

# The Development of Blended-Learning Teaching Portfolio Course Using TBL Approach

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## ABSTRACT

This article was written to develop a teaching portfolio that helps lecturers maximize the benefits of blended learning, a combination of in-person and online learning, through the use of Team-Based Learning (TBL) teaching and learning approach. Studies show that TBL can provide opportunities in developing teamwork capabilities and enhancing active learning, which are effects that could remedy the weaknesses of implementing blended learning. A blended teaching portfolio was developed for an International Human Resource Management course that consisted of a course overview, graduate competency, a syllabus, course material resources, a teaching scenario, a reading assurance test, midterm/final exams, student assignments, assessment of learning outcomes, and a course quality improvement sheet. Each item was constructed based on the characteristics of the course. The portfolio was considered a valuable tool for lecturers to manage a blended-learning course that can help students in achieving higher scores and in motivating them to read course materials prior to class sessions.

## KEYWORDS

E-learning, Face to Face, In Person, Learning Management System, Online Learning, Readiness Assurance Process, Syllabus, Team Based Learning

## INTRODUCTION

The Indonesian higher education is currently under pressure to demonstrate its effectiveness. Additionally, the Indonesian higher education faces issues in its teaching and learning process in order to maintain educational standards and student proficiency outcomes. Specifically, simply passing a course is no longer sufficient; students need to have more active roles during the learning process.

Teaching techniques at a particular university is typically dominated by the lectures. This teaching technique detracts from a student's ability to analyze information critically. A repercussion of this is the student tendency to become demotivated in learning to improve knowledge; the focus of

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enrolling in a class becomes merely to prepare for an exam and achieve a certain grade. This point of view regarding the purpose of a course renders the effectiveness of a course to be moot. To counter this lackluster attitude, students should be taught to analyze problems presented in class through discussions that can develop and improve their skills. The discussions must include collaborations from all members of the class rather than allowing for discussions to be dominated by one or a select few of students, ensuring that everyone in the class garners similar levels of knowledge and skills.

One of the teaching techniques to fix the aforementioned problems is the use of blended learning in both teaching and learning activities. Blended learning is defined as the combination of in-person and online learning. Improvement in teaching practices is expected through the creative and innovative use of technology, enhancing the benefits of online learning delivery. As for in-person teaching activities, instructional strategy such as Team-Based Learning (TBL) can provide opportunities for developing teamwork capabilities and enhancing active learning. TBL is one of the student-centered learning approaches and is designed to provide students with both conceptual and procedural knowledge.

At the university level, a course in management encompasses the teaching of techniques and methods to handle the responsibility of managing a company or organization. Related to the technique, hands-on experience through knowledge application in real situations (or a simulation of it) is important to hone this skill further. One of the subjects in a management course that requires the mastery of concepts through experience in solving cases is the International Human Resource Management (IHRM), a course that comprises basic concepts of human resource management internationalization including strategic context, national and culture context, global talent management, the roles and future in IHRM. This course gives students knowledge related to managing human resources in multinational enterprises to enhance their performance. A Human Resource Management course is a prerequisite for enrolling in this course.

This study was conducted based on research that indicate blended learning approach presents an effective platform to use different pedagogical strategies, and has the potential to maximize the benefits of both in-person and online learning (Wu, Tennyson, & Hsia, 2010). Collaborations between different pedagogy and teaching strategies have been considered good practice for many years. Lectures are no longer standard in a monotonous way since teaching classes involve more interactions, case studies, group work, student presentations, simulations, and other types of learning activities (Williams, 2002). A study conducted by Boyle, Bradley, Chalk, Jones, and Pickard (2003) in the United Kingdom confirms that blended learning can improve learning outcomes. Also in the United Kingdom, a review of its literature and practice commissioned by the Higher Education Academy concludes that overall students are very positive about blended learning (Sharpe, Benfield, Roberts, & Francis, 2006). In addition, students' interaction and overall satisfaction have been shown to improve through blended learning (DeLacey & Leonard, 2002). This study was conducted to develop a teaching portfolio that can help lecturers maximize the benefits of blended learning (both in-person and online learning) through the use of TBL teaching and learning approach. Thus, this article focused on the development of a teaching portfolio for a course in IHRM with blended learning and TBL teaching approach.

