

How to cite this article:

Omar, U. & Yaacob, A. (2020). The benefits of learning management system (LMS) in facilitating the TESL teacher trainees' learning. *Practitioner Research*, 2, 103-119.

## THE BENEFITS OF LEARNING MANAGEMENT SYSTEM (LMS) IN FACILITATING THE TESL TEACHER TRAINEES' LEARNING

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**Received:** 22/07/2020 **Revised:** 10/08/2020 **Accepted:** 20/08/2020 **Published:** 06/09/2020

### ABSTRACT

*Learning Management System (LMS) is becoming an important platform for university students. The use of LMS in teaching and learning process which focuses on the content subject has provided a wider opportunity for the TESL teacher trainees not only to apprehend the content but also to apply them in real life contexts. The study aims to unveil the usefulness of LMS in TESL teacher trainees' learning of the content subject which is Second Language Acquisition (SLA). 15 participants (12 female, and 3 male) from one of the Teacher Training Institutes in the northern region of Malaysia participated in this qualitative case study. Participants were asked to write their personal reflections after each interaction using LMS. 15 weeks of classroom interactions were recorded for analysis. Participants had to write their reflections based on Pre-Class, While-Class and Post-Class Sessions. The findings were analyzed thematically based on the Seven Principles of Learning. The findings indicated that the participants were able to set their target in learning, they were aware of their*

*learning styles, improved their skills and became more engaged in classroom activities. This study depicts the role of LMS in facilitating successful learning. It suggests that practitioners need to maximize the use of LMS for successful teaching and learning.*

**Keywords:** *Learning Management System, second language acquisition, TESL, principles of learning*

## INTRODUCTION

Learning Management System (LMS) is one of the virtual learning environments which delivers e-learning using applications such as *Moodle, Blackboard, and Rcampus*. LMS is described as the software application for administration, documentation, tracking, reporting, and delivering electronic educational technology in creating and managing courses online. It will ease the digital learning objects created on the system to be supported, reused and shared by the learners. In the context of this study, Schoology is chosen as one of learning management systems. Schoology is the management software that eases the learning content, resources, activities plans, and on top of that, it is easily administered. It offers a virtual learning environment outside the regular classroom interaction. In addition, LMS encourages practitioners and students to work collaboratively in understanding academic content in learning English as a second language (ESL).

Online learning is becoming an important learning platform in Malaysia as indicated in the Malaysian Education Blueprint (MEB) 2015-2025. The delivery of learning using electronic or internet is hoped to enhance the quality of teaching and learning. As such, in creating higher education system that ranks among the world's leading higher education systems, the Malaysian Education Blueprint 2015-2025 (Higher Education) gives focus to the implementation of technology and innovation such as online learning to enable dynamism to and personalization of students' learning experiences. It means that the government focuses on outcomes over input through active learning processes. The transformation of the Malaysian education

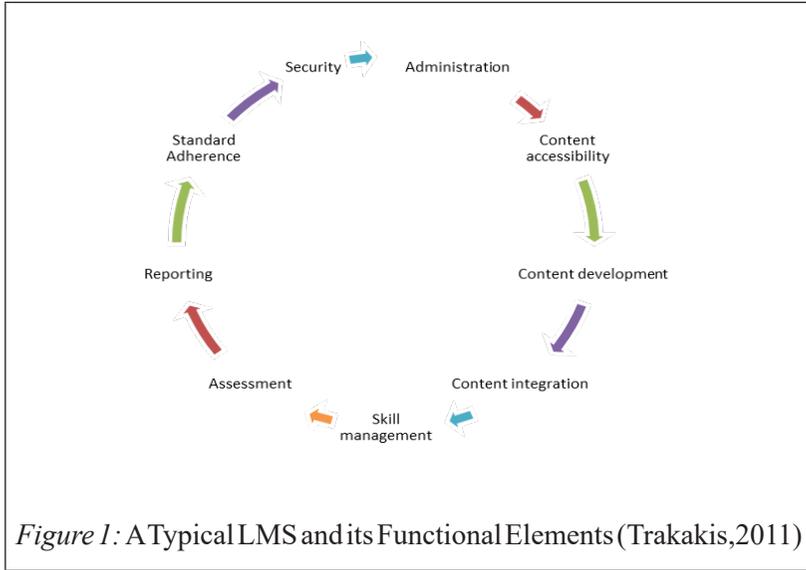
system is hoped to be able to make students enjoy higher quality programmes that use experiential learning and technology-enabled learning models to offer more personalized and engaging learning experiences that push the limits of their potential (Malaysia Education Blueprint 2015-2025, 2015).

