

Are the Learning Management Systems Converging? One view on Blackboard Learn and Moodle

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Abstract: *When choosing a learning management system, most institutions limit their considerations to a few options. Among popular in Bulgaria systems, two solutions gain predominance, Moodle and Blackboard Learn. In this paper instructor's point of view is applied attempting to analyze the usability and the underlying pedagogy of these strongly competing LMS. The comparison is based on the author's experience using both systems as a university lecturer.*

Key words: *e-learning, Blackboard, Moodle, usability*

INTRODUCTION

Different casts of wide-spread software compete to be recognized by users and succeed to a certain degree. During the time, most successful among them become dominant in market share and distribution, exposing similar functionality yet retaining their native peculiarities. Curiously, happens that one user or institution applies simultaneously separate kinds of similar software products.

Such is the situation in the area of Learning Management Systems (LMS). Different universities and schools use different kinds of them both for distance and regular education. Concerning Bulgarian universities, a quick check on the Web shows that most universities prefer Moodle: New Bulgarian University, Sofia University, Plovdiv University, Burgas Free University, University for National and World Economy, Technical University of Sofia, University of Mining and Geology. Medical University of Varna and University of Forestry rely on Blackboard. South-West University of Blagoevgrad is using both of them.

Any LMS represents an infrastructure platform via which learning content is delivered and managed. Typically, a LMS provides instructors with resources to create and deliver content, to monitor students' participation, and to assess students' performance. Present-day systems are web-based to facilitate "anytime, anywhere" access to learning content and administration. In addition digital natives enjoy new educational approaches dealing with technological innovations.

Investigations carried out from LISTedTECH [1] show that Blackboard [2] and Moodle [3] are the preferred LMS for many universities. It seems that there is no straightforward answer of the questions:

1. What is the proper tool to be used - an open source or a commercial one?
2. Which one works better from the faculty and from the students' perspective?
3. Is there an overall best choice?
4. Does the choice of a LMS depend on the university policies?

The learning content can be organized and offered in different ways and via various learning environments. The market provides many alternative solutions. Moodle is an open source solution, but the customization to the organizations' needs requires significant programming efforts and corresponding extra expenses. Blackboard is fully loaded, but expensive by itself - cost depends on the number of acquired licenses. There are organizations that cannot afford Blackboard and thus they are somehow pressed to use Moodle or other open source software e.g. Canvas [4]. Finally, the institution adopts one e-learning environment and deploys its courses on it.

It happened that the author got experience delivering courses both via Moodle and Blackboard Learn at separate Bulgarian and American universities. In this paper one more comparison of these LMS is presented from the instructor's aspect concerning their easiness and usability. Good learning environments support and encourage better practices – both for the teacher and the learner. A comparison is offered between relatively new versions of Blackboard (v 9.x) and Moodle (v 2.x). Certainly it is difficult to compare these e-learning tools as they implement many features. No considerations about the costs or the installation and maintenance are discussed. The quality of learning content and the teaching methodology remain of primary importance. So, from instructors' point of view it is important to compare underlying pedagogy and the features concerning learning activities.

A COMPARATIVE ANALYSIS OF BLACKBOARD AND MOODLE

This analysis presents a brief comparison of Blackboard and Moodle - a commercial versus open-source LMS. The goal is to emphasize on the features of each virtual learning environment and the way these features are perceived from a pedagogical and usability point of view. This investigation is based on author's own experience with both LMS for a couple of years and also on some representative technical reports about Blackboard and Moodle.

1. General Comparison

Generally speaking there is no significant difference in the features delivered from both systems. They support add-ins or plug-ins which bring for the addition of missing functionalities. Differences comprise course organization; support; the pricing model – free versus by quote-based and the community behind each system.

Blackboard is a set of platforms (Blackboard Learn, Blackboard Collaborate, Blackboard Mobile, etc.) that enable learning anytime across universities, schools, government and business organizations. Blackboard Learn is web-based software that permits agile content management, online assessment and active collaboration via a user-centric interface. For instructors benefits of Blackboard include the online management of the overall learning process, live interaction and communication and built-in antiplagiarism service. For students active collaboration around course content and group projects represents a significant advantage. Disadvantages of Blackboard Learn can be summarized as hard to learn, expensive and sometimes inefficient.

