MOODLE, A TECHNOLOGICAL TOOL FROM DISTANCE EDUCATION IN FAVOUR OF ATTENDED CLASSES

Juliana Danielle dos Reis Pereira¹, José Wilson da Costa²

¹ Mestrado em Educação Tecnológica do Centro Federal de Educação Tecnológica de Minas Gerais- CEFET-MG, Minas Gerais, Brasil, julianareisp@gmail.com
² Agência de Fomento: CAPES

Abstract: Integrating information and communication technology – ICT in education, as additional resources in attended classes, will help students and teachers accessing a large and different quantity of data. This technology could highly promote students’ autonomy and efficiency of the learning-teaching process. In order to improve monitoring and feeding back students in the subjects from the master course on technological education in CEFET/MG – Centro Federal de Educação Tecnológica/MG, it has been proposed the use of a learning management system, Moodle, which means Modular Objected Oriented Dynamic Learning Environment, to support scheduled activities. According to Wikipedia, the Moodle is a free software, which allows running virtual environment to help learning, mostly used in projects and programs of distance learning nowadays.

Keywords: technology, education, learning virtual environment, teacher training.

1. Introduction.

The use of computerized sources for improving the learning-teaching process has been seen as a welcome component in education, which have, in their device, supports to optimise teaching and learning.

The development of a process that stresses self-learning and student’s autonomy, in opposition to traditional learning models based on presenting stuffs, offers many possibilities to adapt education to the real necessities in our society.

There have been published many works on this topic, which are important to my study. Only some of them have been selected for the discussion in this article, which are: Belloni (1999), Moran (2009), Kenski (2001), Litwin (1997), Oieras e Rocha (2001), Santos (2006), Ribeiro (2003), Costa (2007), Pereira (2008) among others. To improve monitoring and to feed back students in the master course on Technological Education from Centro Federal de Educação Tecnológica de Minas Gerais – CEFET/MG, it has been proposed the use of a learning system Moodle,
as a support to develop planned activities in their subjects. According to Wikipedia, The Moodle is a free software; a technology which allows to run an environment to help learning, which is also employed in projects and programs of distance education learning, here as DE. As “moodle”, it has been defined as the process of surfing the net, while doing something else.

By taking the software possibilities many tools from Moodle have been used, so that it has been possible to exploit some aspects that were not fully discussed in classroom, because of time or the schedule, such as videos, songs, bibliography, films, programmes on television, links, simulators, virtual museums, etc. Moodle was also chosen in order to present these technologies to students, as long as both subjects in their course, have technology and learning in their background. One point of for treatment is to discuss how this technology is applied to education, in order to soften the negative idea created by people who refuse applying technology on education, and who object to use the possibilities of this technology. Another point is to present the problems and themes on this perspective in a soft way.

2. Why should we use Moodle, a software very known by the distance education area?

According to Wikipedia, Moodle, Modular Objected Oriented Dynamic Learning Environment, is a free software, which helps learning. This software runs on a virtual setting, from now on, environment, and it is compatible to many operational systems. It also means learning management system- LMS, in collaborative work based on this program, becoming a system of managing educational activities that creates online communities in collaborative work. The Moodle structure allows students and/or teachers to change information themselves, learning or teaching, in a specific online course (WIKIPEDIA, 1999).

The main characteristics of Moodle are the fact that this software offers a huge source of materials management, of generating and processing data. Its inferential features give this kind of Virtual Learning Environment- VLE - efficiency and efficacy. Above all, they ensure a concrete possibility to an education based on technology and mainly to distance education projects.

Its accessibility, functionality and constant updating, together with a considerable number of contributors all around the world, make it a high quality tool, so that this system can be seen as a suitable pedagogical instrument.

According to Costa (2007), Moodle could be considered as a kind of VLE, because it is a setting, in which knowledge has been presented through technology, and it simulates relationship on the net, which is developed in a school by interacting students and their subjects, students and students, and students and teachers, under the affective and social relations in or out of school. Based on socio-constructivist pedagogy, and according to Martin Dougiamas, “o Moodle deals with learning as a social activity and focuses on learning, while we create things, like texts, so that other people can access and can make use of them (WIKIPEDIA, 1999).
For the last three semesters, two subjects, “Education in Society of Information” and “Distance Education” offered by the postgraduate program, line III, Technology of Information and Education/CEFET-MG, have been extensively worked with the VLE Moodle as a support for pedagogical activities.

