

Management of Blended Learning for Lao PDR Student Teachers

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ABSTRACT: *Blended learning is a popularized approach of education that utilizes and combines in-class learning with online class learning, an alternative for learning management in schools in Lao People's Democratic Republic. This article will be a study of the blended learning concept as a guideline in adaptation for undergraduate students at teacher colleges in Lao PDR. The researcher had studied relevant concepts and theories of blended learning, active learning, and online learning in order to adapt these concepts in the learning management or as a guideline for further studies to promote more diverse learning approaches and student-centered learning. This will help learners to be able to access to technology for learning by utilizing benefits of blended learning, which combines active learning and cloud-based learning, to aid learners in self-learning through the learning management technology in order to attain learning achievement and digital skills that are important for learners in 21st century, a society of digital learning.*

Keywords: Lao PDR's Teacher Training Colleges, Blended Learning, Face-to-Face Learning, Online Teaching

1. Introduction

Technology now plays a vital role in our daily life, such as in online shopping, listening to music, viewing movies, and chatting via the internet. Technology has advanced at an extremely high speed in recent decades, having a profound impact on our daily life. People can now use the internet to access a wide range of information and connect with one another. This aspect of using the internet to locate information online, where practically every piece of information is available online, has made people's lives considerably easier. The control of machines through computer systems is another point of strength that technology has to benefit human lives. Furthermore, technology plays a role in education, such as online teaching, information searching, knowledge and information dissemination, and the use of Augmented Reality and Virtual Reality, among other things, all of which have considerably improved the educational system.

Education is an issue that receives a lot of attention around the world. Scholars have proposed different ideas for educational approaches, each with its own set of teaching methods. Each theory is best suited to certain types of content and themes. Teachers must choose and use theories that best match the topic they are teaching. The use of technology in the teaching/learning process, which is extremely significant, lies at the heart of the twenty-first century's issues in teaching/learning. Students may become bored if just physical texts are used in the teaching/learning process. As a result, good teachers must learn to incorporate technology into their teaching methods. Teachers face a challenge in modernizing their teaching methods in order to facilitate effective learning and the development of talented human resources. The book *How Learning Works: Seven Research-Based Principles for Smart Teaching* by Ambrose (2010) is about caring for students' prior knowledge, caring for the way students organize knowledge affects their learning, caring for students' motivation for learning -- knowing how to create disguised motivation or assorting motivation into the teaching process (without teaching), caring to create learning environments so that students develop mastery, caring for practice and feedback, caring for students' development, caring for the courses' climates, and caring for students to become self-directed students. Therefore, the book *How Learning Works* is about caring for students as a priority in teaching.

Education in Lao PDR today has improved considerably with more usage of new teaching techniques, training on teaching and communication, usage of technological media for education, and adaptation of ICT media

for teaching. However, there are still limitations such as limited internet access in areas far from the city centers, the lack of interactive devices for teaching/learning, and the limited knowledge and techniques among teachers all of which are critical for teaching, according to the Lao People's Revolutionary Party's and the government of Lao PDR's 7th five-year socio-economic development plan (2016-2020), which has emphasized the development of professional schools, teaching/learning quality, teacher quality, equipment, curricula, and various labs to reduce theoretical teaching and promote practical teaching via increasing scientific experiments in labs (Ministry of Planning and Investment Laos PDR, 2016).

In the Lao PDR, most teaching/learning takes place in classrooms. Because most teaching/learning materials are only available physically and not online, only a small fraction is done through online platforms. Despite government rules requiring teaching/learning to be student-centered, most teaching/learning is theory-based (Kaplan & Lewis, 2014). This is due to a variety of causes: the teacher's experience with traditional teaching methods, a lack of technological understanding, and communication limitations such as limited internet access and a small number of Laotian-language websites are all factors that slow down the movement to student-centered teaching/learning. As a result, most teacher training colleges teach/learn face-to-face. Through cognitive processes (Thinking Processes), social processes, group processes, and involvement using the taught materials, a student-centered teaching style focuses on assisting students to acquire knowledge and accomplish innovation. Wherein, the teacher has the role to provide convenience for arranging a new learning experience for the students. To build a wide range of intelligence, the student-centered teaching strategy must be aligned with students' interests, abilities, and aptitudes, integrating knowledge from diverse fields of study, and using a variety of teaching methods from multiple sources of knowledge (Dachakupt, 2007).