Moodle is a free, web based LMS that delivers a set of learner-centric tools facilitating collaborative learning driven by a great community support. Benefits comprise ease of use, improvements on to suit the users' evolving needs, localization (about 95 language translations), customization to conform individual needs and a high level of data security. Moodle allows the support of personalized learning and it is suitable both for face-to-face and distance learning. However even Moodle is highly customizable, this requires significant technical skills and a dedicated programmers team to administer the back-end working environment. Other drawback concerns the rapid update of release versions because Moodle is offered as open source software and previous versions are no more supported in matter of months. In addition some modules and plugins being developed for a particular version become incompatible with newer versions.

2. Feature comparison

Features can be compared along the following tools:

- Course delivery: test types, automatic test support, grading, course menu, course management, assignments, online gradebook, etc.
- Productivity: calendar, progress review, work offline, module page, etc.
- Communications: discussion forum, file exchange, mobile access, blogs, lecture recording, etc.);
- Student involvement: group organizing, wikis, student portfolios, etc.
- Content development: course templates, customization, instructional design tools, compliance with standards, etc.

Key Features of Blackboard Learn [5] include:

- Date Management tool;
- Discussion Boards and Calendar;
- Video Embedding and Content Editor;
- Groups Management;
- Enterprise Surveys and Course Evaluations;
- Grade Center;
- Automate Outcomes Assessment;
- Interactive Rubrics.

The main features of Moodle [6] are:

- Grade management;
- Student roster / attendance management;
- Assessment implementation;

- Discussion forums;
- Lesson planner;
- Collaboration management;
- File exchange;
- Internal messaging, live chat, wikis.

Both LMS offer functionally equivalent services and the difference can be found to down fine details. A detailed features comparison is not intended here. Interested reader is referred to [7, 8, 9, 10, and 11].

3. Usability

Usability is a very important issue for every instructor as it represents the dimension of efficiency, efficacy and satisfaction of the user to achieve a given goal by interacting with a specific tool. One can't find much difference between Blackboard Learn and Moodle after being well studied as adopted e-learning environments by a given institution. However, significant training is needed to set up classes and incorporate learning content with Blackboard. So I find the system a little bit complicated. Courses that you are either teaching or enrolled in are listed in the My Courses panel. For each course the so-called Blackboard course shell (Fig.1) containing the main tools of the environment is set. One can find the interface to these tools heavy and not quite user friendly. Blackboard offers a multi-level folder like structure thus blurring the structure of the course that becomes somehow disorganized. There seems to be just too many buttons and levels presented to the users all at once. Sometime discussion boards are hard to be track and the replies could get lost. Finally some browser compatibility issues and problems with the HTML editor can be mentioned.

