The Application of Blackboard Platform in a Chinese Higher Education Setting: A Case Study of Beijing University of Posts and Telecommunications

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Abstract: This study reported the application of the Blackboard platform in a Chinese higher education setting. It gave an overview of the application of Blackboard platform in different subjects and course at Beijing University of Posts and Telecommunications (BUPT). Then, based on the survey and interview results, the current paper indicated learners' perceptions of and teachers' attitudes towards the integration of the Blackboard platform in learning. Finally, the present research disclosed the problems and challenges that universities may encounter in the process of applying the Blackboard platform in Chinese higher education settings. Suggestions are then proposed for the better utilization of the platform in the purpose of further improving the effectiveness of integration.

Keywords: Blackboard platform, higher education, Chinese higher education setting

1. Introduction

Information and Communication Technology (ICT) has been changing the way in which teachers enlighten students and learners acquire knowledge. The computer technology not only allowed students to be more engaged in learning, but also led to a significant improvement in their learning performance (Andrew et al., 2014). It also provided various possibilities to promote teaching in higher education. The application of the Blackboard platform in education is a typical example of integrating ICT with education. A number of previous studies have discussed user experience of the Blackboard platform and how to design a course with this platform. For example, Boggs and his colleagues (2004) used the Blackboard system in developmental mathematics courses and reported the system made contribution to increase learners' success rate in completing coursework. Dagmar (2015) introduced how to develop learners' English learning skills in the Blackboard-based virtual learning environment. However, there was still a lack of research concerning application of the Blackboard platform in Chinese higher education setting with the support at the University's administration level. The Blackboard platform was widely acknowledged as a learning system widely used in e-learning around the world, with a great variety of features which can be included in the course such as learning material, quizzes, discussion forums, assignments, and so on (Graf & Liu, 2008). It was a popular network teaching platform and was extensively used by different types of educational institutes in China (Peng, 2010). Earlier literatures proved the advantages of employing the system. For instance, it was verified that Blackboard platform contributed to enhance instructors' efficient management of students' assignments, improve teachers' asynchronous communications with students and create an online community for collaborative learning (Chan, 2012; Chang & Hao, 2008). According to Chan (2014), the Blackboard system also furnished a channel for teacher investigators to evaluate students' progress and to examine teaching strategies (Chan, 2014). Blackboard created an interactive and community-based virtual learning environment that supplements traditional classroom-based language instruction (Brandl, 2005)

Beijing University of Posts and Telecommunications (BUPT) in China is a comprehensive university with information technology as its main feature. Since 2014, the University's teaching

administration office started the "ICLASS" project, which promoted the integration of the Blackboard platform with classroom teaching and learning.

2. Application of the Blackboard Platform at BUPT

2.1 Favorable policies for promoting the application

In order to promote the application of the platform at BUPT, two favorable policies have been adopted. Firstly, the university has initiated the research project named "ICLASS" in the purpose of fostering and facilitating the application of the Blackboard platform in classroom teaching in various courses in the year of 2014. This research project has sponsored 42 courses with substantial research funding. The courses have covered outstanding courses with national-level, municipal-level or school-level awards at the university.

Secondly, the university has encouraged teachers' engagement in online teaching with the Blackboard platform. For instance, the university acknowledged the teachers' efforts in constructing course materials and resources online as part of their daily teaching work. Moreover, the university has selected the well-maintained projects and awarded teachers' online performance accordingly. Teachers' active participation in online teaching has been considered as pre-conditions for the "Teaching Achievement Award" at the university.

2.2 Facilitating conditions for promoting the application

The university also provided various facilitating conditions for promoting the application of the Blackboard system. For example, a number of training workshops and forums were organized for teachers to have face-to-face communication about problems they encountered in the process of using the platform. The university also set up a public instant messenger account and a public Email account which further enabled the online communication between the faculty members. Furthermore, the university issued the user manual and a video demo about the Blackboard platform, offering vivid demonstration for the application of the system.

3. Results and Discussion

3.1 Overview of the application

The Blackboard platform at this university is capable of accommodating a total number of 20,000 users. Until 2015, there are 15,516 registered users, a total of 79 active courses (active courses refer to courses which updates within this month) and approximately 2275 active users (active users refer to users who log into the platform during this month). Teachers of BUPT are also proactively exploring the platform. The overview of the platform usage statistics is shown as follows:

Table 1 An overview of the application of the Blackboard platform at BUPT

Subjects	Number of Activated Courses	Annual Average Page View	Online Resources(MB)
Information Engineering	13	169,761	13,522.461
Social Sciences	19	79,853	10,646.791
Computer Science	16	8,864	119.834
Physics and Mathematics	10	203,658	23,689.249
Electronic Engineering	5	301,093	224.744
Economics and Management	1	8,883	141.857
Software Engineering	2	144,178	3,334.713

3.2 Learners' attitudes towards the application

In order to explore learners' attitude toward Blackboard platform, this paper conducted a survey among the active users. More than 90 percent of the subjects majored in science and engineering and over 50 percent of the platform users participating in the survey were freshman.. Based on the data from the survey, we found learners' attitudes towards the application as follows:

1. The advantages of using the platform included its rich courseware, audio and video resources, multi-functional interaction modules, interesting team-work activities and convenient online tests.
2. Approximately half of the students agreed that the platform can eliminate the time and space limitation. They reported that they can learn in and after classes and can use the resources more efficiently. About one third of the students liked the way of interaction the platform provided. They can get feedback and their learning results on time. Moreover, they enjoyed the collaborative learning online and found it was an efficient way for them to learn.
3. About 95% students held positive attitudes towards the use of the Blackboard platform and the efforts and contributions made by the teachers.
4. More than half of the students intended to learn courses and course-related materials, and 46% students was inner-motivated to improve their learning and research abilities. 30% students wanted to improve their team work skills through the platform.
5. More than 70% students were ready to continue to use the platform in the future.