We can use many tools among the ones available to the VLE Moodle: (1) Materials: there are the important documents for developing the course; (2) course evaluation; (3) chat, tool which helps a lot the conversation among people, and makes it possible to discuss themes dealt in classroom, previously schedule for that; (4) diary: the individualized student area whose purpose is to monitor his development, noting his stimulus and frustration, and to make possible commentaries by the teacher; (5) forum, which could be for informing or discussion; (6) glossary; (7) lesson: teachers will be able to post related material and exercise as textbooks; (8) survey; (9) questionnaires: this permits the teacher to provide an evaluation on line and to survey in a variety of models such as ticking true/false questions, relating a ordered statement according to the second half, multiple choice questions, dissertation and algebra exercise. There is, moreover, an effective system for correction, which calculates means, scores, percentage, as far as needed; (10) revising work: it is possible to make a student’s work revision on line, as well as to feed him back per e-mail, and it is able to make students correct their work in pairs; (11) Wiki and other constantly updated tools, since there is a big community which cooperates and collaborates with the Moodle Project.org; (12) updating in plugging, which could be copied from the official sites and added to the site used in the course by the moderator. And if it is necessary, it is possible to make a backup of the whole material, storing it in a new version of the system. But in some cases, it must be said that some user data could be lost, depending on the setting provided by the moodle moderator in the institution.

An advantage in the VLE Moodle is the use of SCORM pattern to put materials into of learning objects-LO, which will be available, stored and used by another software, LMS, virtual or attended course, since they are permitted and shared by its organiser.

Because of the factors above, and to achieve target goals, i.e., to improve the monitoring students and the approaching to them in the Master Course on Technological Education in CEFET, the Moodle tools were employed in order to permit handing works on line, which offers practicability, and saving sheets stuffs and ink, helping The Environment.

The chat tool makes it possible to get students in touch, and to be in touch with teachers too, stressing some affective aspects which are presented in the educational process, giving shy students the opportunity to take part in the discussion by writing on line.

The discussion forum has been used as a channel for discussion of attended class themes, and it schedules dates for presentation, group presentations and assigned homework. This tool offers the students the possibility to make any commentaries and questions about the evaluation criteria, suggestions for date of presentations, activities and tests.
The calendar schedules the subject activities, such as evaluations, seminars, homework and papers.

The news forum is used to stress the dates for presentation, the suggested bibliography, academic events, links of videos sites, some tip for a TV program, such as interviews, doc, which are related to the discussion in the subject.

Some others tools have been used in order to advise any changes that will have been made since the last user login, such as online users, the last materials posted by the teacher to the students, the access to personal information, and to the e-mail list of students.

According to Belloni (1999, 104) the integration of information and communication technologies – ICT, as an additional tool in classroom, helps the access of a huge variety of information by the students and teachers. This is “a global tendency of all kind of education in pedagogy”. Its implement can be of much help to student’s autonomy and in the efficiency in learning-teaching process (BELLONI, ibiden). Moreover, Belloni says that the use of DE technologies “could introduce a new concept of technological education, seen as educational communication” (104) in a perspective of integration the traditional and distance education varying according to focussed pedagogical and didactics objectives (BELLONI,1999,105).

3. Attended class versus distance education: how will the education be handled in the future?

The changes in the modern world are based on the enormous use of information technology and of the huge variety of human activities. Particularly, Education has been dealing with these technologies, and a clearer perception of this process of knowing has defied educators who want to build a new setting for learning-teaching, specifically the ones related to virtual learning environment. The place for this investigation is the classroom, because it is where technology will effectively be applied to monitoring students will improve their knowledge in using these technologies, as a help of learning in reliable pedagogic projects.

In the present context, in which men and machines are inserted, technologies provide the access to the information and communication, spreading knowledge and ideas among different cultures. Innovations and “re-functionalization”(SANTAELLA, 2003), promoted by the great use of a variety of media, have an impact in the way of how people think, behaviour, and locate themselves in time and space, and these innovation have contributed to the discussion on how to learn and teach.

Hernández (1999) affirms that “formal education should be re-evaluated, because representations, social values and knowledge are changing, and the school, we have today, is based on a model of 19th century, with different perspectives, as well as its response has its roots back in 12th century.” (HERNANDÉZ, 1999, p.13)
According to Lévy (1999), the quickly progress of cyberculture has clearly showed this new context, and net communication means a new pedagogy that involves, at the same time, personal and social learning.

