BLENDED LEARNING USING MOODLE AT THE „1 DECEMBRIE UNIVERSITY" IN ROMANIA

CIPRIAN CUCU [*]

ABSTRACT: *Moodle is one of the most common platforms used for supporting educational processes suited either for distance education but also blended-learning (mixing web-based learning tools with face-to-face interaction). The current paper presents a case study on implementing Moodle as a blended learning solution at the '1 Decembrie 1918' University of Alba Iulia, Romania. The study looks for benefits and issues for instructors focusing on the latter since those issues must be overcome in order for the blended solution approach to be efficient.*

KEY WORDS: *blended-learning, Moodle, learning.*

JEL CLASSIFICATION: *D83, I29.*

1. INTRODUCTION

1.1. Blended learning

Blended learning is already an established concept in education. It's meaning and scope have been constantly developing for almost 20 years, revolving around the "combination of traditional learning with web-based online approaches" (Whitelock & Jelfs, 2003).

Other studies in the field show the concept to be more flexible to the point it "means different things to different people" (Driscoll, 2002), emphasizing four points:

1. mixing web-based technology in traditional learning;
2. combining different pedagogical approaches in a single educational setting (eg. a course);
3. combining educational technologies with face-to-face instructor-led training (includes various technologies not limited to the web);
4. combining instructional technology with actual job tasks.

[*] *Assist. Prof., Ph.D., „1 Decembrie 1918" University of Alba Iulia, Romania, cucu.ciprian@gmail.com*

For the purpose of this paper we will use the assumption that blended learning is the practice of "mixing online learning with face-to-face" learning (Oliver & Trigwell, 2005). This definition includes the two elements needed for the current case study – physical student-instructor / student-student interaction and web-based tools to support the educational process.

1.2. Moodle

Moodle (Modular Object-Oriented Dynamic Learning Environment) is a free e-learning web-based software. The software is presented as a Learning Management System (LMS) but also as a Virtual Learning Environment (VLE) (Moodle, 2014).
Moodle offers a wide range of functionalities for both managing the groups of students as well as for managing the instruction. Since we test the impact of using Moodle as teacher-support, we focus on the following functionalities:

- grouping students and assigning groups to courses
- posting of educational resources in several formats (files, web pages, videos)
- activities – that allow in-class or individual student work
- monitoring attendance
- quizzes

Though LMS and VLE may be considered as having important differences, this is less due to the technological aspects or software functionalities but mainly due to their actual uses (Pinner, 2014) and is not a relevant discussion for the current study.

1.2. Paper motivation

The proposed case study is a first part of a larger project that aims to test the use of web-based tools as teacher support. It starts from the observation that some basic forms of blended learning are unofficially being used pervasively in higher education institutions in Romania (see section 3) and inquire into how using Moodle influence different aspects of the educational would process, such as:

- active student participation during in-class activity
- student individual work
- student – professor communication
- time cost and stress level / pressure on the instructor
- facilitation of instructor analyses (attendance, activities)

Other themes of interest will be targeted in future studies:

- student – student communication & collaboration
- the structure and clarity of the content (educational resources)
- the ease of access to resources
- the frequency of accessing educational resources by the students
- the impact on student results (learning benefits)
- various correlations between Moodle activity and results

2. IMPLEMENTATION OF MOODLE AS A BLENDED-LEARNING SOLUTION

2.1. Current blended-learning context

Most instructors at the „1 Decembrie 1918" University have constantly integrated technological tools into their teaching methodologies, especially to assist in class management, providing student with educational resources and activities and other student – professor communication. The most common tools and their usage are described below:

- **Yahoo groups**: has been one of the first tools used for contact with students. It allows sending communications (by email) to any or all of the students registered in the course and allows posting files or links that may act as educational resources. Among the limitations we observed:
  - Some students postpone of forget to join the group, especially if they do not attend the first meetings where the group set-up is done.
  - An increasing number of students are using e-mail less frequently.
  - They offer limited storage and functionalities (eg is not able to hande student submissions of activities)
- **Facebook groups:** is a more recent trend started by the overwhelming migration of students to Facebook. Young people migrated their communications from e-mail, instant messaging and older social media sites such as Hi5 towards Facebook and setting up FB groups at school came as natural consequence. Facebook groups allow direct communication between students and between students and instructors as well as posting files. Limitations include:
  - The timeline based-communications means that information become harder to find after time passes and more information is added.
  - There are no file-management features: no folders can be created, there is no search functionality and finding files in the group becomes daunting very fast.

It may be worth mentioning that Facebook groups have become extremely prevalent among students, mainly because it allows them to communicate with each other in an environment they already use frequently. Most students have FB groups even if they are requested to use other tools as well and some students even have two groups at the same time – one where they invite instructors as well a secret one where only students are allowed (probably to speak freely).