## **The Blended Learning**

A multitude of research has been done on blended learning. It is expected that through the creative and innovative use of technology, traditional teaching practices can be improved. However, this definition does not sufficiently capture the idea that blended learning can maximize students' learning outcomes. As currently stated, blended learning involves only the "attaching" of technology onto the traditional, in-person teaching approach as an aid, and without redesigning delivery methods and pedagogy (Bleed, 2001; Vaughan, 2007). Blended learning, as opposed to 'distance learning' or 'online

learning’, is not implemented simply by transferring learning and teaching to an online medium. As defined by Alebaikan and Troudi (2010), the blended learning is ‘a significant integration of online and traditional face-to-face class activities.’ Previous studies (Bates, 2000; Garrison & Anderson, 2003) indicate that the application of ICT (information and communication technology) could assist in eliminating geographical and situational learning barriers, presenting better opportunities for students and teachers to interact and subsequently lead to improvements in the quality of learning experiences. Additionally, a study conducted by Aziz (2013) has shown that the inclusion of a group blended-learning strategy led to a more significant improvement compared to an individual blended-learning strategy. These findings underscore that the key to obtaining successful outcomes from blended learning is proper application.

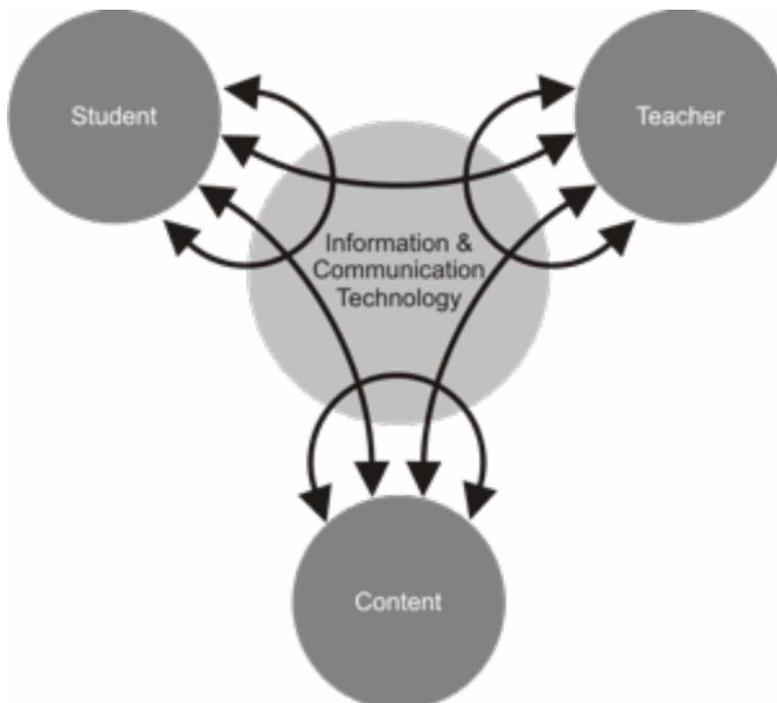
### E-Learning and Learning Management System (LMS)

E-learning is defined and improved in accordance with technology development (Pardamean & Suparyanto, 2014). There are three aspects crucial to the definition of e-learning: teaching, learning, and Internet. E-learning can be defined as a method to establish teaching and learning processes using Internet and information technology devices (Cross, 1998; The Herridge Group Inc, 2004; Fournier, 2006; Garg & Jindal, 2009).

Anderson (2004) states that there are three major elements in e-learning: the student (as a learner), and the teacher and the content/knowledge learned. The concept of e-learning is based upon the know-how to connect these elements through the use of technology. Its concept can be described by drawing the model of interaction mapping between elements; Figure 1 illustrates one possible schematic of such interaction.

Learning Management System (LMS), “an information system that administers instructor-led and e-learning courses and keeps track of students’ progress” (Brown & Johnson, 2003), is needed for

Figure 1. Interaction mapping among the major elements of e-learning (Pardamean & Suparyanto, 2014)



establishing e-learning. With the LMS, training, evaluating, and tracking results could be established easily. There exists many LMS, paid or open source. One of the more well-known open source versions of LMS is MOODLE.