Blended Learning is a teaching method that places the student at the center and incorporates technology into the classroom. It is a novel teaching approach for student teachers in Lao PDR, and it is a challenge that could lead to success in a variety of directions. However, as Pramungdomrat and his team discovered in their study of student teacher training course development for vocational students to prepare them for practical professional experience, which can be divided into training via website training and training via workshop training, the score for overall achievement is high, and the student satisfaction with the teachers in organizing the training is high (Pramongudomrat, Methapatara, & Stirayakorn, 2011). This indicates that implementing Blended Learning in teacher training colleges in Lao PDR will certainly have positive effects on the students' academic performances. This is in line with the Ministry of Education and Sports of Lao PDR's strategic plan, which sets guidelines for the development of teacher training colleges' education systems, stating that they must develop learning resources for all disciplines in the curriculum to suit the updated common curriculum, guaranteeing that teaching is student-centered, and that ICT will be integrated into the teaching/learning process (Ministry of Education and sports Lao PDR, 2021). The Ministry of Education of the Lao PDR emphasizes the value of education and seeks to modernize curricula and teaching methods in diverse schools in order to attain improved learning outcomes.

In education, technology plays a crucial role. Technology must be integrated into the teaching/learning process for education to progress. As a result, the teaching strategies that teachers develop in the classroom are critical for promoting academic performance. Even if the content is excellent, the process will fail if teachers do not understand how to use technology in the teaching/learning process. As a result, the teaching/learning process must be well-organized in order for students to learn.

2. Lao PDR's Teacher Training Colleges

In Lao PDR, there are a total of 8 teacher training colleges, not including departments in various universities and departments of arts and physical education. Teacher training colleges prepare teachers to teach in high school, middle school, elementary school, and kindergarten. There is academic and curriculum training available through the Bachelor's degree and Diploma programs, depending on the Department of Teacher Education, Ministry of Education and Sports, in which teaching/learning curriculum models are assigned. The majority of lesson plans are based on the Understanding by Design: UbD model, which has seven rooms and five steps which clearly indicate the activities of teachers and students. The majority of instruction is based on textbooks or pre-determined courses. The teaching is primarily lecture-based and focused on the students. Because some subjects are still in the improvement process, putting students at the center of particular subjects may result in old content being used. As Mr. Kongsai Saengmanee, Deputy Minister of Education and Sports stated at a conference for the administrators of the 23rd Teacher Training Institutions for 2017-2018, the Ministry of Education and Sports has concentrated on upgrading the curriculum and teaching methods. The importance of reforming teaching/learning courses in all disciplines to reduce the number of theoretical hours and increase the number of practical hours is emphasized in order to meet the qualitative and quantitative goals for each level and year of student teachers, while also focusing on integrating English and ICT into the teaching/learning process (Sengmany,

2018). According to Gate Panlak, the head of the Department of Teacher Occupation Creation, the 2018-2019 Teacher Development Plan has specific focuses, including improving the curriculum to create teachers in all classes and disciplines, continuing from pre-school education, and a new and improved course of study, and raising the teaching quality of teachers in institutions to a higher level to support the academic maintenance of teachers as a whole (Panlak, 2018). In Laos, teacher training colleges play a critical role in the education system. Each year, roughly a thousand students from various teacher training institutes enroll, which is sufficient to meet the demand for teachers in Lao PDR's schools. The Ministry of Education and Sports has prioritized this because it aims to train enough teachers, elevate their positions, and improve the quality of teaching as well as the quality of life of teachers in society. This is done in conjunction with developing and nurturing teachers in order to raise standards, as well as encouraging student teachers who have good academic achievements, are gifted, and enjoy teaching to pursue teacher certifications. We will be open to hiring teachers with knowledge and expertise in the long run, caring to improve and adjust teaching/learning methods to be of high quality as part of the vision to build teachers to build humans, and humans to build nations, and to continue to develop curricula for all levels of education to be continuous (Viphavanh, 2011).

