1. Introduction

1.1 Research needs and objectives

Within the past few years, internet and mobile technologies have become more affordable and widespread. Even though there are progresses, the quality in all levels of educational sector in Mongolia could still be further improved [1]. Blended learning,
as the name suggests, consists of a blend of at least two pedagogical approaches: within the context of this research, blended learning is the integration of the PBL and face-to-face learning in a classroom with e-learning. For example, the classroom is used by the PBL group to discuss critical concepts, and the discussion boards and synchronous chat room in an online environment such as Google Classroom, is used to encourage participant's dialogue around the concept [2]. Mongolian Universities are being challenged by technology, and need to adapt in a world where online courses are becoming increasingly popular. Therefore, Mongolian Education Ministry defined long-term strategies and basic policies for the educational development [3]. This paper presents process and procedures of problem developments for BPBL in Mongolian Universities. The aim of the module is to develop the problems required for BPBL based on a Management curriculum. This paper contains Research needs and objectives, Instructional design of BPBL, Learning Environment for BPBL, Problem development of the BPBL, Extraction and Procedures of BPBL Problem Development and Conclusion[16-18].

2. The main body

2.1 Instructional design of BPBL

The proposed BPBL instructional design model (Fig.1) is made up of demand, analysis, performance objectives determining, assessment tool designing, teaching strategies development, teaching materials preparing, implementation, formative implement assessment, final evaluation and formative evaluation[4].

(1) Demand phase

Phase to determine gaps of Mongolian University changes in teaching and distance learning conditions.

(2) In the analysis phase, characteristics of learners and teachers, the learning environment and learning processes will be analyzed.

(3) Determining performance objectives. Determining the expected outcomes of the study. Learning objectives should be defined before choosing appropriate courses for BPBL.

(4) Develop assessment tools and items that can determine whether the learners achieve learning objectives. Assessment is done to acquire learning objective and close relation assessment standard and object are based on BPBL objective [5].

(5) Teaching strategies. Teaching method should be determined and various materials that are used during class should be prepared. Instructional method conditions are required to execute the learning objective. It is also called as teaching methods, teaching forms and teaching tactics [6].

(6) Teaching material design. When establishing a plan for BPBL, all materials should be prepared for before learning. The materials needed for class
refer to all tools of learning and media data to be used for classroom activities. Teaching materials must be prepared in accordance with the steps and procedures necessary data for lesson progress [7].

(7) Implementation. Execution of BPBL in Mongolian University. In the implementation phase, a learner gains knowledge by self-direct choosing aside from seeing and listening.

(8) Formative evaluations. The program is evaluated by the following steps, one to one evaluation, small group evaluation and on-site evaluation. One-to-one evaluation is evaluation of learning progress, advantage of participation, occurring trouble of individual students compared to one individual student to prescribe for individual students.

(9) Summative assessment: Phase determining the result of program's last study. Formative evaluation decides whether study program met the success criteria made at the beginning.

(10) Program refining. Refining phase with content made from formative evaluation phase. Refined BPBL is improved by combining self and co-learners evaluation of the program. Problems are refined during developing process but the problem will be ready after finishing final revision.

2.2 Learning Environment for BPBL

The communication technology requires the development of computer skills as students learn to navigate different learning management systems. The skills students learn to participate include creating and sharing documents, incorporating audio/ video materials with group members, completing online learning session [8]. Online environments can help students solve problems effectively. In this study, we used the Google Classroom learning management system https://classroom.google.com to conduct the BPBL learning for students of Dornod University in Mongolia. Google has already made a large impact on education with its Google Apps for Education which includes Google Docs, Google Spreadsheets, Google Calendars, and a diverse array of other apps that are easily utilized by schools. Google Classroom's purpose is to facilitate paperless communication between teachers and students and streamline educational workflow. Classroom allows teachers to create classes, post assignments, organize folders, and view work in real-time [9]. Learners can begin their work with just one click, by viewing the assignment then opening a Google Doc. When they do this, teachers have a real-time view into learner progress and can offer feedback along the way. Google Classroom offers a one-stop platform for facilitating digital production, workflow, and communication between teachers and learners[10]. A new document will be created and will appear on the page with the assignment title and student's name. The files are automatically saved, even if you close or exit the screen. Once clicked on by each student, teachers can view the student's files [11].