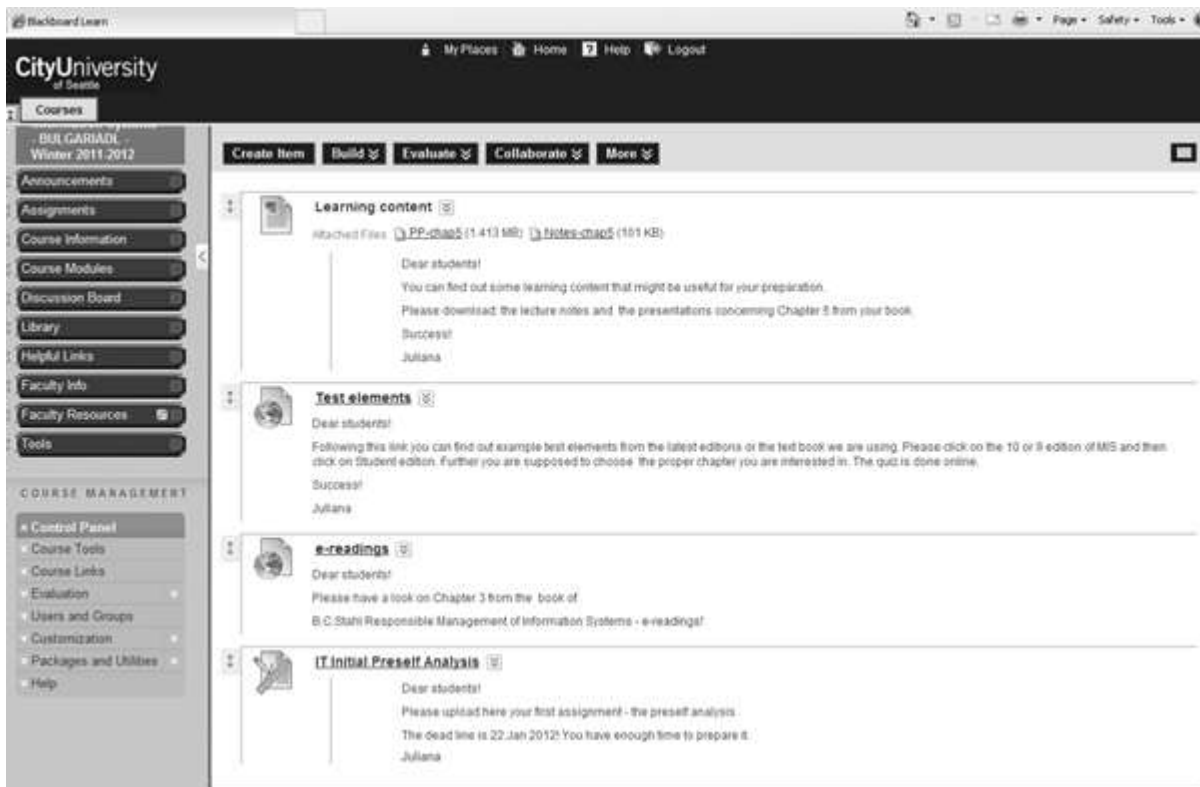


Fig. 1 Blackboard course shell

Meanwhile Moodle is far more intuitive and permits good housekeeping when the course tends to become disordered. Moodle's single page unit based structure facilitates a modular design that permits to improve the overall functionality by adding new components (Fig.2). Once you have IT support and don't care about administration issues Moodle is simple and straight forward to use. It handles interactive content such as videos, audio, and websites. Moodle has an assortment of plugins that can assure additional functionality. We work in supporting students and frequently see the use of Moodle. Students are able to login to the portal, find assignments, and from there plan and manage their time. The system allows to clearly communicate the information and to open dialogue with the student. However at times some

functions are confusing and lack explanation. Once again, it's not easy to administrate the LMS only by yourself.

4. Maintenance

As it concerns the maintenance, Moodle is supported by a large international group of users and developers. One of its strong points is the active online learning communities and collaboration activities. Blackboard also has its own organized communities. Though Blackboard is a commercial LMS, while Moodle has always been open source, the engagement of each product with its community of users is different.



Fig. 2 Moodle My Courses panel

5. Pedagogy

Moodle affirms attempts to support Social Constructionist pedagogy [12] that stimulates collaboration, critical thinking and task-based learning thus providing a social experience. Students are allowed to create a profile with a picture and to track who else from their course is online. Recent activities are also reported. There are wiki's and other tools that allow the production of collaborative objects.

There are no statements about underlying pedagogy in Blackboard Learn. Recent versions announced Social learning tools (Profile, People, Message and Space). These tools permit collaborating with students and faculty around the university area and at other colleges and universities with Blackboard Learn. Actually this new global learning network connects users at Blackboard Learn institutions around the globe. In this way informal learning is stimulated.

Both LMS encourage contacts between students and instructors via discussion tools and notifications on recent activities. Collaboration among students is stimulated by real-time chat and group collaboration tools. Both systems are giving quick feedback and permit student to manage their learning process through online content and assessment tools. They provide also for multiple content formats and different learning paths. Summarizing Moodle and Blackboard Learn are quite similar in the presentation of leaning content.

Some pedagogical differences can be found in the organization of the learning material. Blackboard offers a folder-based structure, while Moodle presents the whole course on the same page split into units defined by the instructor. The embedded organization of LMS force the users to upload their content under the right category, instead of applying the own pedagogical style. The impact of LMS on the pedagogy and teaching is analyzed in [13].

Blackboard "tends to encourage a linear pathway through the content" [14]. When first enter Blackboard instructors see the default buttons of the course menu (Fig.3). It would be more natural to see a blank schedule into which they could create each week's or unit's

activities. Blackboard default organization forces the instructor to think in terms of content types.