- **Spreadsheet software:** this tool comes in two variants – desktop based (Ms. Excel / Libre Office Calc) and web-based (Google Spreadsheet or similar). This tool is only used by instructors to record attendance and grades to quizzes, tests or other graded activities. Since students have no need to access it (reports are usually posted through other tools such as the groups described above).

- **E-mail:** is still used apart from web-groups mostly when students need to submit activities, projects or even respond to tests.

Thus to make sure all aspects are met, an instructor usually registers attendance using a spreadsheet software, posts educational resources (usually limited to files) and proposed assignments on a YahooGroup, a Facebook group or both, recieves student submissions on e-mail, may sometimes answer questions on the Facebook group, records evaluations of student submissions back in the Spreadsheet software and posts the results on the Yahoo group, on the FB group or both.

This overall description points to one of the issues instructors have to face: using multiple tools to manage the class and the instructional process, with the following minimal requirements:

- Attendance: rules of attending physical classes vary among subjects and faculty, but attendance is taken into account almost pervasively.
- Resources & assignments: instructors need to provide students with educational resources and post assignments (that may or may not be graded).
- Updates & reports: instructors need to be able to inform students of various events (eg. change in schedule) and post reports (for attendance and grades).

2.3. Enter Moodle

The main reason behind the Moodle implementation was to conduct a pilot project to determine how well it can replace the tools described above in order to have an all-tools-in-one-place approach that answers the three basic points described above.

One of the issues considered has been the adoption barriers among instructors; since implementing a LMS can be seen as an innovation, it produces the *compatibility* issue that is described as “the degree to which an innovation is perceived as consistent with the existing values, past experiences, and needs of potential adopters” (Rogers, 2003, p.15).

Because institutional support and proven instructional support are the main factors behind LMS adoption (Bower, 2001; Gold, 2003) the first step was to assess the learning curve behind Moodle and the benefits as well as the limitations regarding the instructional support aspect.

Figure 1 shows a typical Moodle learning curve for an instructor. Main functionalities are ranked according to their difficulty, considering the existing practices:

- posting resources as files is the easiest task, that any instructor should be able to perform;
- group management is also straight-forward, though it may become more complex if there is a need to use cohorts and groupings;
- moving further, instructors may discover that they can easily post other types of content, such as videos or web links;

- a slight more complex is the creation of web pages as educational resources, since they need a restructuring of the educational content (compared to posting files, which instructors usual already have);
- attendance is a specific type of activity, that needs setting up sessions in order to allow registering student attendance;
- separating the posting of resources so that they are available to only a specific group is sometimes needed, since the instructor may need to control the flow of information (the timeline) and different groups may have classes on different days; this is even more important with assignments, that may have deadlines so they need to be synchronized with the in-class progress of each group;
- managing quizzes is the most difficult part: firstly there are several types of questions the instructor needs to be familiar with; secondly, usual tests may be harder to transform into the type of questions offered by Moodle; thirdly there is a large variety of settings, ranging from the number of points (grade) to the timeframe of the test.

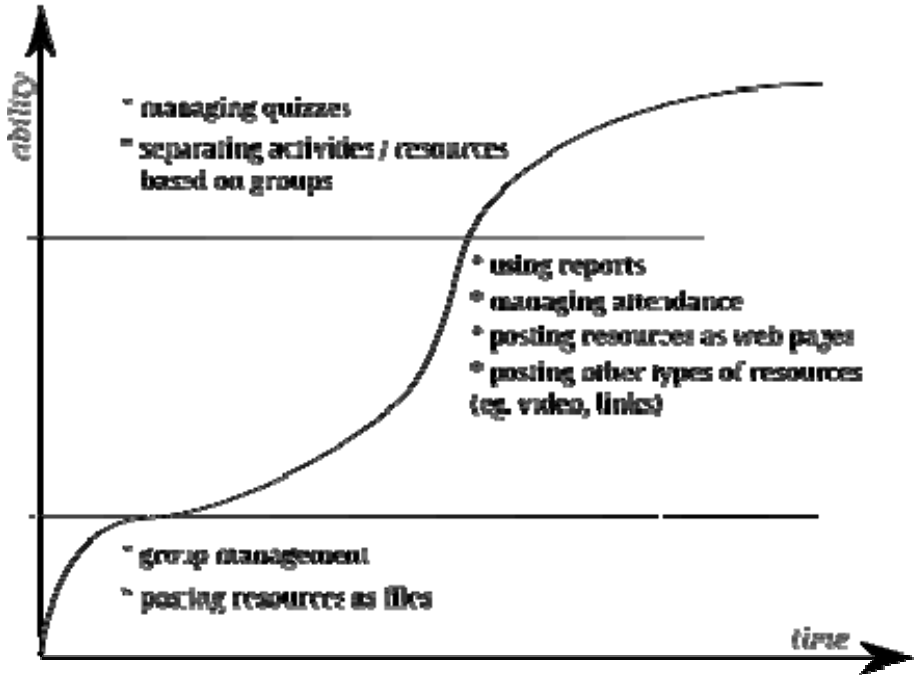

Figure 1. Moodle learning curve

Benefits. After the initial adaptation to the Moodle system, its benefits come into view:

- posting resources and assignments is easier and more flexible than with groups or email; when the course is completed, it shows a structured view of the contents that allows for easy review;
- since course modules (or topics) as well as individual resources and assignments may be shown or hidden as necessary, this reduces the pressure on the instructor, who can construct the course at his own pace and re-use it (with updates if needed);
- managing student activity is also more efficient, having all assignments in one place; some type of quiz questions are even automatically graded (but for more complex quizzes manual evaluations are necessary).