2.3 Problem development of the BPBL

The biggest feature here is that learning begins from problems in BPBL [12]. The problems were presented at the beginning of the study and the reasons why they should learn were explained. The learning based problems motivate learners further. Thus, designing problems are important to reveal a real-world problem for effective BPBL. It is important to consider the function and characteristics in designing problems. The function and characteristics are the extent to which the problem [13]: leads to the intended learning issues, promotes self-directed learning, stimulates critical reasoning, stimulates elaboration, promotes teamwork, and triggers interest.

2.4 Extraction and Procedures of BPBL

Problem Development

Core objectives and content selection, associated learning and practical content, drafting problems, identifying the characteristics of learners, finding the problems, setting up the roles and situation and
determining the problem of BPBL is introduced in this section. The procedure's design problem for BPBL is shown in (fig.2) below.

Problems are used to engage students’ curiosity and initiate learning the subject matter. BPBL prepares students to think critically and analytically, and to find and use appropriate learning resources. The problems should be based on the needs of Mongolian business situation, multiple textbooks and cases. Moreover videos, stories, novels, magazine articles and research papers about recent Mongolian economic environment can be used. The real world stories such as those from newspapers, radio, TV or specialized books can be used.

(1) Select the core objectives and content
Core objectives and content of BPBL for Management subject in Mongolian Universities can be selected. In the process of solving a given problem, learning objectives should be achieved [14]. In this study, learning contents and the suitable BPBL problem is designed [14]. It is shown in (fig.3)

(2) To plan associated learning content and practical context
Learner-centered learning is actuated in educational scene all around the world. On the other hand, teaching methods used in Mongolian universities are mostly teacher centered and passive.

(3) Draft the Problem
To define and introduce the BPBL problem which suited Mongolian learners. The method for distributing a problem falls under three closely related teaching techniques: case studies, role-plays, and simulations. Regardless of which technique is used, the heart of the method remains the same: a real-world problem.

(4) Identify the learner characteristics
In Mongolia there have been the traditional way of thinking that teacher is the best, other than parents and education is very important since long time ago. Teachers are the most idolized person and without seeing their faces students can’t learn independently.
(5) Find the problem

In BPBL problems are provided through a variety of forms such as video, simulation, role-playing, and simulation computer. This also evaluates the students based on their understanding of contents and terminologies.

(6) Setting up the roles and situation

The role of instructor and learners of BPBL are unfamiliar in Mongolia. Encourage the learners based on the real situations of Mongolian students to attend the learning even when they are solving problem poorly and continue with a flexible mindset to fit the actual learning environment.

(7) Create the problem

While the core problems will vary among disciplines, there are some characteristics of good PBL problems that transcend fields (2001, Duch, Groh, and Allen). The problem must motivate students to seek out a deeper understanding of concepts. The problem should require students to make reasoned decisions and to defend them. The problem should incorporate the content objectives in such a way as to connect it to previous courses/knowledge. If used for a group project, the problem needs a level of complexity to ensure that the students must work together to solve it. If used for a multistage project, the initial steps of the problem should be open-ended and engaging to draw students into the problem. Problem designed that learners can check in learning tasks. All of the information needed to solve the problem is given into the problem definition and do research for the problem solving. An example of a problem for a management class is provided below:

Example: You are a professor of management at University for 10 years. You have to make lesson plan and instruction easy to understand. The contents of the lesson plan require a Managers and Management, The Management Environment, Foundations of Decision Making, Foundations of Planning, Organizational Structure and Design, Managing Change and Innovation, Foundations of Individual Behavior, Understanding Groups and Managing Work Teams, Motivating and Rewarding Employees, Leadership and Trust, Managing Communication and Information, Foundations of Control, to present it on the dates outlined below; The presentation should be carried out within 20 minutes.

Date of Announcement: 0000
Announcement: 0000

3. Conclusion

This study designed the procedures for employing BPBL and provides guidelines of defining problems for learning content of the subject. BPBL provides high satisfaction because of reasons such as more acquired skills, more independent study and collaboration, more flexibility and more opportunities. The good problem designing is summarized as selecting the core learning objectives and content, designing practical context related to learning content, drafting problem, identify the learner characteristics, finding problems, establishing the role and situation and designing problem. The learning content that is composed of 13 chapters and 5 designed problems for BPBL. An online environment, Google Classroom is introduced in this paper as a possible environment to facilitate BPBL. Develop students' problem-solving skill based on increasing opportunities for the development of collective intelligence [15]. In Google Classroom, multimedia contents provided by search sites and information that are necessary for classes are produced as multimedia contents. The instructional design of BPBL at the Mongolia is a worthwhile research topic. This research will be helpful for tending the Mongolian specialists required by society based on information and communication technology.
References


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