### Structure of Team-Based Learning (TBL)

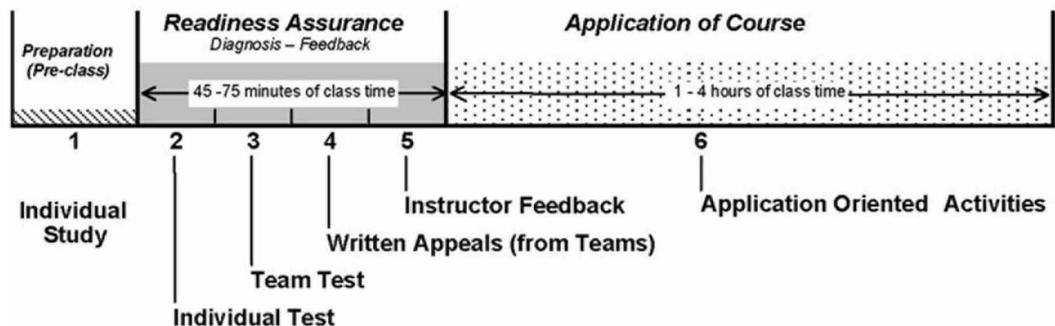
The primary learning objective in TBL is to achieve beyond simply covering content, and shifting more focus towards ensuring that students have the opportunity to practice course concepts via problem solving. Thus, TBL is designed to provide students with both conceptual and procedural knowledge (Michaelsen & Sweet, 2008). Although a portion of the classroom time is still spent on ensuring that students master the course content, the vast majority of class time is used for team assignments that focus on problem-based learning by simulating complex questions that the student will face as the course develops.

Figure 2 outlines a general scheme of how a TBL course is organized. Students are strategically organized into permanent groups for the term, and the course content is typically organized into five to seven major units. Before any in-class content work, students must study assigned materials since each unit begins with the readiness assurance process (RAP), which consists of a short test on key ideas from the readings that students complete individually. Subsequently, the students would work on the test as a team, coming to consensus on team answers. Immediate feedback is given on the team test, allowing the opportunity to write evidence-based appeals and valid arguments for incorrect responses. The final step in the RAP is short and lecture-specific to clarify any common misunderstandings found within the team test and appeals. Upon completion of the RAP, the remainder of a learning unit is mainly spent on in-class activities and assignments that require students to practice using the course content.

Shifting from simply familiarizing students with course concepts to requiring that students use those concepts to solve problems is no small task (Michaelsen & Sweet, 2008). The realization of this shift requires changes in the roles of both the instructor and the students. The instructor's primary role shifts from dispensing information to designing and managing the overall instructional process. On the other hand, the students' role shifts from being passive recipients of information to actively responding to initial exposure to the course content during the process of preparing for in-class teamwork. Changes of this magnitude do not happen automatically and may even seem improbable. They are, however, achievable when the four essential elements of TBL are implemented successfully (Michaelsen & Sweet, 2008):

- **Teams:** Groups of students must be properly formed and managed;
- **Accountability:** Students must be accountable for the quality of their individual and group work;
- **Feedback:** Instructors must provide frequent and timely feedback to students;
- **Assignment design:** Group questions must promote learning and team developments.

Figure 2. TBL process (Michaelsen & Sweet, 2008)



When these four elements are implemented in a course, the stage is set for student groups to evolve into cohesive learning teams (Michaelsen & Sweet, 2008).

Forming student teams for group work, even in an informal manner, produces benefits that cannot be achieved with students' being in a strictly passive learning role. While even the most casual use of teams is beneficial, it must be stressed that team-based learning allows the achievement and maintenance of important outcomes only through consistent utilization of the method. Some of these benefits include (Michaelsen & Sweet, 2008): 1) developing students' higher level cognitive skills in large classes, 2) providing social support for "at-risk" students, 3) promoting the development of interpersonal and team skills, and 4) building and maintaining faculty members' enthusiasm for their teaching role.

## TEACHING METHOD

### Teaching International Human Resource Management with TBL

This section focuses on components of the teaching portfolio that helps lecturers manage the IHRM course. Procedures, materials, and a description of the teaching process for this course will be outlined in this section. This course consists of 13 meetings in one semester. Description of the materials studied is listed in Table 1. Not all parts were taught with TBL since only some materials were compatible with the TBL system; TBL was only performed on sections 3, 5, and 6 of the course. All teaching materials were uploaded by lecturers through the LMS portal. All students were required to open an account and download materials to be used in the learning process with TBL and in-person/Face-to-Face. It was assumed that all students had the ability to prepare themselves prior to TBL class attendance. Besides TBL and Face-to-Face (F2F), this course also utilized another lecturing method, the GSLC (Guided Self-Learning Class), which is an independent learning approach through the LMS portal:

1. **Course Overview:** The International Human Resource Management course encompasses basic concepts on the internationalization of human resource management including strategic context, national and culture context, global talent management, and the role and future in international

Table 1. Material and technique

Session	Topics	Teaching Technique
1	The Internationalization of Human Resources Management	F2F
2	Strategic International Human Resource Management	F2F
3	Design and structure of the multinational Enterprises	TBL
4	International Mergers and Acquisitions, Joint Ventures, and Alliances	GSLC
5	International Human Resource Management and Culture	TBL
6	International Employment Law, Labor Standard, Ethic, and Employee Relation	TBL
7	International Workforce, Planning and Staffing	F2F
8	International Recruitment, Selection, Repatriation, Training and Management Development	F2F
9	International Compensation, Benefits, and Taxes	GSLC
10	International Employee Performance Management	F2F
11	Well-Being of International Workforce, and International HRIS	GSLC
12	Comparative IHRM: Operating in Other Regions and Countries	F2F
13	The IHRM Department, Professionalism, Future Trends	F2F

human resource management. This course gives students knowledge related to managing human resources in multinational enterprises to enhance their performance. The Human Resource Management course is a prerequisite for enrolling in this course;

2. **Graduate Competency:** Each course in the study program contributes to the graduate competencies that are divided into employability and entrepreneurial skills as well as outcomes specific to a study program, which students must demonstrate by the time the course is complete.

Upon successful completion of this course, students will have achieved the following learning objectives (LO):

**LO1:** Explain the basic concept of international human resource management.

**LO2:** Identify the internationalization of human resource function.

**LO3:** Apply international human resource functions to match the needs of a multinational enterprise.

3. **Syllabus:** The syllabus includes information about the lesson plans throughout the 13-week course, outlining specific details related to learning objectives, strategies for evaluation, teaching methods, student assignments, grading system, required textbooks and references, weekly plans, teaching methods, and learning activities;
4. **Course Materials:** Course materials are classified according to the topics, and prepared using Word Processor and Power Point. The student should also read the primary textbook, Dennis Briscoe, Randall Schuler, and Ibraiz Tarique (2012), *International Human Resource Management*, 4th Edition, ROUT, New York, ISBN: 978-415-88175-4;
5. **Scenario:** The teaching and learning method in this lecture is a blended-learning method that uses two kinds of teaching techniques, including: online learning and Face-to-Face (F2F). Online learning is administered through the LMS portal, while F2F consists of two models: regular lectures and lectures with TBL:
  - a. **BinusMaya:** The online learning process is administered through an LMS. The university developed the LMS used in this lecture called BinusMaya. In the student's user interface, BinusMaya features consists of Info, Topic, Assignment, Assessment, and Shared Materials. On the other hand, the user interface for the lecturers consists of Practicum, Lecture Book, Message Monitoring, Student Attendance, Discussion Forums, and Grade Entry. A number of important features for the course are detailed below:
    - i. **Info:** An important feature of this section contains information about the course outline (CO), learning objectives (LO), graduate competency, and course materials. Through this feature, students are expected to familiarize themselves with important aspects of the course prior to enrollment. Students can also obtain information about the textbooks, which are used as references for this lecture;
    - ii. **Topic:** This feature contains a list of topics and lecture agenda. With this feature, students can determine materials are needed and will be studied along the semester. Each topic is connected with the material used for every session in this course. Students can download the material that has been uploaded by the lecturer. This link makes it easier for students to obtain the basic, lecture materials. All course materials have been compiled into PDF files;
    - iii. **Assignment:** This feature assists students to determine materials that will be tested and to access the test agenda. This information helps students in preparation for each exam by delineating information such as the number and the types of tests they must take and pass in order to successfully complete the course;
    - iv. **Assessment:** This feature contains techniques and assessment criteria on each assignment. The clarity of assessment criteria can help students to prepare for the exam. Students can also find out what competencies they have mastered before the exam;

