

## **A CASE STUDY ON STATUS QUO OF THE USAGE ON BLACKBOARD PLATFORM IN COLLEGE COURSES**

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### **Abstract**

Blackboard teaching management platform (referred to as the BB platform) is the most widely used teaching management platform in Chinese colleges and universities, and studies on the status quo of its usage in existing courses are of great value, while such studies are few. This study researched 100 excellent college courses using BB platform since 2003, aiming to explore the status quo of BB platform usage in college courses. Authors hope that this research can offer inspiration to promoting universities to better use the BB platform.

### **Introduction**

Educational reform at home and abroad proved that IT plays an important role to promote innovation in teaching methods and even the education system change. Integrating information technology and curriculum and driving the modernization of education by educational information have been the focus of major theoretical and practical issues of curriculum reform in colleges and universities. In recent years, many colleges and universities in China have introduced WebCT, Blackboard, and Moodle network teaching platforms and technology tools. When used in teaching, network teaching platforms and tools can not only provide students with a variety of cognitive and communication tools, but also give strong support for implementation of such teaching methods as inquiry learning, collaborative learning, reflection learning, self-learning, etc.

The BB platform is a platform dedicated to provide a better learning experience for the learner. It promotes students' course learning and self-development by connecting the in class and after class of traditional teaching, breaking the constraints of time and space of the classroom teaching, and expanding and deepening classroom teaching. BB platform is currently the only teaching platform that can support one million subscribers on the market, with nearly 85 percent of the U.S. market and 50% of global market share (Ye, 2012). It is estimated that more than 4,000 colleges and universities around the world are using the BB platform (Ye, 2012). It was first introduced into China by Beijing CERNET-Blackboard Company in October 2003, and by the end of 2011 the BB platform has had nearly 240 users in China (Wang & Huang, 2011), including universities like Peking University, Beijing Normal University, Renmin University of China, Ocean University of China, and Nanjing Normal University. What's more, this number of users is increasing, and more and more courses are produced on the BB platform. Then, how is the application status of the BB platform? Which functions are used most, and least? Have they fully used the potential of this platform to assist teaching? In order to answer these questions, researchers examined domestic

college courses that incorporated the BB platform and then summarized the current application status of the BB platform.

### **Functions of the BB platform and Its Ability to Support Teaching**

The BB platform analyzed in this study is of 8.0 Enterprise Edition, and there are six modules in it, main function of each module is in the table below.

Table 1

#### *Function of Each Module of the BB Platform Control Panel*

Module	Main Function
Content area	Showing the contents of each topic, including slides, learning activities and homework.
Tools section	Including all communication tools, such as notice, discussion boards, and digital transceiver box.
Course options	Allowing teachers customized course Web site browser settings and appearance, as well as course availability, registration options and visitor access.
User management	Teachers can manually register or delete the students and create a group in order to carry out the cooperation of the group.
Test	Providing the tools to create online tests & surveys, manage achievements center, and view course usage
Help	Providing online handbook and other Blackboard online resources for teachers

From the functional point of view, these six modules can be classified into four separate functional modules (Wang & Huang, 2011):

1. Content Resource Module (CRM). Teachers upload courseware and classroom-related documents and links in order to provide students with a wealth of resources.
2. Online Communication Module (OCM). The platform provides such real-time and non-real-time communication tools as discussion boards, chat tools and virtual classroom. Using these tools, teachers can synchronously and asynchronously communicate with students, answer questions, clarify students' needs and get feedback from students. In addition, valuable exchanges content can also be integrated into the curriculum. Students can discuss on one question in the form of individual or small group, or collaborate to complete a task, and these communications can not only strengthen the link between the students, but also help them in-depth understanding of the course content.
3. Assessment and Management Module (AMM). Teachers can keep track of student learning through the design and implementation of formative evaluation and summative evaluation.
4. System Management Module (SMM). Teachers can set curriculum users, course menu and properties of tools in above three modules.

According to the teachers' operation manual (2009 Edition) provided by Beijing CERNET-Blackboard Company, the authors sorted the specific functions in each

module as follows.

Table 2

*Specific Functions in BB Platform*

Functional Modules	Specific Functions	
Content Resource Module	Add the syllabus	
	Add handouts	
	Add a network courseware	
	Add extra-curricular supplementary materials	
	Add quiz	
	Add homework	
	Add glossary	
Online Communication Module	Update teachers' information	
	Publish course notice	
	Organize discussions	
	Set assistants	
	Manage learning groups	
	Share the electronic folder	
Assessment and Management Module	Track learning	
	Student self-assessment and peer assessment	
	Correct homework	
	Correct papers	
	Evaluate teaching	
System Management Module	Design course structure	
	Archive, import and recycle a course (necessary operations when there are repeat classes)	Archive a course
		Import curriculum document into a new curriculum
	Recycle a course	