In accordance with the Ministry of Education and Sports of Lao PDR's guidelines, the Teacher Training College of Lao PDR is improving the teaching/learning curriculum and teaching methods to make them more suitable for the modern era in order to upgrade the college to become a development institution and a center of effective learning. Knowledge of teaching has been used, and new teaching methods are being researched and tested to be employed in the teaching/learning process in order to improve Laos' education system step by step.

3. Blended Learning

Blended Learning, as defined by Tantranont, Tuanrat & Kaewthummanukul (2018) is learning that integrates face-to-face learning with other popular modes of learning, and it is a learning organization that uses online computer media to improve learning efficiency and effectiveness. The blended teaching/learning paradigm, as defined by Carman (2002), is a teaching/learning technique that integrates online learning with traditional classroom learning. There are direct consequences on Blended Learning after integrating with constantly emerging technologies (Fuller, 2021). Blended learning is a learning model that integrates face-to-face teaching and learning and online teaching and learning, emphasizing engaging learners. At the same time, the teacher acts as a facilitator to give advice and follow-up on learning outcomes both online and offline. Blended learning combining teaching and learning methods in the classroom, along with other processes using online tools. At the same time, it combines technological and communication strategies developed by distance learning through an interactive and vibrant learning environment (Martín-Martínez, Sainz & Rodríguez-Legendre, 2020). The highlight of the blended learning model is the student-centre learning system, which requires students to participate in individual groups or personal learning activities actively. Assist students in gaining confidence, motivating themselves to present ideas, and respecting and appreciating their friends' opinions in the classroom (Hasanah & Malik, 2020). Teaching through websites in a Blended Learning manner (Blended Learning) is a method of combining online learning with traditional learning. If Blended Learning is perceived as something that should already be adopted, this is considered typical. The issue with Blended Learning is the ambiguous ratio between online and conventional learning, which can entail using traditional learning as the primary technique and online learning as a secondary method or using online learning as the primary method and traditional learning as a secondary method. As a result, the solution is to discover the proper ratio (Nilsook & Wannapiroun, 2013). Blended Learning effectively integrates the benefits of several learning methods in order to keep students engaged and learning. When students study in the classroom, they will receive direct instructions from the teachers and will interact with teachers and classmates. Students can directly share their experiences with their peers and teachers. They can ask any questions they have in the classroom straight away. However, there is a lack of variety of media in the classroom, which makes learning less exciting. To keep classes interesting, online learning teachers employ a range of materials. Although all students have access to the materials at any time and from any location, they lack interactions with teachers and classmates, lack direct experiences, and must exercise high levels of responsibility. As a result, Blended Learning combines the benefits of several learning styles to suit the course content, allowing students to reach the highest level of learning efficiency (Jaitham, 2015). Blended Learning is a teaching/learning method that combines online and classroom instruction. There are activities that mix student-teacher interaction with technological features that allow students to control their own time, places, and learning paths (Nasongkhla, 2018). In other words, Blended Learning is a teaching approach that is similar to using textbooks, lectures, or projects in that it does not refer to a certain philosophy or teaching method. Online and offline components are included in blended learning. These aspects are mixed and can range from as few as the number of students in a class to fully modelling a traditional classroom (Fisher, 2019). Blended Learning, often known as hybrid courses, is a type of learning that mixes face-to-face components with online components. The term "Blended Course" can be described as a combination of online and classroom activities. One-on-one tutoring can be utilized in conjunction with or

instead of face-to-face learning. The online component is merely an optional component with a minimum online proportion of 30-75 percent (Ko & Steve, 2017). The summary of the above is consistent with the study of Martín-Martínez, Sainz & Rodríguez-Legendre (2020) study “Evaluation of a blended learning model for pre-service teachers”. It found that the combined teaching arrangement consists of five components as follows (web2.0, social relations, cooperative learning, expectations and feedback). The application of the blended instruction model as an additional element in teaching assist in enhancing the development of knowledge and skills both individually and in collaboration or group work