- v. **Shared Material:** This feature contains an archive of materials, exercises, and independent assignments from current lecturers and past faculties who have taught the same courses that students can browse. Shared material primarily contains additional materials that can provide further assistance for students to learn the course material;
- vi. **Discussion Forum:** This feature is an online medium for discussion between students and lecturers. Through this feature, students and lecturers have the ability to discuss materials without the constraints and limitations posed by time and place, i.e. face-to-face class time and physical classroom;
- b. **Face-to-Face:** Generally, this Face-to-Face process is equivalent to conventional lectures. It begins with a presentation from the lecturer and students listen to the lecture. Frequently, lecturer adds discussions to allow students to be actively involved in the class. Face-to-Face is sometimes less effective due to the passive nature of the students' role during class time;
- c. **Face-to-Face with Team-Based Learning:** This section presents the lecture scenario for Face-to-Face with TBL. In accordance with the stages in TBL, each session consists of 3 stages, e.g. Preparation, Readiness Assurance Process (RAP), and Application Concept Test (ACT). For example, the lecture forms two discussion groups in this course, e.g. group A and B. Each group contains between 3 to 4 members that is permanent for one semester.

During the preparation stage, all students must independently learn the material that has been uploaded on the LMS portal. One week before the start of a session, the lecturer reminds the students to prepare themselves by reading the relevant materials. Students can improve their knowledge through learning resources in the LMS or other materials from the library or the internet. Without preparation, it is unlikely that students can follow these sessions.

The RAP segment of this session consists of individual tests, group tests, and short lectures. This session begins with the individual test, between 10 to 15 minutes in length, followed by a test group or discussion groups. The set of questions for the individual test and the group test are the same, but the answer sheet models are different. Explanations of questions and results are described in Section 6. The next stage is the class discussion by presenting the results of the group discussion. For students who disagreed with an answer from the lecture can posit the disagreement in a stage called the Written Appeal. Phase 2 ends with a brief clarification of sub-topics that are considered to be most unclear by the class.

The third phase is ACT, a test phase that contains questions about applications of the concept. Due to limited time constraints, this stage is done during the midterm test or final exam. The explanation of the questions and answers are described in Section 7.

- 6. **Reading Assurance Test:** RAT is a set of conceptual multiple-choice questions. This test is different from a typical multiple-choice question in the way the questions are answered and the format of the worksheet. An individual RAT worksheet is shown in Figure 3. RAT aims to measure students' understanding of concepts through 5 to 10 multiple-choice questions. Each question has four possible answers choices. Students must distribute a total of 4 points for each question, ranking each answer from least correct to most correct, allowing students to receive partial credit based on their ranking and points distribution. It is assumed that the ranking is based on the student's thought process of which choices are least to most likely to be the correct answer based on their knowledge of the content being tested. An RAT has a maximum total point that is 4 times the number of questions.

After the individual RAT, students worked in groups. The lecturer checks the individual RAT while the students discuss the questions within their groups. The groups RAT worksheet is a scratch paper as shown in Figure 4. The scratch paper used is based on the Immediate Feedback Assessment Technique, also known as the IF-AT, a revolutionary testing system that transforms traditional multiple-

Figure 3. Individual RAT's worksheet

Tanggal : 12-03-2015 TEST KE : 2  
 Nama : [REDACTED] KODE MK : 01622  
 GROUP : 1 MATA KULIAH : IHRM

No.	A	B	C	D	Skor
1				4	4
2	1	1		2	1
3	2	2			2
					1

Figure 4. Group RAT's worksheet (IF-AT)

**IMMEDIATE FEEDBACK ASSESSMENT TECHNIQUE (IF AT®)**  
 Name Group I Test # 1 & 2  
 Subject International Human Resource Management Total \_\_\_\_\_

**SCRATCH OFF COVERING TO EXPOSE ANSWER**

	A	B	C	D	Score
1.				★	2
2.			★		4
3.				★	2
4.	★				2

choice testing into an interactive learning opportunity for students thereby providing teachers with a more informative assessment opportunity (Epstein Educational Enterprises, 2014). The students scratch their group answers for every question. If a star is revealed upon the first scratch, the group receives 4 points the question; alternately star on the second scratch leads to 2 points and third scratch garners 1 point. From the individual and group RAT answers, the teacher compiles the wrong answers to serve as the basis for reviewing the RAT worksheet.

For instance, in the whole course for the entire semester, there were three lectures that used the TBL approach. Therefore, three RATs were administered to students. The first RAT was done in Session 3. The topic for this session was design and structure of the multinational enterprises. The RAT in this session consisted of 10 questions. The Second RAT was done in Session 5 about international human resource management and culture. This RAT consisted of 10 questions. Figure 5 shows the RAT for Session 5. The third RAT was done in Session 6 about International Employment Law, Labor Standard, Ethic, and Employee Relation. The RAT for this session consisted of 5 questions. The number of question in every session was determined based on the number of concepts covered by the topic of each session.

