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BLENDED LEARNING APPROACH TO BUSINESS EDUCATION

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Abstract

Technology is constantly creating opportunities for management teachers to design, facilitate and build a collaborative "community of inquiry" and for students to interact and collaborate with their peers, faculty and content. The future of business education will depend on its agility to engage in and deliver technology-enabled learning. In order to provide future-proof business education, hybrid offerings – blending online learning with face-to-face learning are needed. Blended learning - the thoughtful integration of the face-to-face and online teaching-learning activities provides flexible and collaborative learning opportunities to students for enhanced learning experience and improved outcome. Learning Management Systems (LMS), such as Moodle helps academic institutions design innovative teaching-learning approaches and enhance students' learning engagement. Moodle facilitated the ICFAI Business School (IBS) faculty members to blend their face-to-face teaching with online learning activities and engage students in participatory learning. This paper describes the blended teaching-learning approach adopted in IBS, highlighting the Moodle modules used. It also discusses the challenges faced and the eLearning policy initiatives required for effective implementation of Blended Learning.

Keywords:

Blended Learning, Business Education, B-schools, eLearning, Moodle

1. INTRODUCTION

The infusion of information, communication and broadcasting technologies into the teaching-learning process enabled the Business Schools (here in after referred to as B-Schools) create active and interactive online learning communities. The future of business education will depend on its agility to engage in and deliver technology-enabled learning. In order to provide future-proof business education, hybrid offerings – blending online learning with face-to-face learning are needed; with due focus on experiential learning [1].

The B-Schools across the world are integrating educational technology to offer blended learning programs for: providing flexible and collaborative learning opportunity and enhancing student's learning experience and outcome. With an intent to provide students with flexible, collaborative and engaging learning experience, the ICFAI Business School (here in after referred to as IBS) launched blended learning in 2012.

2. BLENDED LEARNING

The Christensen Institute [2] defines blended learning as "a formal education program in which a student learns at least in part through online learning, with some element of student control over time, place, path, and/or pace; at least in part in a supervised brick-and-mortar location away from home; and the modalities along each student's learning path within a course or subject are connected to provide an integrated learning experience".

Blended learning is not just the use of technology; it is the organic integration of thoughtfully selected and complementary face-to-face (F2F) and online approaches and technologies to maximize the benefits of traditional teaching methods and online delivery [3], [4]. The 21st century students continue to blend technology with their lives and expect anytime and anywhere access to courses from their mobiles and other portable devices. Moreover, technology is constantly creating opportunities for teachers to design, facilitate and build a collaborative "community of inquiry" and for students to interact and collaborate with their peers, faculty and content [5]. Blended learning offers an effective platform for employing different pedagogical strategies, such as classroom interaction, case studies, student group work and presentation, simulations etc. to maximize the advantages of both face-to-face and online learning and create a stronger sense of community among students [6]-[8].

Thomas and Brown [9] opine that a growing digital and networked infrastructure created a "new learning culture", enabling students to access and engage with learning everywhere, not just in the classroom. The "digital native" students immersed in new digital tools and networks engage in an unprecedented exploration of language, games, social interaction, problem solving, and self-directed activity that leads to diverse forms of learning [10]. This paper describes the blended teaching-learning approach adopted in IBS, highlighting the Moodle modules used. It also discusses the challenges faced and the eLearning policy initiatives required for effective implementation of Blended Learning.

3. ABOUT IBS

The IBS (ICFAI Business School), one of the best B-Schools in India has been providing excellent academic delivery to its students since its inception in 1995. IBS delivers quality instruction, conducts rigorous evaluation for continuous learning and improvement, develops industry interface and facilitates the final placement of students. IBS's 100% case-based learning aims at transforming its students into leaders of the future [11]. Its unique and innovative approach to business education focuses on providing students with the opportunity to acquire: right knowledge - relevant, contemporary and cutting-edge knowledge; right skills - analytical (case-based learning), professional and personal; and right attitude - positive thinking, risk-taking, opportunity-seeking, adapting to change and achieving a proper balance between divergent goals of life, for enduring success in management careers. The Post Graduate Program in Management (here in after referred to as PGPM) of IBS provides a broad perspective in all areas of management.

3.1 PGPM PROGRAM

The two-year PGPM (Post Graduate Program in Management) program gives the students an in-depth exposure to and training in core subjects, elective courses and integrated general management courses [12]. Each academic year comprises of two semesters. After the first two semesters, students undertake a 14-week Summer Internship Program (SIP). In the first and second semesters, students study core courses in all the functional areas of management like Finance, Accounting, Economics, Marketing, Human Resources, Operations and Information Technology. In the third and fourth semesters, students study integrated management, strategy courses and advanced courses in the form of electives. In order to engage students in participatory learning and extend their learning beyond classroom, IBS introduced Moodle-enabled blended learning in 2012.