Horn & Staker wrote that Blended Learning is a formal education format where learning is organized in part through online learning where students can control, when, where, how, and steps in learning at least in part in the classroom or anywhere. The students’ learning paths can be connected to provide an integrated learning experience. This could mean using data from online learning to inform academic performance and drive students’ offline learning. In blended learning, students learn over the internet. This doesn't mean using any digital tools like online graphing calculators or Google Docs. Online learning entails a more significant transition in teaching and learning from face-to-face instructors to web-based content education and tutoring. The importance of student control cannot be overstated. Blended Learning, on the other hand, is no different from meeting with an instructor every hour. Online learning technology must modify materials and instructions in order to govern students, at the very least, in order to qualify as Blended Learning from the students' perspective rather than employing digital tools in the classroom from the teachers' perspective. It may be as simple as allowing students to pause, rewind, or skip forward via freely available online content. The following are examples of Blended Learning model designs:

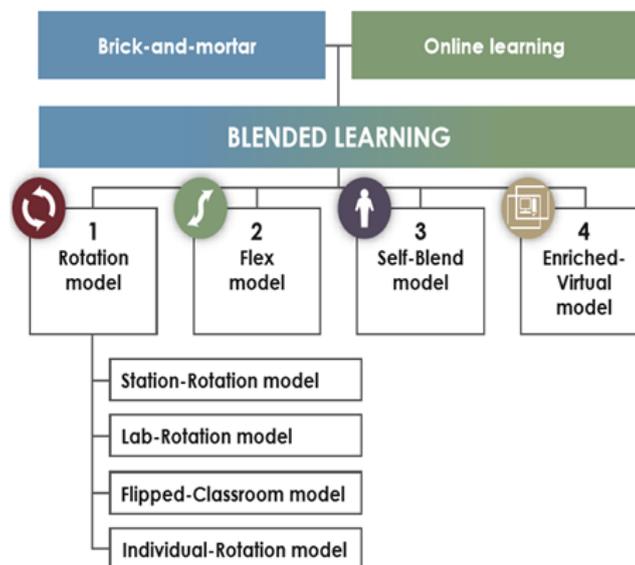


Figure:1 Blended Learning Model (Horn, & Staker, 2015)

1. Rotation model

- Station Rotation: This rotation might take place inside a single classroom or a group of classrooms. This is referred to as rotation. For example, students can now learn in a classroom and then continue their studies online or at a lab, library, or other location.

- Lab Rotation means the rotation of the labs. The rotation resembles that of a set of stations. Students instead walk from the computer lab to the course's online learning component. The goal is to use computer labs and other staffing structures for the online component to maximize teacher time and classroom space. Computer labs have been utilized in schools for decades. The big difference today is that teachers are starting to blend internet time with classroom time in order to create a seamless curriculum.

- The third sort of rotation model with the highest level of attention is the Flipped Classroom. The name comes from the fact that the classrooms were flipped.

- Individual Rotation is a type of Blended Learning in which students rotate through different issues or courses. The majority of these qualities are found in higher education or university settings, where learning data is shared between institutions.

2. The Flex Model is a sort of Blended Learning that is adaptable to varied scenarios and may be used by teachers to provide students with a variety of learning styles such as tutoring or learning in small groups based on interest groups, among other things.

3. The A La Carte Model refers to the most frequently used Blended Learning model in high schools. All courses that allow students to learn totally online while still attending school are included in this paradigm. If the student has not previously taken a physics or Chinese course, he or she can pursue online courses in the Learning Room or after school in addition to the university's usual offerings. Despite the fact that online courses do not include a face-to-face component, this is a sort of Blended Learning since students experience a combination of online and classroom learning. A La Carte learning, like Flex courses, can incorporate offline components, but the key difference between the two is that recording teachers in A La Carte learning are online teachers, whereas recording professors in Flex courses are one-to-one teachers.

