilitator. (Here, we can mention not only asynchronous but also synchronous.

As it can be seen there is a clear interconnection between the Salmon's and Lange's stages and both authors lead participants starting in an unknown environment to fulfill students need (especially feeling of love and belonging, acceptance in group, self-esteem, need for self-respect, the need competence, mastery, and self-actualization.

4 Significance of interactions in e-learning

Chickering and Gamson (1987) illustrate the importance of interaction in learning and postulated seven principles for good practice in undergraduate education, out of which five are directly connected to interaction:

- encourages student-faculty contact (learner-to-instructor interaction)
- encourages cooperation (learner-to-learner interaction, learner-to-instructor interaction)
- encourages active learning
- gives prompt feedback (learner-to-content interaction)
- emphasizes time on task (learner-to-content interaction)
- communicates high expectations (learner-to-instructor interaction, learner-to-learner interaction)
- respects diverse talents and ways of learning

5 Moodle tutors and interactions

Having some experience with distant learning as a participant (first course in 1996, the last one 2013) as well as a designer and tutor (using different environments) I had a feeling that I perceive e-education differently compared to majority of e-course designers and/or teachers.

A short survey realized among the Slovak University teachers using LMS Moodle (as one of the most frequently used platform). Learning management system Moodle is an open source that is positively evaluated not only thanks to its simplicity, user-friendliness as well as the fact that it is

an open source. The system helps to manage education, to record students' work and to track their progress. It is also space where teachers can record continuous assessment; students can read teachers feedback as well as share common ideas.

Three research questions were formulated before running the research – What are the tools mostly used by the teachers in Moodle? How do students perceive Moodle as a tool for e-education? What can be done to lighten or lift the burden of e-education from the teacher's shoulders to make it a used tool for computer assisted learning/teaching or to help them to run the courses online and use the advantages the system offers.

The sample of our research consisted of 57 Slovak Moodle e-tutors (42% of males, 58% of females) and 34 University students. Eight teachers out of the sample number created also a focus group for further discussion after the survey analysis.

To learn more about the use of e-education tools (using Moodle) we used three different tools. To collect information about the e-tutors and the level or scope of their use of LMS we used a postal survey (57) as well as face-to face structured interviewing with the focus group consisting of 8 respondents to get qualitative data. The survey consisted of 15 binary and multiple choice questions. To learn more about the students' perception and activity in Moodle we used the self-completion questionnaire for students using LMS Moodle was distributed to 34 students and it consisted of multiple choice and open ended questions. We realize that the samples are not representative however the aim of the study is indicate the status quo in Slovakia and to suggest some ways of more efficient use of e-education and to support it by the data collected.

The survey for teachers consisted of 10 questions and was aimed to learn more about them and their experience with Moodle as well as their opinion on using Moodle (nominal and categorical data).

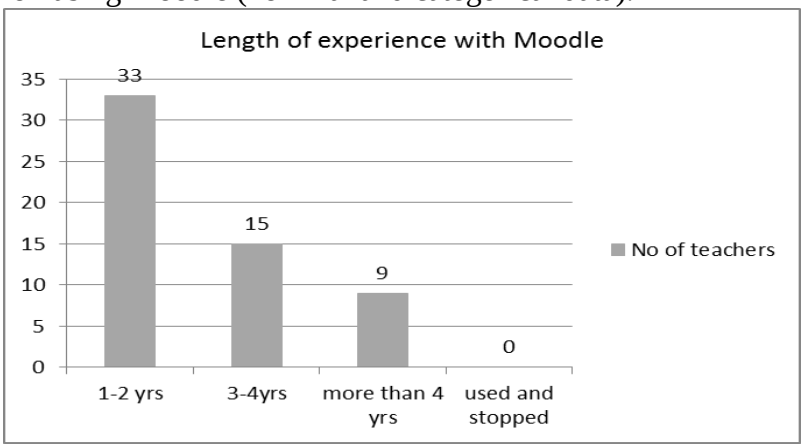

Figure 2 Length of experience with Moodle

As it can be seen in the fig 2, most of our sample (58%) were beginners with Moodle (some of them were teachers without any formal preparation in e-course design, however most of them were trained at one technical workshop. I want to stress the adjective technical and to highlight the aim of the schooling. It was really to master the technical skills necessary for a course technical design. Only rarely people mentioned methodological preparation for e-course writing and moderating. Unfortunately, for years we have experience that with new technologies introduced to schools we offer workshops how to use the technology technically but not effectively and methodologically correctly (we understand that it cannot be generalized, however, it seems that it is true about the majority of technologies). The truth is that after some time there are various methodology guidelines published how to use it effectively, but usually the publications are preceded by the experience of enthusiasts that can be characterized by the method attempt/trial – mistake/error.

We can positively state that people who start using LMS Moodle find its advantage and use it at least to support their teaching. As we can see in figure 2 more than 27% of teachers using LMS Moodle for less than 2 years have built and used more than 5 courses. All teachers using Moodle for longer period than 2 years run more than 5 courses per year.