There is something to do with education, if we want to renew schooling, by inserting it in the media-technological context. This will lead us straight to make changes in the concept of learning-teaching process, and mainly in the teacher. Breaking the traditional paradigm, whereby knowledge is acquired only from teachers, requires new conditions of work, which implies the necessity for a constant training teacher, recognising the participation of teachers in acquiring knowledge (SILVA, 2006).

In this sense, much effort and actions take place in order to teachers to create meaningful condition for the learning process in the technology of information and communication society. For this, it is required that teachers will be in constant training, they will make plans of their educational steps, and will be responsible for changes and transgression (HERNANDÉZ, 1999), face of a practical and massive learning for life.

The teachers will work in areas of real development and close (VIGOSTSKY, 1984) to their students, to promote interaction and to make meaningful the process of developing knowledge. It should be familiar to the teachers the necessity and interests from students, the possibility to relate these demands to the learning process and experience within the school in their lives, while analysing the demands from students, their knowledge, as well as applying these demands to improve students’ background.

Pierre Lévy (1999) in his book, “What is virtual?”, stresses that the use of virtualization through intensifying ICT in daily interaction has increased in our lives, enlarging the human potentiality, requiring a new way to learn, to think and to see a new pedagogy.

The reflection about the possibilities of information and communication technologies ICT, based on Moodle, are presented as a didactic, media, and scientific proposition; they are responsible to provide practical knowledge.

In Hernandéz (1999), the formal education allows students to acquire strategies for knowledge, giving them, power to go beyond schooling as it is usually conceived. The teacher works actively in this process, and he must be trained to do his job in a very reasonable way. Hernandéz (1999) reinforces the teacher’s role saying that his role is “the pedagogical dialogue, researching and academic criticism, as an attitude towards learning in classroom” (p 23), or outside it, “according to the ideology that the function of school is not to teach trivial knowledge, but to help students in their education.” These considerations catch attention on how to work with technological resources available to education.

### 4. Who are the teachers working with this technology?

Are they e-teachers? Certainly, they should be. Technology should be familiar to them. They should know how to handle it didactically. Changes from the massive use of ICT in society, and somehow in education, imply changing the function of a teacher. The role of a centred teacher in class, which means he is the most
important part in the process, should change into a cooperative one for students, so he can promote learning with them, and, above all, he is able to pedagogically use technologies, which were not necessary developed for this goal.

Our focus in these subjects was to discuss the demands on the job and training of contemporary teachers like the e-professionals, and the difficulties faced in trying to do so. It has been seeing that, to be such a professional, many troubles come out, even the ideal procedures of an e-teacher are fulfilled, as researching the available tools and the suitable technology, and making a didactical use of them. Now, the success to this kind of education is not depending on the teacher capacity and enthusiasm anymore. There is the need for active involvement of everybody, demanding more self-learning, autonomy and teamwork.

The hard task found on our way almost made students and teacher give up and accept the orthodox opinion from the ones who reject the new technological innovation in their work. However, it did not happen. The strong desire to overcome all these troubles raised questions in how to promote the changes in education as far as it could be done. We mobilize and evolve mentalities from the teacher’s team in our institution for the challenge: what is education in a constant training reality? We have asked ourselves how to deal with education in our society nowadays, when there is no time at all to do things, there is a huge technology available, and the changes take place quickly, as seen by many authors, (LÉVY, 1996; SANTAELLA, 2003; SILVA, 2006; KENSKI, 2003, LITWIN, 1997; BELLONI 1999).

Belloni (1999, 107) says that it is necessary to pay attention on the background of who will teach, because “the contradiction in his daily life, in which he faces students completely different from the kind of one he is supposed to meet in the beginning of his studies, and his inconsistent behaviour toward technologies, leads him to put a question on his initial formation and get a new way in how to updated himself ”; he should, necessarily, consider the possibility of distance learning for the constant training required for him. Teachers should welcome and integrate technology of information and communication in their practice, specially the ones already presented in distance education. They should know how to plan, diagnose and manage problems; they should be able to give answers on an online environment. To do this, it is necessary a continuous training, which prepares him to his important role in the learning-teaching process, offered through distance education.