4. Enriched Virtual Model: The Enriched Virtual Model is the fourth Blended Learning model. This course requires face-to-face learning but allows students to do the rest of their online work from anywhere. On Mondays, Wednesdays, and Fridays, for example, some may meet on Tuesdays and Thursdays and allow students to work independently in online sessions either on or off campus. Individual teacher meeting criteria may be tailored based on student progress on other days. If a student fails, he or she will have to meet with the teacher more frequently. In contrast to inverted classrooms, students in a rich virtual classroom rarely interact with teachers on a daily basis. It differs from online courses in that it necessitates classroom experience; they are not limited to business hours or social gatherings (Horn & Staker, 2015).

Blended Learning is a unique learning approach that incorporates technology into traditional or face-to-face learning as well as online learning, allowing students to learn at their own pace in 8 hours of online learning while also gaining knowledge during classroom hours, which will be the future trend in education in Lao PDR.

4. Face-to-Face Learning

Face-to-Face learning is a common teaching method that involves students and teachers meeting face-to-face. The teachers will teach according to the lesson plans that have been provided, and there may be a variety of activities during class time. A demonstration teaching approach, in which a teacher or student shows other students or peers, is one example of face-to-face teaching. It could be to demonstrate the use of instruments in potentially risky processes, methods, or experiments that are not appropriate for students to conduct. Students develop insights and are able to accomplish things correctly when they are taught in this manner. It also instructs students on how to use their observational abilities. In some ways, it is considered a direct experience. Because the teacher is the one who develops and implements the teaching/learning experience, the demonstration teaching approach places the teacher at the center. It's possible that students will be slightly involved. This teaching style is thus appropriate for subjects that need students to see practical procedures, such as physical education, art education, and the art industry in the occupational and occupational base groups (Khammanee, 2017).

The teacher will enter questions of various characteristics that are good questions into a question-based learning technique, which attempts to strengthen students' mental processes. It can help students enhance their thinking skills by challenging them to employ rational, analytical, critical, synthesis, or evaluation thinking to answer those questions (Moonkham & Moonkham 2002).

Learning with a Focus on Case Studies is a method of instruction that allows students to investigate situations or tales that are either true or hypothetical from reality by gathering data for analysis, discussion, and information sharing. This type of learning teaches students how to seek knowledge in a variety of methods and how to connect past knowledge with new knowledge, as well as how to broaden knowledge and apply it to real-world issues. (Khammanee, 2017).

Learning Through Brainstorming is a learning technique in which all students comment or make suggestions for resolving the problem as much as possible by openly sharing their ideas without being judged. All recommendations and comments are recorded. After that, there may be discussions to go over all of the ideas,

classify them into types or categories, and decide on approaches to solve the problem (Moonkham & Moonkham 2002).

Deductive Learning is a method of learning in which the teacher arranges information to help students understand ideas, principles, rules, or conclusions that may be applied to a variety of circumstances. The goal of the lesson is to provide several instances or to have students apply theories, concepts, rules, or conclusions to various circumstances. It could also be a method for students to gather rational evidence to support hypotheses, concepts, rules, or conclusions. Students will benefit from this type of learning if they are reasonable, do not believe things easily, and have a thorough understanding of the laws, ideas, and conclusions. This type of instruction can be described as teaching from theory or rules to specific examples (Khammanee, 2017).

Experimental Learning is a learning process that allows students to practice, study, seek knowledge, and experiment on their own to prove principles, theories, or facts by defining problems hypothesized in the experiment, implementing the specified procedures using the necessary materials, collecting data, summarizing the experiment's results, and summarizing the learning results obtained from the experiment under the guidance, supervision, consultation, and close supervision of a teacher.

Investigative Learning is a learning process that focuses on the development of problem-solving abilities by training students to study and search for knowledge by asking questions and encouraging students to use their thought processes, use reasons until they find knowledge or a solution to correct the problem on their own, summarize the solution as principles, rules, or methods for solving problems that can be applied to control, adjust, modify, or create an environment, and summarize the solution as principles, rules, or methods for solving problems that can be applied to control, adjust, modify,

There are many different ways of teaching/learning. Each approach has its own set of procedures and formats that are appropriate for various types of content. Therefore, teachers must select teaching approaches that are appropriate for the subject and content being taught.