Figure 5. Sample of RAT questions

1. ....are intense feelings directed at someone or something.
  - a. Effect
  - b. Moods
  - c. Affective
  - d. Emotions
2. ....is a mood dimension consisting of nervous
  - a. High Negative Affect
  - b. High Positive Affect
  - c. Low Positive Affect
  - d. Low Negative Affect
3. The tendency of people to associate two events when in reality there is no connection
  - a. Illusory correlation
  - b. Affect intensity
  - c. Exercise
  - d. Positivity offset
4. .... is an individual's actual emotions
  - a. Emotional labor
  - b. Emotional dissonance
  - c. Felt emotions
  - d. Displayed emotions

7. **ACT in Midterm/Final Exams:** ACT is done during the Midterm or Final Exam. ACT during a midterm exam consists of 5 essays and the final exam consists of 8 essays. Table 2 shows an example of the description of materials tested in this course. The questions in this test were essays in the form of a case study of the concepts learned during the course;
8. **Student Assignment:** Students were given the scenario and asked to prepare a personal assignment. They were also provided with an explanation on how to complete the assignment, which could be completed individually or as a group. Every assignment has the percentage of grade contributing to for the final course score. In the TBL process, the assignment can be a case study. The purpose of the assignment is to help students practice their ability to apply learned concepts to a real case;

Table 2. Topic for midterm and final exams

Chapter	Sub Topic	Number of Question
MIDTERM	The Internationalization of Human Resources Management	1
	Strategic International Human Resource Management	1
	Design and structure of the multinational Enterprises	1
	International Human Resource management and culture	1
	International Employment Law, Labor Standard, Ethic, and Employee Relation	1
FINAL	International Recruitment, Selection, Repatriation, Training and Management Development	3
	International Employee Performance Management	1
	Comparative IHRM: Operating in other regions and countries	1
	The IHRM Department, Professionalism, Future Trends	1

9. **Assessment of Learning Outcomes:** Learning outcomes were assessed through the results of the midterm and final examinations. All responses to the essay questions on the exams were evaluated according to a particular set of criteria then graded accordingly as excellent, good, average, or poor. The excellent score is awarded to students who achieved a score between 85 until 100. While the good predicate awarded to student who got the score between 75 until 84. An average grade translates to students who achieved between 65 and 74 while a poor grade translates to a score below 65. For LO 1, the indicators were (1) ability to explain the basic concept of international human resource management and (2) ability to explain concepts related to international human resource management. Indicators for LO 2 were (1) ability to explain international human resource functions and (2) ability to explain relatedness of these functions. Lastly, the LO 3 indicators were (1) ability to explain the international human resource function suitable for an organization and (2) ability to explain the outcome of the IHRM functions applied to the organization.

## RESULT

In order to assess the TBL framework, a pilot class was devised that consisted of seven students. Students then were divided into two groups: Group A consisted of four students and Group B of three students.

### Course Quality Improvement Sheet (CQIS)

The quality improvement of this course was determined by data collected from the CQIS questionnaire about course satisfaction. This questionnaire was regularly used by the University to provide feedback on satisfaction for all courses as well as the teaching and learning method based on a 6-point Likert scale.

There were 3 questions for Satisfaction of Course Management (SCM):

1. Were the course materials clear and concise?
2. Was the course well organized?
3. Does the course allow for adequate development of subject knowledge?

For questions on Satisfaction with Teaching and Learning Method (STLM), there were 5 questions:

1. Was the lecturer open towards student's perspectives or ideas?
2. Did the lecturer provide clear and understandable explanations?
3. Was the lecturer enthusiastic about what he/she was teaching?
4. Were the teaching methods effective?
5. Were feedbacks given by the lecturer helpful for the students to see how they could improve?
6. Were they satisfied with the teaching commitment of the lecturer?

The data from CQIS indicate that students were satisfied with TBL learning, primarily due to the immediate feedback they received that allowed for further evaluation on their performance.

### Reading Assurance Test (RAT)

As part of TBL, the Readiness Assurance Test (RAT) was conducted three times in one semester. The students performed RAT individually in 15 minutes prior to formal learning and teaching activity in the classroom. In each RAT, there were 15 multiple choice questions. The materials for each RAT were obtained from text book.