In the context of IPG, online learning is introduced to expose the teacher trainees with the latest medium of instruction in improving their teaching and learning in the future. It supported the MEB in promoting and modeling digital citizenship and responsibility by embedding digital culture among lecturers and teacher trainees in their professional practices. Most teacher trainees in IPG are being exposed to the use of ICT in their learning process. Furthermore, there are few courses handled by the ICT Department purposely set by the main IPG as part of the course syllabus. The TESL teacher trainees in particular, will learn to operate some digital resources when they were preparing their coursework throughout their study programme. Despite the importance of online learning on teaching and learning, the usage among teachers or practitioners are still low.

## **LITERATURE REVIEW**

LMS has developed its functions as Course Management System (CMS), Collaborative Learning Environments, and Virtual Learning Environments. In other words, its functions are quite similar to each other including the management of the users, roles, and the course information, online communication, and web-based content. This LMS is closely related to the constructivist approaches whereby students build their own understanding in learning to achieve their goals and objectives especially in constructing new knowledge.

The main functional characteristics of learning management system include administration tools, content accessibility, content development, content integration, skills management, assessment capabilities, reporting, standards adherence, and security as shown in Figure 1.



As indicated in Figure 1, the basic features of the effective learning management systems tend to be easily manageable for the users to register and design profiles, set curricula, define roles, manage content, author courses, and administer the user payments. Content accessibility refers to the content to be delivered which can be managed online or in the classroom itself. Trakakis (2011) stated that content development includes authoring, maintaining, and storing the learning content. On the other hand, content integration covers the native support including content management systems (CMS), portals, and registration modules. The competency skill assessment of the e-learners using peer reviews and feedback tools is classified under skill management. LMS is considered a strong and flexible system especially in customizing reports based on the course offered or course completion and assessing the e-learners that support the standards such as the Shareable Content Object Reference Model (SCORM).

Besides, LMS plays its role in importing and managing the courseware that complies with standards irrespective of the authoring system that has produced the content. Lastly, the security of the data system which contains personal user details, proprietary content especially user authorization, authentication, and data protection are given top

priority in LMS. The usage of the password encryption techniques is the usual security features for any LMS.

### **Related Studies on the use of LMS in learning**

Related studies have shown that LMS is able to promote a ‘student-active-learning’ environment (Koszalka & Ganesan, 2004) whereby students’ interaction is able to be established (West, Waddoups, & Graham, 2007) and it offers some opportunities in innovating the learning and teaching process (Dutton, Cheong, & Park, 2003) to fulfill the 21st Century Learning. LMS is more suitable to be used in higher education to determine the students’ involvement (Aggilanda Easwary Muruthy & Mat Yamin, 2017; Lee Yen Chaw & Chun Meng Tang, 2018). These earlier findings showed that system quality and service quality had a significant relationship with system use. In turn, system use had a significant relationship with learning effectiveness (Lee Yen Chaw & Chun Meng Tang, 2018).

### **Theoretical Framework**

The current study was guided by the seven Principles of Learning (Weibell, 2011) which consists of agency, engagement, context, practice, change, target and potential. Weibell (ibid) stresses that learners have the potential in learning and that they have their target which can be intentional or accidental. They will also experience change in the learning process due to repetition, time or feedback they receive from others. The principles of change are activated by models of practice and are facilitated by internal, external or varied contexts. Weibell (2011) also claim that learners normally engage in activities which form their habits and they are also influenced by their capacity, motivation and inhibition. Finally, learners are active agents who make their own decision as to what to be learned and how to apply they efforts in achieving their learning goals.

The second theory which guided this study is Vygotsky’s (1978) Social Constructivism Theory. Most of the constructivist theories basically agree on two main ideas, which are the active participation of the learners in constructing their own learning and the importance of social interactions in knowledge construction process (Bruning,

Schraw & Norby, 2011). Generally, Vygotsky’s main focus for education was the development of the greater mental function. Besides, his ideas are relevant for educators who teach directly, or intentionally use modeling to teach, or crafting collaborative learning atmosphere (Woolfolk, 2013). This depicts that in learning, educators have to play their roles in supporting the students in the part of the tasks they cannot do it by themselves, hence the students are needed to be assisted and guided in discovering the knowledge.