To people who want to give an effective help to an attended course, managing online tools, and to help planning activities and choosing strategies, and also developing and applying a methodology for work and evaluation, the following points have been taken relevant:

1. to choose and prepare the material to be worked on VLE;
2. to analyse and set the previous knowledge required from the students;
3. to identify and select basic meanings to the material discussed in classroom, which will be required for debate and evaluation on the Moodle environment;
4. to control the flow, in and out, of students, as well as anyone else, in order to hand homework, to check the most frequent question, and other situation, which will serve to write reports on the development of the course;
5. to participate in the screen building, layouts and templates, and in the organization of class presentations;
6. to write some instructions for the course, presenting the rules for using the room, the role of students, the obligation of teachers, his tutor or trainee, if it applies, and their role of the assigned monitor/trainee by the teacher of the subject;
7. to properly observe if AVA is helping to monitor and aid the development of students in the course.

However, to achieve this goals, it is necessary to guarantee that the teacher learn how to perform his role as a mediator. It is expected that in his learning, there will be the needs such as:

a. to prepare students and motivate them to collaborate with the group, performing decisively their proposed activities on the environment;
b. to know pedagogical possibilities e limits for each tools available by VLE in target;
c. to elaborate pedagogical parameters to use the tools, observing their demands, such as, criteria for using, participation and evaluation in the activity; or because of the tool constrains, the teacher should know how to give solutions to the problems from the use of AVA in the process of technological learning-teaching process.

5. Some considerations on proposing a work project, which uses technological tools from DE, in attended classes.

All technological instruments require a kind of training, if it will be handled for any particular reason. For one of them, Discussion Forum, for instance, if not properly planned or monitored by the teacher, there might not be a serious discussion, so that anything deeply is pointed out and many careless commentaries are written. On Discussion Forum, it could be seen many criteria of analysing the participation of students, in their collective mediation and in their teacher’s monitoring. The active participants in the discussion evaluate automatically his and the others ideas, while they are reading the message and making their commentaries. This will not only avoid unnecessary monologues, when an issue is presented, but also, will avoid that each student copies his own commentary, so long as it contains repetitive, not well articulated commentaries with the others.

For the Chat tool, by which it is possible to have great debates and constructive dialogues, on the other hand, there is a need to reflect its function, since the didactical and efficient administration of this tool has put some challenge, not only
for the teacher and tutor, but also for the technical team who maintains it and supports the pattern VLE.

Besides these challenges, there are some troubles in managing the order of discourse running on the LMS system. To name some of them, there is a difficulty to disconnect the shift group of the group, because they do not study at the same time during the day, which leads to simultaneously sending messages to all of them. It breaks the discussion and the control of messages during the activity. Due to the intense use of the system, some messages are not delivered. It is because of the lack of control of posted messages, and it will deliver parallel topics, or will block sending some messages. Another problem, resulting from this large information on the academic system, takes place when it does not support all the data, disconnecting merely many students. Because of this, the steps taken on the chat tool must be saved, so that students, who are not present or disconnected, access the whole discussion later.

Opting to develop a project as it is presented in this article, it is suggested to the teacher, who will choose the VLE, that he should verify the limits in these technologies, the possibilities that they offer concerning monitoring the learning-teaching process, the practicability and usefulness of using available tools by the teacher and students, the capacity to transfer the software into another system, the capacity of the software to run sources which will interact all the users efficiently and, at last, which offers the teacher the possibility to set criteria of evaluation.

The teacher should be familiar to the technology in target, so that it will help planning and elaborating previously the activities to be developed on the VLE according to the purposes. So, tests will be performed, the database and list of discussion will be checked, to choose the suitable VLE to the kind of work to be developed by the teacher.

So, as suggesting the implement of this practice in classroom, besides the matters concerning the choice of VLE, the awareness of the system possibilities and the limits in the educational process, the teacher must write deadlines for plans and dates, as well as evaluation, and he is responsible to identify and discuss strategies to improve the course, the maximum of the course in classroom is aimed.

The teacher should set criteria for controlling frequency. He should learn how to deal with claims from students concerning the enormous variety of activities, creating possibilities and strategies, which will help students to connect to VLE, and to do the scheduled exercise. The teacher will be able to understand the limits of students to access this technology, for instance, the one who has his access only in the campus of the institution. Above all, the teacher will be able to deal with the students who will easily give up the course, if it is the case.

That is not the purpose of this article to come to end with the discussion around integrating and using technologies DE in attended classes. It is not a report on how to define the teacher’s competence and set their abilities. This work wants to call attention to the demands in studies on efficacy of technologies for learning, particularly, on the necessity of the teacher to integrate and use them in his work. The purpose of this work concerns on the identification of parameters and
indicators, by using these instruments, which will be the base to a discussion on technology and education, in order to go further on this topic.

6. References


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