Limitations. While the benefits presented above are interesting, the limitations and issues that have been found are more relevant and may offer further development possibilities.

Evaluation is still difficult

Though Moodle offers assignments and quizzes that may be graded, their aggregation is still difficult. The current practice at the "1 Decembrie University" is to mark all graded assignments and quizzes on a fixed scale (1 to 10) and to calculate a weighted average at the end.

Moodle has a percentage-based approach (percent of task completion) and allows various types of aggregation methods, but this increases the complexity of the evaluation and the time an instructor needs to create all reports. Another issue is the fact that the Romanian standard usually allows for "default points" - that means to start grading from a mark higher than 0 and lower than 5 (that is defined by the instructor for each task, but is usually 2, sometimes 3).

This may be useful for student motivation, to make a distinction between a student that submitted an assignment but had no correct answers and a student that doesn't even submit the assignment.

Attendance report lacks clarity

The attendance report that the instructor sees spreads out too far and becomes hard to see. This may be a "theme" issue (i.e. a graphical design issue), but it is an important issue that may confuse many instructors. There is an option to export the attendance report as various file formats, but the total is not exported which leaves the instructor with an extra-task.

Communication functionalities are under-used

There is an ongoing discussion on how to lead students to collaborate and communicate more for educational purposes (Pinner, 2014). When an LMS such as Moodle comes into play, recommendations range from simply telling the students repeatedly to use the forums and messaging available in the system to actually giving graded assignments that are based on accessing the forums.

Since in the current project we had no such incentives, students' communication within Moodle has been extremely low: all 300 students sent during the semester only 10 messages to the instructor, there were no discussions in the forums, no response to announcements and no message exchange between students.

This might prove to be a more complex issue than it appears because the prevalence of communication through Facebook and rises the question whether or not efforts to get the students into the LMS are worth it, or if it would be better to get the platform to them, by specific integration with FB apps.

4. CONCLUSIONS

The current paper presents a case study of using Moodle at the "1 Decembrie 1918" University of Alba Iulia, focusing on instruction support.

The findings of the study show that current tools used to support instruction, such as YahooGroups, Facebook groups, online / offline spreadsheet software and e-mail can be, with some effort, replaced in the instruction practice by a LMS such as Moodle. This would benefit the instructor in several ways:

- courses become easier to organize, the course structure can be easily replicated;
- all information becomes available in one place, including attendance, grades.

However, there are several issues that require attention:

- Moodle has a learning curve and thus has to face resistance to change;
- the wide range of option for instructors makes it also difficult to master;
- communication between students through the LMS is inexistent, students prefer to use platforms they use outside the university, especially Facebook.

The current study is only a first step towards understanding how to better use Moodle as a blended-learning solution and to really obtain an increased student motivation and interaction with learning that ultimately leads to better results. Further steps will include:

- studying student perception on Moodle as a blended-learning tool;
- verifying a possible correlation between Moodle activity and students' results;
- empirical analysis of the way students use Moodle;
- development of Facebook applications that work with Moodle to enhance communication.

REFERENCES:

[1]. Bower, B.L. (2001) *Distance education: Facing the faculty challenge*, The Online Journal of Distance Learning Administration, (IV)II

[2]. Driscoll, M. (2002) *Blended Learning: let's get beyond the hype*, E-learning, 1 March, Available at: http://elearningmag.com/ltimagazine

[3]. Gold, M. (2003) *8 lessons about e-learning from 5 organizations*, T+D, 57(8), 54-57

[4]. Oliver, M.; Trigwell, K. (2005) *Can blended learning be redeemed? E-learning*, 2(1), pp.17-26

[5]. Pinner, R. (2014) *What is the Difference Between an LMS and a VLE*? Available on http://elearningindustry.com/difference-between-lms-and-vle, [Accessed 26 December 2014]

[6]. Rogers, E. (2003) *Diffusion of Innovations* (5th ed.), New York: Free Press

[7]. Sharma, P. (2010) *Blended Learning. Published*, ELT Journal, Vol. 64/4, Oxforn University Press, October

[8]. Whitelock, D.; Jelfs, A. (2003) *Editorial: Journal of Educational Media Special Issue on Blended Learning*, Journal of Educational Media, 28(2-3), pp.99-100

[9]. Moodle (2014) https://docs.moodle.org/28/en/About_Moodle Last accessed December 26th