3.2 MOODLE

Moodle (Modular Object-Oriented Dynamic Learning Environment), an open source learning management system (LMS) serves "as the course hub for management and administration, communication and discussion, creation and storage of materials (learning resources), and assessment of subject mastery" [13]. Moodle enables institutions and educators create flexible, collaborative and social learning environment. It allows faculty: manage content – add resources (in multiple media), create activities (assignment, forum, quiz, glossary, wiki etc.), enroll users, grade student's performance and provide feedback, communicate online and offline learning events with students and engage students in collaborative and constructive learning tasks.

Moodle fosters social constructionism [14], which asserts that learning is particularly effective when students in groups construct knowledge for others to experience. Blending Moodle modules, such as forum, wiki, glossary and database with classroom teaching-learning allows students co-construct and share knowledge online.

4. BLENDED LEARNING APPROACH IN IBS

A customized Moodle 2.3 version was introduced in 2012 to complement IBS's face-to-face teaching-learning and provide extended and enhanced learning experience to students. The goal and aims of the IBS blended learning approach are to:

- Provide a flexible and integrated platform for academic delivery, learning support and grading.
- Enable faculty members manage course content and enhance interaction and communication with students.
- Engage students in constructive, collaborative and social learning process beyond classroom.
- Provide students with anytime access to case studies, iBooks (interactive textbooks developed by the IBS faculty members), IUP (ICFAI University Press) Journals, student handbook, syllabi, learning resources, activities and attendance.
- Create a master learning resources pool enabling faculty members contribute and re-use the online learning resources.

Staff training and development played a major role in realizing the afore-listed blending learning goal and aims.

4.1 STAFF TRAINING AND DEVELOPMENT

Staff readiness and preparedness are vital to embark on technology-enabled Business education. Staff and administrators lacking: knowledge in and experience with the existing or emerging technologies creates a barrier [15]. Recognizing the significance of training, the IBS eLearning team devised plans for organizing orientation sessions to administrators and training programs to faculty. In March 2012, workshops were conducted for identified teams from each IBS campus on Moodle administration and demo and orientation sessions for academic coordinators, who oversee academic delivery at various IBS campuses. The eLearning team organized faculty training programs in May 2012 at six IBS Campuses on Moodle, its functionality and basic course managing modules.

Every year, the eLearning team organizes faculty development workshops in order to make faculty comfortable with the new modules and plugins integrated with the IBS LMS. In addition to the face-to-face training, IBS faculty acknowledge that the 'Faculty FAQ' and 'Student FAQ' created using the Moodle book module with step-by-step instructions, screenshots and screen-captured videos serve as ready reference for creating content and activities and managing courses online. Student FAQ help students to navigate around the site, participate in their courses and submit activities. Preparing faculty and students helped significantly in the implementation of the IBS LMS.

4.2 IBS LMS IMPLEMENTATION

Implementation of the IBS LMS is done in a phased manner for two reasons: (i) start simple and progress towards building an integrated system, (ii) introduce simple Moodle modules to faculty members so as to minimize faculty resistance to change.

4.2.1 Phase I:

In January 2012, Moodle was identified as the suitable platform for implementing blended learning. In February 2012, in-house hosted Moodle was piloted for 6 weeks with two faculty members volunteering with 220 students. By the end of the pilot run (March 2012), plans for going live for the semester-I students of class of 2014 were laid out. Moodle hosting, customization and maintenance were outsourced in March 2012 with the perception that it would save time, free up internal resources, and avail professional expertise.

In June, 2012, IBS LMS was formally launched as Quicforce http://quicforce.ibsindia.org/ with only three Moodle resources – file, URL and page and three activities – assignment, forum and quiz. During the first semester, faculty faced bandwidth issues while adding resources and creating activities. The LMS usage was improved during the second Semester with the upgraded bandwidth at all the IBS campuses.

Though the IBS LMS usage was improved, faculty members and academic coordinators were unhappy with the non-

availability of certain core Moodle modules and contributed plugins. This was due to the unwarranted limitations created by the outsourced company. In order to resolve the said limitations and provide end-users (faculty and students) with the desired Moodle modules, plugins and functionality, it was decided to customize and enhance Moodle features in-house. Developers were hired to undertake the Moodle customization as per the IBS faculty and academic coordinators' requirement.