The result of RAT is detailed in Table 3. From RAT #1 to RAT #3, students in both groups consistently showed improvement in their performances. It was also true for the overall students when both groups were combined.

Table 3. Mean and SD for RAT

Group	RAT #1	RAT #2		RAT #3
	Mean (SD)			
A	46.50 (16.92)	58.75 (16.90)	88.75 (13.14)	
B	48.75 (11.64)	71.25 (1.77)	100 (0)	
All Students	47.50 (13.98)	62.92 (14.61)	92.50 (11.72)	

## DISCUSSION

The teaching portfolio in this study is developed to help the lecturer to manage a blended-learning course with TBL approach. The learning model in this teaching portfolio consists of online learning and face-to-face courses, while TBL is a bridge that connects between online learning and face-to-face. The bridge was intended to ensure the implementation of an efficient and effective learning.

### Online Learning

Blended learning is one option to overcome various obstacles in traditional, lecture-room education. Internet can help the process of distributing materials for learning and other aspects related to the learning process. By utilizing the LMS portal, learning management process becomes more effective. The problem that often arises in online learning is the absence of collateral against the student interest to learn independently, a problem that technology cannot overcome. However, the elimination of this problem can be done through the use of learning techniques. TBL is one of the most effective learning techniques to encourage each student to become an independent learner (Michaelsen & Sweet, 2008; Hashmi, 2014) while RAP encourages students to read and prepare before the lecture begins. Students must be encouraged and trained to become active learners. Higher persistence level and higher degree of readiness (e.g. self-efficacy, technology skills, and time-management skills) may be motivated to participate in an online experience (Burns, 2013).

The Individual RAT phase is designed to increase student interest in reading and studying literature independently. TBL system requires students to prepare before a face-to-face lecture. This form of collateral motivates students to read materials prior to lecture since failure to do so can gravely affect their grades. Therefore, student habits of studying only before major exams are changed, rendering the ability to maximally reap the benefits offered by the use of an LMS.

RAT is intended to allow students to learn about basic concepts required in the lecture independently. The purpose of this first phase of TBL is to ensure that students master concepts properly. From the results of RAT (individual as well as group tests), it can be shown whether students have learnt and mastered certain topics. If majority of students answered wrongly to the selected topics in the questions, the lecturer can easily detect and corrects it through a mini-lecture. In addition, students also have the opportunity to provide arguments to the lecturers' answer if the students consider that the lecturer's answers are wrong. The students can put their arguments in writing during appeal phase. This process is to enhance student's critical thinking skills.

### Face-to-Face

TBL also provides encouragement for students to be active during lectures. As a result, the Face-to-face learning process is no longer just a passive knowledge transfer from lecturer to students. Students are encouraged to actively construct their own knowledge, known as Constructivism. Through

collaborations in Group RAPs, each student expresses their own ideas as a basis for contributing in a discussion. This process then eliminated the habit of students attending lectures without any participation during the whole session. Since the result of a group discussion counts towards the overall grades, students have a stake at ensuring that the final group answer is accurate.

A disruptive habit that often occurs in a physical, in-person lecture is the students' discipline and timeliness. Many students, who view lectures as a mandatory activity rather than a conduit of learning, become jaded as the semester progresses. With this, forms the pattern of tardiness or even truancy. Individual RAT at the beginning of the lecture emphasizes to students the necessity to attend classes and arrive on time. This test only takes place within the first 10 to 15 minutes of class; thus, lateness is a disadvantage for students and can negatively impact their final scores in the course.

## **CONCLUSION**

In general, positive outcomes obtained through the implementation of this teaching portfolio for blended learning with TBL were: (1) the students achieved higher scores; (2) the students were motivated to prepare lectures; (3) the students' understanding were improved through theory mastery and knowledge application in case studies; (4) the students became more active in group discussion; and (5) student's tardiness were significantly reduced.

Team-Based Learning (TBL) is an effective bridge for online learning and in-person/face-to-face learning in the blended-learning method. The learning process within an IHRM course, which requires an understanding of basic concepts and an ability to apply basic concepts to find solutions for case studies, can be improved by the application of TBL as a teaching technique. The effects of TBL are positive for the learning progress of each student and TBL simultaneously improves the effectiveness of online learning. Face-to-face learning is also becoming more varied, leading to higher levels of enthusiasm in students.