5. Online Teaching

Online teaching involves constructing a virtual classroom that mimics conventional classroom conditions as a communication channel between teachers and students via the World Wide Web network. The Hypermedia program in education is designed to allow students to search for information and knowledge from many networks on important computers, such as the internet network and the World Wide Web network. This kind of instruction makes advantage of the internet's features and resources to build or design relevant learning experiences. For example, using elements (such as email, listservs, newsgroups, conferencing tools, etc.) implemented on the network solely or using many things together causing a variety of teaching styles which depends on the organization of technology used in the distance learning on the World Wide Web. This type of instruction allows students to study independently, or it may be intended to allow interactions between students and teachers, or between students themselves, and it can be evaluated through a network (Khammanee, 2018). A web-based classroom is an online setting where students and teachers can do additional learning in addition to basic curriculum. Web-based classrooms are not just a means of disseminating knowledge to students, but they also aid in communication and evaluation (Cormack, & Jones, 1998). Many of the systems that provide Web-based classroom functionality have subtle differences in how they use the internet. Internet applications such as email, Usenet News, FTP, and other computer applications such as databases may be used in web-based classrooms. Students and educators in the classroom can access and use these programs through the web, which provides a simple and familiar interface. Online tutoring entails completing a portion or all of a course over the internet, either using a web browser or a mobile app that allows one to manage the many aspects of an online course. Online education is sometimes referred to as E-Learning, a phrase that is commonly used in the business world. It is a type of distance education, a method that blends traditional courses offered via mail, DVD, phone, or television with any mode of learning that does not require students and teachers to be in the same location at the same time (Ko & Steve, 2017).

E-Learning, or Electronic Learning, may be viewed as a new educational concept, arising from the advancement of computers and online networks which created different teaching systems with different names, whether teaching through the web (Web-based Instruction), online teaching (On-line Learning), teaching through the internet. (Internet-based Instruction), or even referred to as computer-assisted instruction on the Web (Camion Web). Each is a form of learning through the entire computer network. The meanings of E-Learning have different perspectives. The American Association for Training Development (2000) (Nilsook, 2004) has described three definitions as:

(1) Electronic Definition

E-Learning refers to the process and utilization of web-based teaching/learning, computer aided teaching, virtual classrooms, and collaborative learning with various digital tools including internet learning, intranet, networking, learning with audio system, video system, satellite system, TV system, and CD-ROM.

(2) Internet Meaning

E-Learning means learning through the internet or using the ability of the internet for learning.

(3) General Meaning

E-Learning is defined as the integration of learning that is independent of time and progress. When the three meanings are integrated and compared to today's schools of thought and circumstances, the following can be deduced: The structuring of procedures and use of electronic media, particularly computers and the internet, is referred to as E-Learning. The systematic design of teaching and learning to enable learning anywhere, regardless of time and learning progress, Thus, making more efforts to develop online teaching and learning. The creation of websites for teaching/learning is a part of E-Learning (Wu, 2020; Cidral, 2018). It is a system that organizes teaching/learning activities and assessments in synchronization dimensions and at different times by producing information in the form of digital and published knowledge and providing communication through a computer network. It is referred to as an electronic learning system when it's structured into a system (E-Learning System). It is a unit of study of course modules and curricula that has the qualities of spreading knowledge. The Learning Management System is used to create teaching and evaluation requirements for academic accomplishment. E-Learning is a research that involves a large number of people and is appropriate for both formal and non-formal education, training, and commercial learning (Nasongkhla, 2018).

People who do not have time to sit and study can benefit from online learning, often known as E-Learning. This sort of learning is structured in a methodical way, with assessments and learning outcomes that are similar to those found in traditional teaching and learning. Teachers and students can be contacted, and additional information on a wide range of topics can be accessed.

6. Conclusion

Education is dependent on technology today and in the future. Teachers, particularly those at the Teacher Training College of Lao PDR, who are focusing on upgrading curricula and teaching methods, face a problem in learning how to apply technology in education. Adopting the Blended Learning paradigm is novel and appropriate for teaching and learning in order to stimulate more online content development and production in a time when online content is scarce. Students must be able to use technology in learning to better access resources, stepping into digital literacy, when using a Blended Learning strategy, in addition to the necessity for teachers to provide curriculum online.

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