4.2.2 Phase II:

Second phase was challenging to the IBS eLearning team, as the in-house team undertook the customization and maintenance of Moodle for the following reasons:

- Outsourced company was unsupportive to release and integrate core modules and new plugins, enhance existing features and upgrading Moodle to the latest version.
- High costs paid to the outsourced company for customization, hosting and maintenance of the IBS LMS.

The advantages of undertaking the customization and maintenance of IBS LMS by the in-house eLearning Department are:

- Adopting latest version of Moodle to provide advanced features to IBS faculty and students.
- Enhancing existing features as desired.
- Integrating new modules and plugins based on institutional requirement and/or faculty request.
- Substantial reduction in operating costs involved in customization and maintenance.

In-house development and maintenance enabled eLearning team to release and integrate new modules and plugins and enhance existing modules as per end-users' requirement.

4.2.3 Phase III:

In the third phase, the IBS LMS gained more attention, as functionaries recognized the role of Moodle big data in institutional planning and decision making. Accordingly, the eLearning team developed an application - Management Information System (MIS) from Moodle logs (site logs and course logs).

MIS generates dynamic reports, namely, access reports, activity report, attendance report (course-wise and student-wise), session progress report and consolidated report (access and activity). The various IBS campuses heads and academic coordinators are provided access to their campus-specific reports; whereas, the IBS Head Office functionaries have access to all campuses' reports (Fig.1 MIS Reports). The campus heads and academic coordinators are assigned Moodle manager role and mapping their user Id and role with their campus city allows them access only their campus reports.

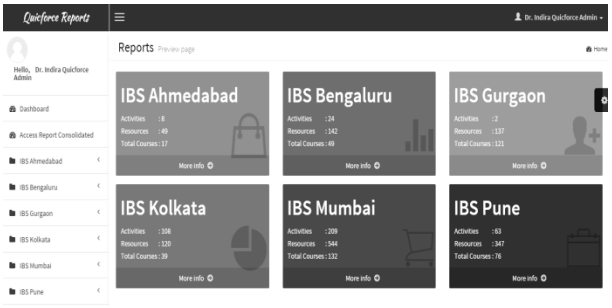

Fig.1. MIS Reports IBS Head Office Dashboard

The subsequent sections deal with the question "How did Moodle facilitate blending the IBS teaching methodology with online teaching-learning components?"

5. IBS TEACHING METHODOLOGY

The IBS Teaching Methodology is an optimal blend of classroom instruction, case discussions and analysis, project work, thesis, seminar, self-study, home assignments etc. Faculty members cover only the key concepts that help students in case analysis. Students are expected to prepare for the introductory topics by self-study, by referring to the reference books, articles, papers and websites specified by faculty. Case-based teaching method requires active participation in classroom discussions, written analysis and oral presentations. However, faculty may not find sufficient time in the Face-2-F (F2F) format to give each student an opportunity to actively engage in discussions and analysis. Moodle-enabled academic delivery provided ample opportunity to the IBS faculty to extend teaching-learning activities online.

5.1 MOODLE-ENABLED TEACHING-LEARNING

Integrating Moodle to implement IBS's unique teaching methodology offered an additional platform to enhance student learning experience. Face-2-F (F2F) instruction is generally structured within specific time frames - each faculty gets two sessions a week. Two-session a week is inadequate to accommodate active learning tasks, namely, in-class case analysis (discussion & written), oral presentations etc. Blending technology with F2F teaching provided students with flexible learning opportunity and engaged them in self-study, online case analysis with peer review and grading options.

Participation in the Moodle workshops made the IBS faculty members well-versed with populating learning content in multiple media on their course pages - uploading files (PPT, PDF, MS Word, MS Excel) and folders, embedding SlideShare, YouTube and Vimeo videos, sharing resources from their Google Drive, Drop box and other external repositories. However, they are yet to explore the flipped classroom model, i.e., using lecture capturing technology to record and upload their lectures (video not more than 10 minutes) with built-in learning activities and expect students to come prepared to the class by viewing their lectures and provide in-class opportunities for discussions, problem solving exercises and collaborative learning activities. In order to save faculty time, various institutional resources are pre-loaded while creating the Moodle courses.

5.2 IBS LEARNING RESOURCES

The IBS eLearning team preloads the courses with institutional learning resources (uploads or links) useful, before assigning faculty role and enrolling students. Institutional resources include: (i) iBooks - interactive textbooks developed by the IBS faculty members using the iBooks Author, (ii) Cases - developed by the IBS Case Research Centre (CRC) and (iii) Case-based learning guides by the CRC. Additionally, useful resources such as Student handbook, Syllabi and Library databases are made available on IBS LMS.