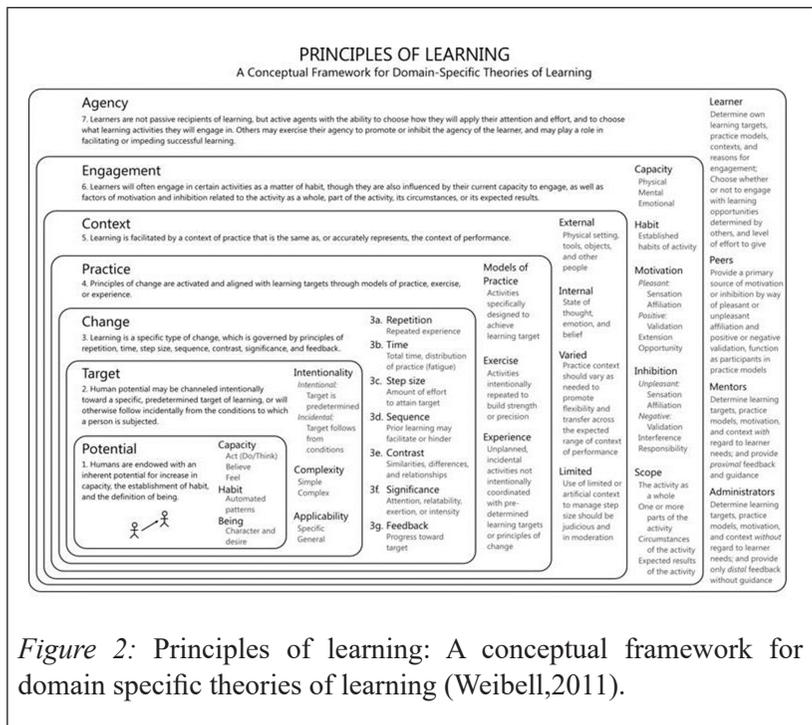


Figure 2: Principles of learning: A conceptual framework for domain specific theories of learning (Weibell,2011).

*Objective of the Study*

The study aims to explore the usefulness of LMS in the TESL teacher trainees’ acquisition of the content subject, which is SLA. It also attempts to understand how LMS assisted students’ learning. In this paper, students’ learning using LMS was assessed based on the Principles of Learning by Weibell (2011).

## METHODOLOGY

### Research Design

The study used qualitative case study approach, and it was explorative in nature. Case study is a ‘study of particular’ (Stake, 1995), and it investigates ‘a contemporary phenomenon in its real-world context’ (Yin, 2009). A case study is an intensive description and analysis of the phenomenon or social units bounded by time and place (Yin, 2003).

### Data Collection Methods

Multiple methods such as observation, reflection and interview were used in this study to establish ‘*thick description*’ which refers to “data in which the contexts of behavior were described; now often used to refer to detailed, complex, contradictory data” (Braun & Clarke, 2013, p 338). These multiple methods were also employed to triangulate the data in this study.

#### *Observation*

Observation is a way of gathering data by watching behavior, events, or noting physical characteristics of the participants in their natural setting. In the context of this study, observations were conducted through online observation whereby postings and activities via LMS were recorded. These observations allowed the researcher to record all the online activities and postings in the Schoology.

#### *Reflection*

The data were also collected using the teacher trainees’ personal reflections after each interaction using LMS within 12 weeks, in order to gain insights on the usage of it. 15 teacher trainees from *Institut Pendidikan Guru* (IPG) in the northern region of Malaysia took part in this study. They were majoring in TESL and all of them were in their Third Year of study. The students’ personal reflections were posted through Schoology. The purpose of reflection was to examine the participants’ experiences and feelings when using LMS. They would be able to refine ideas, express their personal beliefs and feelings in

their reflective journals. Prior to data collection, Gibb's reflective cycle was introduced to them as a guide in writing reflection.

### *Interview*

Online structured interviews were also conducted at the end of the course to examine the students' perceptions of the benefits of LMS in enhancing their learning as well as identifying the challenges related to LMS implementation. Interview findings are used to support the data obtained from reflective writing.

### **Data Collection Procedures**

Data collection procedures were conducted in three phases. In Phase 1, online structured interview was organized to obtain demographic information of the participants and to establish trust and rapport with them. In Phase 2, LMS was implemented to teach content subject which is SLA, for 12 weeks. During this phase, observations of online postings and discussion as well as reflective journal writing were recorded for analysis. Finally, in Phase 3, face to face interviews were conducted with selected participants to identify the benefits of LMS as well as to ascertain issues and challenges when using LMS as their learning platform.

### **Data Analysis**

Data were analyzed using thematic analysis (Boyatzis, 1998) which was subjected to the participants' personal reflections, and researcher's observation recorded using field notes. The thematic analysis process involved transcribing, reading through the data, coding and recoding the themes, presenting the themes and describing the cases and finally, interpreting the data (Creswell, 2009).