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## REFERENCES

- Alebaikan, R., & Troudi, S. (2010). Blended learning in Saudi universities: Challenges and perspectives. *ALT-J. Research in Learning Technology*, 18(1), 49–59. doi:10.1080/09687761003657614
- Anderson, T. (2004). Toward a Theory of Online Learning. In T. Anderson, & F. Elloumi (Eds.), *Theory and Practice of Online Learning* (pp. 33-60). Athabasca University.
- Azis, Y. M. (2013). The effectiveness of blended learning, prior knowledge to the understanding concept in economics. *Education Research International*, 2(2), 106–116.
- Bates, A. W. (2000). *Managing technological change. Strategies for college and university leaders*. San Francisco: Jossey-Bass.
- Bleed, R. (2001). A hybrid campus for a new millennium. *EDUCAUSE Review*, 36(1), 16–24.
- Boyle, T., Bradley, C., Chalk, P., Jones, R., & Pickard, P. (2003). Using blended learning to improve student success rates in learning to program. *Journal of Educational Media*, 28(2-3), 165–178. doi:10.1080/1358165032000153160
- Brown, A., & Johnson, J. (2003). Five Advantages of Using a Learning Management System. Retrieved from [www.microburstlearning.com](http://www.microburstlearning.com)
- Burns, M. (2013). Staying or leaving? Designing for persistence in an online educator training programme in Indonesia. *Open Learning: The Journal of Open, Distance and e-Learning*, 28(2), 141-152.
- Cross, J. (2004). An informal history of E-Learning. *On the Horizon*, 12(3), 103–110. doi:10.1108/10748120410555340
- DeLacey, B., & Leonard, D. (2002). Case study on technology and distance in education at the Harvard Business School. *Journal of Educational Technology & Society*, 5(2), 13–28.
- Epstein Educational Enterprises. (2014). What is the IF-AT? Retrieved January 21, 2014 from <http://www.epsteineducation.com/home/about/>
- Fournier, H. (2006). *State of the Field Report: E-Learning*. Canada: National Research Council Canada, Institute for Information Technology.
- Garg, M., & Jindal, M. K. (2009). EduSat - E-learning Through Satellite – Reaching the Unreached. *International Journal of Recent Trends in Engineering*, 1, 149–151.
- Garrison, D. R., & Anderson, T. (2003). *E-learning in the 21st century: A framework for research and practice*. London: Routledge Falmer. doi:10.4324/9780203166093
- Hashmi, N. R. (2014). Team Based Learning (TBL) in Undergraduate Medical Education. *Journal of the College of Physicians and Surgeons--Pakistan*, 24(8), 553–556. PMID:25149832
- Michaelsen, L. K., & Sweet, M. (2008). The Essential Elements of Team-Based Learning. *New Directions for Teaching and Learning*, 116(116), 7–21. doi:10.1002/tl.330
- Pardamean, B. & Suparyanto, T. (2014). A Systematic Approach To Improving E-Learning Implementations In High Schools. *TOJET: The Turkish Online Journal of Educational Technology*, 13(3).
- Sharpe, R., Benfield, G., Roberts, G., & Francis, R. (2006). *The undergraduate experience of blended e-learning: A review of UK literature and practice*. Higher Education Academy, Retrieved from [http://www.new2.heacademy.ac.uk/assets/York/documents/ourwork/research/literature\\_reviews/blended\\_elearning\\_full\\_review.pdf](http://www.new2.heacademy.ac.uk/assets/York/documents/ourwork/research/literature_reviews/blended_elearning_full_review.pdf)
- The Herridge Group Inc. (2004). *The Use of Traditional Instructional Systems Design Models for eLearning*. Retrieved from [www.herridgegroup.com](http://www.herridgegroup.com)
- Vaughan, N. (2007). Perspectives on blended learning in higher education. *International Journal of Learning*, 1, 81–94.
- Williams, C. (2002). Learning on-line: A review of recent literature in a rapidly expanding field. *Journal of Further and Higher Education*, 26(3), 263–272. doi:10.1080/03098770220149620
- Wu, J. H., Tennyson, R. D., & Hsia, T. L. (2010). A study of student satisfaction in a blended e-learning system environment. *Computers & Education*, 55(1), 155–164. doi:10.1016/j.compedu.2009.12.012

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