After the overall analysis of the four major functional modules of the BB platform and the specific functions of each module, the author believes that the BB platform can contribute to the teaching in the following aspects:

1. Blackboard platform can break the traditional constraints of teaching time and space. This is the most obvious effect of the BB platform (Zhao & Ren, 2012). Teaching activities are no longer limited to 45 minutes in the classroom. "Teaching" and "learning" carried out in extracurricular activities are colorful, too. Teachers combine the network teaching platform with existing classroom teaching by carrying out a variety of web-based teaching and learning activities, for example, setting homework and marking, group discussions, survey testing, post, and displaying work.
2. The BB platform can optimize the configuration of curriculum resources. The network curriculum resources consist primarily of the following forms: basic

resources, a web page of the electronic text, graphics, images, animation, audio and video library, discipline basic symbols, disciplines basic graphics library, discipline commonly used tools; building blocks resources, teaching unit , cases, test database, FAQ library, terminology library, reference library and shared software library (Zhao & Ren, 2012). BB Platform supports the uploading and sharing of the majority of forms, and teachers can achieve orderly configuration of the various resources and establish a non-linear link among them by a simple operation.

3. The BB platform is capable of tracking and checking the quality of teaching. Blackboard platform not only have obvious advantages in terms of curriculum construction, its teaching management functions are also quite well. Its systematic statistical functions can reflect the participation of teachers and students, and the statistical details includes academic performance statistics, course usage statistics, curriculum segment access statistics, and teaching activities participation statistics.

### Methodology

This study intended to understand the BB platform in the university curriculum by analyzing college courses constructed in the BB platform. The authors examined 100 courses constructed after 2003, excellent courses offered by Beijing CERNET-Blackboard Company, in which there were 50 courses constructed between 2003 and 2007, and 50 courses constructed between 2008 and 2013.

The authors counted the functions used in each course by visiting the course page, and the data were analyzed from the following aspects:

1. Summarizing the common ground of all courses in using the BB platform.
2. Analyzing the similarities and differences of the usage of BB platform between courses constructed between 2003 and 2007 and courses constructed after 2008.

### Results

#### The General Status Quo of the Usage on BB Platform in Course Cases

Table 3

*The Sort Table of Functions According to the Number of Courses Used It*

No.	BB Function	Number of Courses Using	Percentage of Total Number of Courses	Modules in
1	Design course structure	100	100%	System Management Module
2	Add the syllabus	95	95%	Content Resource Module
3	Add handouts	86	86%	Content Resource Module

4	Update teachers' information	84	84%	Online Communication Module
5	Add extra-curricular supplementary materials	81	81%	Content Resource Module
6	Add a network courseware	75	75%	Content Resource Module
7	Add homework	44	44%	Content Resource Module
8	Organize discussions	11	11%	Online Communication Module
9	Publish course notice	9	9%	Online Communication Module
10	Correct homework	8	8%	Assessment and Management Module
11	Set assistants	3	3%	Online Communication Module
12	Manage learning groups	1	1%	Online Communication Module
13	Add glossary	0	0%	Content Resource Module
14	Add quiz	0	0%	Content Resource Module
15	Share the electronic folder	0	0%	Online Communication Module
16	Evaluate teaching	0	0%	Assessment and Management Module
17	Correct papers	0	0%	Assessment and Management Module
18	Student self-assessment and peer assessment	0	0%	Assessment and Management Module
19	Track learning	0	0%	Assessment and Management Module

As shown in Table 3:

1. Among 19 functions of the BB platform, 12 have been applied by at least a course, 7 have not been applied.
2. Among those functions that have been used, 5 came from Content Resource Module, 5 came from Online Communication Module, 1 is in Assessment and Management Module and 1 in System Management Module. Four of the five functions of Content Resource Module ranked 2,3,5,6, which shows the favor

of courses towards them. The function of Design Course Structure takes the first place, and this function is the first and foremost task of building an online course. In the Online Communication Module, although there are 5 functions being used, only one function has been used by the majority of courses, the rest 4 functions have either been used by only about ten percent of courses, or been used by fewer courses. In addition, close to 50% of courses have applied functions associated with homework: add homework and correct homework.

3. Among the 7 functions that have not been used, 4 came from Assessment and Management Module, 1 are from Content Resource Module and 2 from Online Communication Module.