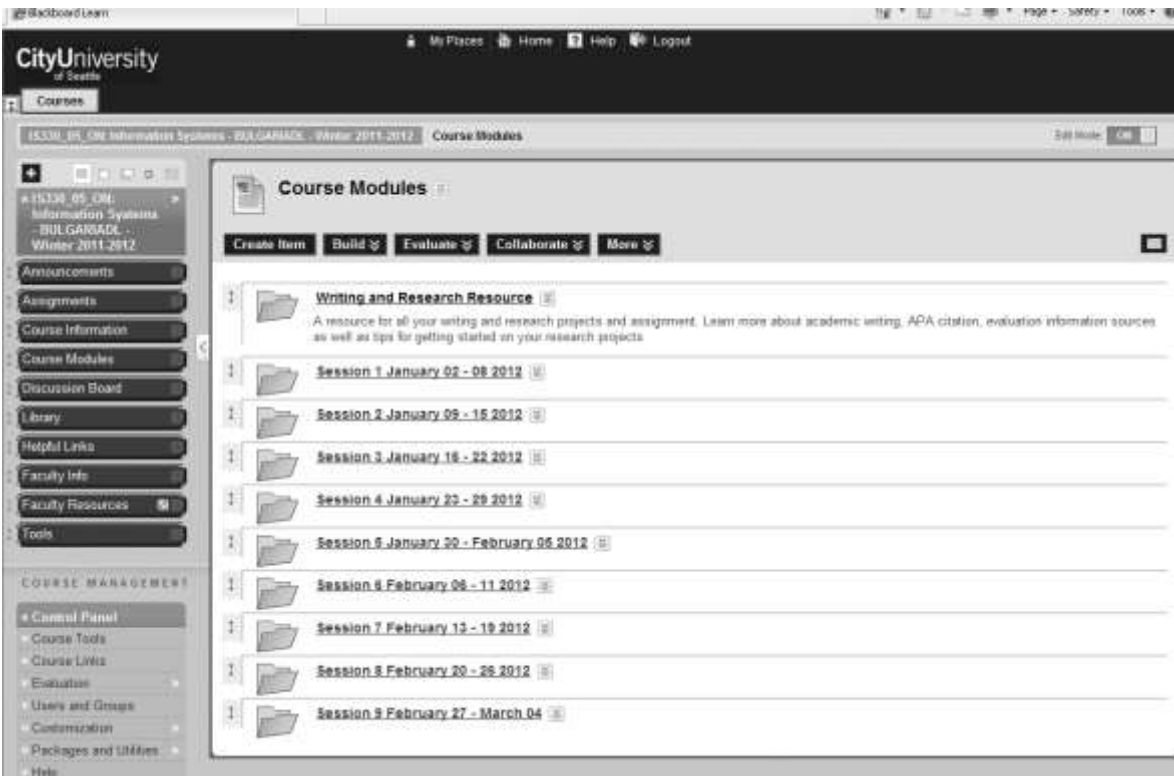


Fig. 3 Blackboard course menu

Organization in Moodle is not by type of content, but by week or topic (Fig.4), like a regular class syllabus. This format permits the instructors to decide what activities to do week by week or unit by unit, which does not constrain any learning style or teaching methodology. Although Blackboard does not limit the content, the inherent structure behind the Blackboard course shell could constrain the way an instructor designs the learning paths for the course.



Fig. 4 Moodle organization

CONCLUSION

When choosing an LMS, a reasonable question arises: what is better – a free open-source solution which requires further development, or an expensive product which is ready out of the box? This question reveals two general investment factors: initial price and future cost of ownership. Both factors strongly depend on institutional policies and instructors are expected to use the selected product. Moodle is a nice alternative for those that are looking for a full-featured LMS with a relatively low cost. But the system customization to fit specific needs may require significant programming efforts. Blackboard is an industry-leading LMS, but it is expensive.

In this paper an attempt to analyze the usability and the underlying pedagogy of two competing learning management systems from instructor's point of view was presented. As it concerns functionality, there is no predominance. Moodle's learning content organization is more transparent and the constructivist style is incorporated in. Blackboard seems to require precursory training for instructors and students while Moodle is intuitive and easy to use. So, my personal preference is to use Moodle as LMS.

Not surprisingly, Blackboard and Moodle are in the top twenty of most popular LMS all over the world. The latest version of Moodle is 3.0.3 and it is reported on March 2016 [15]. New features include enriched quiz question types, improved students contacts, a backup functionality and management of personal messages [16]. The various Blackboard Learn 9.1 releases and the corresponding feature comparison are summarized in [17]. A competency-based education Building Block – the Goal Performance Dashboard – to evaluate evidence of competencies individually is announced. Both systems are trying to offer new tools to facilitate instructors' work. So, learning management systems are really converging.

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