3.3 Teachers' perception of the application of Blackboard platform

Teachers who participated in the survey mainly taught science, engineer, computer, language and social courses. 85% of these teachers have taught at the university for more than 8 years. According to the survey, we made the following conclusions:

1. Using the platform helped the teachers to improve the quality of teaching. 60% teachers claimed that using the platform helped them to enhance the interaction with the students since they could interact with the students even after class. 70% teachers thought the platform could improve learners' learning efficiency since the teachers could take advantage of both online and in-class teaching. About 20% teachers agreed that the platform helped the learners improve learning motivation. Besides, they thought the online group discussion also improved the learning efficiency.
2. The platform provided many functions for online learning. The most frequently used function was for courseware uploading. The second most frequently used function was homework assigning and evaluation. Other frequently used functions included notifications and online communication publishing.
3. Over 80% teachers agreed one of the advantages of applying the platform was eliminating the time and space constraints. The students could learn online after class. Other advantages included optimizing the course resources to improve the learning efficiency. The application of the platform could achieve interactive learning and facilitate collaborative learning among the students by providing feedback and tracking the learning process.

3.4 Problems and Challenges

Though the students and teachers generally held positive attitudes towards the application of the Blackboard platform, we still found a number of problems and challenges. Two main defects of the platform were the lack of video storage space and the slow playback speed for video. One of the solutions may be purchasing streaming media on-demand system and integrating it in the platform. What's more, teachers and students were still not very familiar with the operation system and not very satisfied with the user experience, since the platform was newly introduced in the university. Therefore, more operational trainings should be prepared by the academic office to enable the teachers and students to get more and more familiar with the platform.

4. Conclusion

This paper reported on the application of the Blackboard platform in a Chinese university setting. The research results indicated that Blackboard platform provided various possibilities for promoting the collaborative learning and autonomous learning for learners in China. On one hand, the Blackboard platform has become an essential supplement for the traditional classroom teaching. It also improved the interaction between students and teachers. On the other hand, the successful application of the Blackboard platform in higher education settings still faced various challenges. Policy makers should create a more favorable environment for using the platform. Moreover, both teachers' and learners' ICT literacy still needs to be improved.

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References

Andrew, C.-C. LAO, C.-L. HUANG, O. KUb & T.-W. CHAN (2014). How Self-Efficacy Affects Students' Performance and Pace in Self-Directed Learning with ICT. *Workshop Proceedings of the 22nd International Conference on Computers in Education ICCE 2014, November 30, 2014 - December 4, 2014*

Boggs, S., Shore, M., & Shore, J. (2004). Using e-learning platforms for mastery learning in developmental mathematics courses. *Mathematics and Computer Education*, *38*(2), 213.

Brandl, K. (2005) Are you ready to Moodle? *Language Learning & Technology*, 9(2): 16 – 23.

Chan, C. H. Y. (2012). From self-interpreting to real interpreting: a new web-based exercise to launch effective interpreting training. Perspectives: Studies in Translatology. Retrieved from http://www.tandfonline.com/action/showAxaArticles?journalCode=rmps20

Chan, C. H. Y. (2014). Building an online library for interpretation training: explorations into an effective blended-learning mode. *Computer Assisted Language Learning*, *27*(5), 454-479.

Chang, C. C., & Hao, Y. (2008). The creation of an online learning community in interpreter training. Fanyixue Yanjiu Jikan (*Studies of Translation and Interpretation*), 11, 119–137.

Dagmar, EI-Hmoudova (2015) Developing English Learning Skills in Blackboard Virtual Learning Environment. *The Proceedings of the 1st GlobELT Conference on Teaching and Learning English as an Additional Language.* Social and Behavioral Sciences. Volume 199, 3 August 2015, Pages 517–524

Weisheng LI, Lizhu CHEN, Ge QU & Yan DONG (2014). Investigating Chinese University Students' Perceptions about Blackboard Platform to Support Their Online Learning. Workshop Proceedings of the 22nd International Conference on Computers in Education ICCE 2014.

Graf, S., & Liu, T. C. (2008, July). Identifying Learning Styles in Learning Management Systems by Using Indications from Students' Behaviour. *In Advanced Learning Technologies, 2008. ICALT'08*. Eighth IEEE International Conference on (pp. 482-486). IEEE.

Peng, Z.K. (2010). Critics on the application of blackboard platform in a Chinese higher education setting. Distance Education in China. *Software Guild, 2010(7):55-56*