### **Similarities and Differences in the Usage of BB Platform Between Courses in Two Time Periods**

Table 4

*The Sort Table of Functions According to the Number of Courses Constructed*

No.	BB Function	Number of Courses Using	Percentage of the Number of Theatrical Courses	Modules in
1	Design course structure	50	100%	System Management Module
2	Add the syllabus	48	96%	Content Resource Module
3	Add handouts	48	96%	Content Resource Module
4	Update teachers' information	48	96%	Online Communication Module
5	Add a network courseware	47	94%	Content Resource Module
6	Add extra-curricular supplementary materials	41	82%	Content Resource Module
7	Add homework	22	44%	Content Resource Module
8	Publish course notice	1	2%	Online Communication Module
9	Correct homework	1	2%	Assessment and Management Module
10	Set assistants	1	2%	Online Communication Module
11	Organize discussions	0	0%	Online Communication Module
12	Manage learning groups	0	0%	Online Communication Module

Table 5

*The Sort Table of Functions According to the Number of Courses Constructed After 2008 Using It*

No.	BB Function	Number of Courses Using	Percentage of Number of Practical Courses	Modules in
1	Design course structure	50	100%	System Management Module
2	Add the syllabus	47	94%	Content Resource Module
3	Add extra-curricular supplementary materials	40	80%	Content Resource Module
4	Add handouts	38	76%	Content Resource Module
5	Update teachers' information	36	72%	Online Communication Module
6	Add a network courseware	28	56%	Content Resource Module
7	Add homework	22	44%	Content Resource Module
8	Organize discussions	10	20%	Online Communication Module
9	Publish course notice	8	16%	Online Communication Module
10	Correct homework	7	14%	Assessment and Management Module
11	Set assistants	2	4%	Online Communication Module
12	Manage learning groups	1	2%	Online Communication Module

As shown in Table 4 and Table 5, during the two periods of time, functions ranking the top few are the same: Design course structure, Add the syllabus, Add extra-curricular supplementary materials, Add handouts, Update teachers' information, and Add a network courseware. Most of them are in the content resource module. And over fifty percent of courses used them. It is worth mentioning that compared with courses constructed after 2008, among courses constructed between 2003 and 2007, the percentage of courses using these functions is higher, all over eighty percent, while few courses used other functions. Therefore, we can say that in those years that the BB platform was just introduced into China. It was mainly used in constructing course content when used in college. Courses constructed after 2008 enhanced the usage of functions in the Online Communication module, for example, twenty percent of courses constructed discussion through BB platform, sixteen percent of courses published the notice. Even though, the percentage of usage for these functions is still a far cry from that for functions in the Content Resource Module. It can be seen that college courses still pay more attention to content and resource construction when using BB platform.

### Discussion

It should be noted that, because the authors could not get the background data of the course, we only analyzed information that could be seen, which may cause some errors when classifying the application of some functions. For example, since the non-members of the course could not see the discussion board directly, in order to clarify whether the teacher has organized discussion via the BB platform, the authors viewed contents like course assessment methods, curriculum notification and homework that may have mentioned discussion, but it also does not guarantee the author's judgment is correct.

It is worth noting that among the selected courses, eight courses presented homework, but only 6 applied the function Add homework of the BB platform. Similarly, in the 9 courses having discussion forums, a course did not choose the discussion board of the BB platform, but through an external forum to provide students as the platform for exchange. According to our analysis, there may be three reasons: Firstly, teachers are not aware that there are related functions in the BB platform; secondly, teachers found the usage of related functions is difficult; and thirdly, teachers feel that the design of the function cannot meet the curriculum needs. The specific reasons still need further research.

In addition, when discussing the application status of the BB platform in one course, except for concerning about the number of functions it used, the research should also try to analyze the reasons why it didn't use other functions. Besides reasons of the teacher himself, it is also possible that some functions are not suitable for this course. If we only rely on the number of functions it used to determine whether the application is good or bad, it may be biased.

### Conclusion

The authors hold that the existing courses have not given full play to the potential of the BB platform to support teaching. The BB platform mainly plays the role as a platform to present resources. Among the four major functional modules of the BB platform, the contents resource module has been used most with a focus on the upload of necessary resources such as syllabi, handouts, courseware, and extra-curricular supplementary materials. Functions that can support communication, especially tracking and evaluating teaching and students' learning, have been rarely used. This is consistent with the findings of existing research (Ye, 2012).

Within the context of the selected courses, the BB platform appears to be more like a learning repository rather than a learning platform. Indeed, the wealth of learning resources is conducive to meeting the different learning needs of students, but jobs in constructing a network course are not simply dividing content into several modules and uploading resources. The purpose of the course construction is efficient use; If the course is just a information "stacking station," it may be dragged into the "Recycle Bin"(Ye, 2011). If teachers just pile up and render these resources and give no direction and guidance, it is difficult to ensure students' learning. Students may also feel stressed due to numerous resources, and do not know where and how to engage with them.



The authors believe that the status quo precisely reflects that the educational concept of teachers needs to be updated. Therefore, in order to change this situation, teachers should recognize the important role of the learning platform for the secondary classroom teaching, and correct their positioning of the roles and functions of the learning platform. Otherwise, even the best learning platform cannot fully play its due role, and the idea to achieving teaching reform through the learning platform will be out of the question.

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