6. IBS EVALUATION

IBS follows the Continuous Evaluation System, which is evenly spread throughout the semester. Various Moodle modules support the IBS continuous evaluation system in multiple ways - participation in case analysis and discussion, quiz, assignments for submitting assessment components etc.

6.1 EVALUATION SCHEME AND WEIGHTAGE

The IBS evaluation scheme and weightage and the Moodle modules that support continual evaluation are tabulated below (Table.1).

Table.1. IBS Evaluation and Supporting Moodle Modules

Evaluation		**Weightage**	**Evaluation Components**	**Moodle Module(s) useful**
Continual Evaluation	Pre-mid Semester	10%	Case Studies/ Project/ Assignments/ Viva/Quiz, etc.	Forum Assignment Quiz
	Mid Semester Exam	30%	Written Examination	
	Post-mid Semester	10%	Case Studies/ Project/ Assignments/ Viva/Quiz, etc.	Forum Assignment Quiz
Comprehensive Evaluation	End Semester Exam	50%	Written Examination	

Moodle gradebook features allowed the IBS faculty export online grades and import offline grades of Mid-semester and End-semester examinations. By exporting grades, faculty can submit grades to the Student Service Department. Similarly, importing offline grades to the gradebook enabled students view their comprehensive and continual evaluation grades from within their Moodle courses.

6.2 CONTINUAL EVALUATION AND FEEDBACK

In addition to the end semester examinations, the IBS faculty assesses student's performance through various continual evaluation components, such as, quiz, projects, case analysis, written assignment etc. Continual evaluation components enable faculty to judge student's competencies such as: knowledge of concepts, application of principles, creativity and originality, decision-making ability, documentation and data handling, self-expression, leadership and class participation.

In IBS, feedback on student's performance is available in a continuous and timely manner. In the F-2-F format, the answer scripts, properly evaluated are shown to the students for clarification, if any. Feedback provided for formative assessment components using Moodle in-built feedback functionality helped IBS students to improve their performance in summative assessment. The IBS continual evaluation components and Moodle modules that facilitated administering these components and providing feedback are detailed here under.

6.2.1 IBS Quiz:

Quiz is designed to evaluate students in terms of their conceptual understanding and the skills acquired by them during the course. It is normally unannounced and is conducted in the first 10-15 minutes of the session.

Moodle Quiz Module:

Moodle quiz module facilitated faculty members to administer a time-bound quiz online, with randomly picked up MCQs from the question bank they created. Faculty members use GIFT or Aiken format for importing questions in bulk.

IBS faculty creates online quizzes for testing student's conceptual understanding. In order to meet unforeseen technological glitches, the eLearning team developed and integrated the "offline quiz" application. This application allowed faculty members download question paper sets from the quiz created and administer quiz offline (Fig.2). Faculty administers each set with different set of questions, as questions are randomly picked up from the question bank.

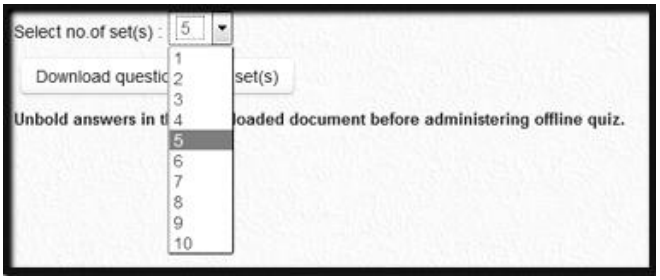

Fig.2. Question paper sets download feature

Quiz Feedback:

Quiz module allows teachers provide feedback for each question, along with correct answer. There are several ways to give feedback to students: on each question or overall.

Quiz review feature (when the correct answers and feedback are shown to students) allows students review their quiz attempt. Moodle offers four review options - (i) During the attempt, (ii) Immediately after the attempt, (iii) Later, while the quiz is still open and (iv) After the quiz is closed. For continual evaluation

quizzes, the IBS faculty members use the review option 'After the quiz is closed' to prevent students from sharing answers with their friends. However, for placements preparatory and self-assessment quizzes, they use 'Immediately after the attempt'. Feedback provided for placements preparatory quizzes helped students improve their performance during placement interviews.

6.2.2 IBS Assignments:

Faculty members give home assignments as a component of continual evaluations to be done by students individually or in small groups. These assignments may involve exercises, problem solving, short-notes, term paper, small case-lets with specific questions, conceptual questions etc. These are to be submitted within the time period specified by the faculty. Moodle assignment module allowed the IBS faculty to administer assignments online within the stipulated time period.