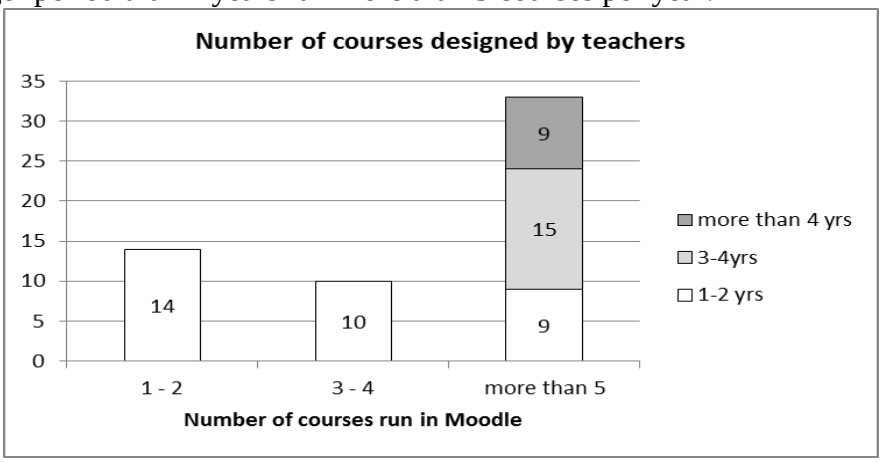

Figure 3 Number of courses run by teacher (divided according the length of experience with Moodle)

This information does not sound so positive when we consider the aim of teachers why they build the courses and what do they use it for (see Table 1). All teachers use LMS for uploading the data for students and slightly more than one third link the material to resources outside. Except for data upload teachers use LMS for collecting students data. People who do not use LMS ask students to either print their assignments or (some of them respecting go green policy) to send it via email. These documents are easily

lost, deleted or stored in junk mail. Moodle helps both teachers and learners to be organized and to track their work with the assignment. It was accepted very positively by students (*I can find materials when I need them… I do not lose them ☺…, etc.*) but at the same time they miss at least basic interaction (*…it is silly that update are sent via email and that we send questions to teacher's email and do not use moodle…etc.)*

Teachers, as we had already mentioned use Moodle for publishing documents although they know about other possibilities. Only 1 in 10 teachers creates their own interactive exercises.

Table 1 – Types of activities used by e-moderators

Type of activities	no of teachers	% of teachers
uploading files	57	100
Forum	5	8,77
Wiki	7	12,28
Chat	4	7,02
interactive activities	6	10,53
links to resources outside the LMS	21	36,84
submitting assignments	12	21,05

The truth is that teachers realize that they use LCMS but only as a space to store document. They are aware of the other tools, however they do not use them as they have face-to-face classes and use Moodle as a support. The teachers claim they are not ready to run e-course or they are not ready to create it. They miss experience of creating the course however at the same time they would appreciate the chance to be students, participants in a course. Personally, I admit that being an e-student (having pedagogical background at the same time) was an irreplaceable experience followed by immediate analyses of teacher's procedures, methods, techniques and strategies application and students perceptions and feeling at the same time. The same was stated by my e-students who enrolled Methodology e-class.

Students who have experience with different tools and activities in Moodle usually positively evaluate its use (*we worked when we wanted, in case I can decide again F2F or e-course I will go for e-course…, I will recommend it to my classmates*) however their feedback is always very useful helping a tutor to enhance learning and to make it more effective (*The instructions in one task of the final test were not clear…, I had a problem with internet connection, but the course was ok…, etc.)*

Conclusion

We have mentioned that in case of running e-course interactions are significantly important. They are important for building a course, developing motivation, critical thinking, communication, developing personalities.

Watts (2010) postulated the following benefits incorporating interaction into courses:

- Interaction builds a sense of community among the students, which leads to student satisfaction, retention, and increased learning (Brown, 2001).
- Interaction provides students with the feedback they need to determine if they are mastering the content in your course.
- Interaction exposes students to a variety of learning resources, including content materials and experiences and knowledge shared by other students.

Interactions in the classroom should make students become more actively engaged in the learning process, leading to higher levels of learning. All types of interactions mentioned in the article should help learner to feel safe, accepted, able to work and progress. We have to admit that teachers responding to our survey were aware about the fact they were/are not using e-course and they mostly understood LMS as a support to face to face lessons. This was also mentioned by the students – they would appreciate interaction, otherwise they understand it as place to store material. They still perceive it as an advantage that they can see the system and find the files and material very quickly. On the other hand teachers admitted they use

Course designer and tutor are responsible for planning interactions and their realization. The tutor should be a really good manager to make learning learner-centered and not teacher-centered or material-centered. It is a difficult work, however it forces learner not only to memorize but also to deduce, analyze, synthetize, not to rely on their owns but also to cooperate what helps them to develop social and life skills and prepares them for life.

Using different types kinds of e-interactions is what makes course effective and gives students a feeling of educational cooperative environment rather than a place where they can work as in an electronic library what has been also proved in the students' feedback. In this article we wanted to describe the various tools for interactions and the irreplaceable role of teacher/designer in the process of preparation and moderating the effective course. Still, the reality shows that the e-courses will be used in both formal and informal education. We (teacher training institutions) have to realize this fact and make pre-service teachers ready for writing e-materials that offer e-interactions that lead not only to interacting with materials but also to the development of critical thinking and what more build social interactions and positive atmosphere in a group.

In our conditions it is a teacher who acts in a role of e-course writer (scenario writer), e-course designer (course creation), e-moderator (person running a course), a teacher is responsible for all process from setting a

course through setting evaluation, student enrollment, running and evaluating the course.

In experienced and progressive institutions there are e.g. Centers for e-education where course developers, interaction developers and methodologies cooperate to build the courses according to the scenarios drafted by the lecturers and e-tutors. Thus teachers are responsible for running course. This is a way how to help in-service teachers. What more, we have to realize, that e-pedagogy has to become a part of regular education of pre-service teachers to make them ready for digital era they live in.

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