Moodle Assignment Module:

Faculty members use Moodle assignment module to seek students' submissions and specify time limit. Assignment availability setting - dates and time for submissions prevents students from submitting their assignment before the specified date. Moodle "groups and groupings features" facilitated assigning group assignments to students. Faculty can grade student's assignments at leisure by downloading submissions and grading worksheet. Moodle upload grading worksheet feature allows update grades and feedback.

Assignment Feedback:

Moodle assignment module has an inbuilt feature to provide feedback on student performance. Assignment feedback types - (i) feedback comments and (ii) feedback files allow faculty either to upload files with feedback or leave feedback for each submission online while grading the assignment.

6.2.3 IBS Case Discussion and Analysis:

The Case Study Method assists students in identifying typical problems in specific functional areas of management. A minimum of six cases per course are mandatory. Students study the case, comprehend the business situation, analyze the problems and come up with alternatives/solutions and then discuss the case in class. Moodle forum module enabled the faculty to engage students in case discussions and assess their analytical skills.

Moodle Forum Module:

IBS faculty members use Moodle Forum module for case discussion and analysis as an extension to the in-class discussions. Online discussion forums promote cognitive engagement, critical thinking and problem solving skills, creativity and originality and decision-making and strategizing ability over an extended time period facilitates the B-Schools create future-proof business leaders. Studies proved that online case-discussions "have more positive perceptions of peer interaction during the discussion than others, and they have outperformed the face-to-face students in terms of conceptual and factual knowledge about the case discussed" [16]. Online forums enable faculty members assess students' performance and provide timely feedback.

Forum Feedback:

Moodle forum module allows faculty to assess and provide feedback on student case analytical skills and students to seek feedback from their faculty. In addition to faculty, students can rate their peers' discussions, if permitted.

7. CHALLENGES

Faculty motivation and functionaries support are vital for successful implementation of blending learning. Though Moodle usage improved from the academic year (AY) 2013 to 2014, there is no substantial increase in the use of participatory learning activities.

Among various Moodle activities, faculty members used assignment and quiz modules; but forum module utilization to promote participatory learning is fewer due to the pre-digital age perceptions of faculty members. Only 30% faculty members used Moodle forum module to engage their students in constructive discussions. 70% faculty members are with the perception that most of their time has to be spent for completing the syllabus and have no time to design active learning experience for their "digital native" students.

"Digital Immigrant" instructors, who use pre-digital age teaching methodology and content are struggling to teach "digital natives" [17]. Digital natives look for collaborating, participatory learning and working. In order to transition to the blended learning format, faculty must adopt new mindsets to: develop blended teaching-learning skills and design student-centered learning. IBS functionaries need to take policy decisions to communicate the significance of LMS to faculty members in designing and delivering student-centered learning.

7.1 eLEARNING POLICY

Adopting an eLearning policy is necessary to standardize the activities and put the relevant systems and procedures in place. Lack of institutional eLearning policy is the main challenge to optimally utilize Moodle capabilities in IBS. The eLearning policy should address the issues related to (i) institutional support for staffing, budgeting, eLearning governance and infrastructure, (ii) content development and delivery, (iii) setting up of 'instructional design and technology lab' for providing support and training to faculty on: technology-enhanced learning design and authoring tools for developing interactive content, (iv) technology-integrated course delivery and assessment strategies, (v) incentive policy to motivate faculty through eLearning incentives, weightage in performance appraisal and awards, (vi) system and course evaluation/quality audit, (vii) eLearning research and development etc. Investing in eLearning research will yield benefits, such as, developing innovative pedagogies, faculty development and harnessing big data for transforming teaching and learning. Mining Moodle data to understand student's learning behaviour and performance will help the IBS faculty and eLearning team create personalized learning path for improving learning outcome.

8. CONCLUSION

Blended learning, the thoughtful fusion of the best of face-to-face and online teaching-learning activities aims at building participatory learning communities. It is not just about transferring information on to an LMS; it involves redesigning and enhancing student's learning experience to meet their learning outcomes. Moodle-enabled blended learning provides B-Schools with ample scope and opportunity to transform passive learning communities into active and participatory learning communities. However, faculty readiness is a pre-requisite for the effective implementation of technology-enhanced learning programs.

The "digital immigrant" teachers are with the perception that the development of online activities is an extra workload and unwilling to promote technology-facilitated teaching-learning. But, they ought to infuse technology innovatively in order to engage their "digital natives", who process and absorb information differently and learn in diverse forms, in active learning process.

Developing institutional eLearning policy would provide strategic direction to eLearning governance and effective implementation of blended learning. Involving technologically and pedagogically-sound faculty members in experimenting blended learning and assessing its impact on student performance is warranted to promote transformative and personalized learning.

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