### **Trustworthiness**

In order to achieve trustworthiness of this qualitative research, methodological triangulation was used. Triangulation using two or more data sources, methods, or researchers was conducted to gain a fuller or multi-faceted understanding of the topic (Braun & Clarke,

2013; p.338). Similarly, it is also supported by Creswell (2014) who claims that triangulation is able to build a coherent justification for the themes.

## FINDINGS

This study was set to explore the usefulness of LMS in enhancing the TESL trainees' learning using multiple methods such as observation, reflection and interview. As this is a part of a bigger research project, this paper will present only the analysis of reflection data which were analyzed based on the Seven Principles of Learning by Weibell (2011). The findings indicated that all the seven principles of learning were evident in this study after the implementation of LMS. The principles of learning include: Potential, target, change, practice, context, engagement, and agency.

### Principle 1: Potential

Weibell (2011) argues that humans are endowed with an inherent potential for an increase in capacity, the establishment of habit, and the definition of being. The findings indicated that the majority of the participants had the potential to increase their capability of doing something in understanding the content that they had learnt using this learning management system. The extracts below illustrate students' reflection on Principle 1.

*“Yes because I honestly think when we discussed issues related to what we learned, we tend to ‘crack’ our heads and produced brilliant ideas regarding the subject”*  
(Participant 3)

*“Yes, especially the topic on the hypotheses. I think this topic is the most important part of the subject and it involves a lot of ideas of teaching where it will be beneficial for me in my teaching”* (Participant 5).

In these examples, participants developed their potential when they discussed issues and tried to solve the problems. They tried hard to

solve the issue by ‘cracking heads’, In addition, they also mentioned the benefits of sharing ideas for teaching in their future career as a teacher.

### **Principle 2: Target**

The second principle is having a clear target. This principle indicates that human potential may be channeled intentionally toward a specific, predetermined target of learning, or will otherwise follow incidentally from the conditions to which a person is subjected. Majority of the participants responded that LMS assisted them in getting the input of the content subject and at the same time, helping them in conducting other activities. Participant 1 for example, mentioned that she was aware of the target to acquire more input or information in conducting the activities.

*“Yes, it helped a lot by adding more input other than what you had. You can say that it was like the comprehensible input because in order for us to conduct the activities we need to have more information on it”.* (Participant 1)

*“It helps me in understanding the concept by relating to the actual things that may occur at school. It also helps in preparing me for the practicum.”* (Participant 2)

Participant 2, on the other hand, related the subject matter to the real context of the school.

### **Principle 3 – Change**

Learning involves a specific type of change, which is governed by principles of (a) repetition, (b) time, (c) step size, (d) sequence, (e) contrast, (f) significance, and (g) feedback. The findings indicated that the majority of the participants were aware of some changes in their learning style in understanding the content of the subject. Participant 6 stated that she learned better after listening to her friend’s presentation rather than reading on her own.

*because I realised that we had a very active discussion during the activities in the classroom such as oral*

*presentation. sometimes, it is easier for me to listen to my friends' explanation compared to reading the text on my own. (Respondent 6)*

*I prefer mixed method strategies regarding the activities in classroom. It is easier to understand and comprehend what have been taught by Madam if I explore the knowledge by myself. For example, presentation tasks help me a lot in understanding the content of this course (Respondent 7).*

In these examples, participants reported that they learned by engaging with each other and sharing ideas during discussion. They also gained some understanding when listening to their friends' explanation during presentations.

#### **Principle 4 – Practice**

Principles of change are activated and aligned with learning targets through models of practice, exercise, or experience. The findings indicated that the majority of the participants felt that LMS eased them in practicing and exercising some skills such as writing and reading skills effectively.

*Of course, it did. For me, Schoology gives positive impacts on my acquisition on the content of the subject. When madam asked us to write reflections on what we have learnt, I realize that indirectly it helps me to enhance my writing skill (Respondent 7).*

*Yes, because we can always refer back to this platform because we shared everything here and it is a very useful platform for me. (Respondent 8)*

In these examples, participants' reflections helped them to realize their own learning process and enhanced their writing. Participant 7 for example mentioned that reflection helped to improve her writing skill while Participant 8 used LMS to share information with her peers and to refer to some notes they posted earlier.

## **Principle 5 – Context**

Learning is also facilitated by a context of practice that is the same as, or accurately represents, the context of performance. Majority of the participants were aware of useful distinction is made in the framework between internal context and external context. Internal context is defined by one's state of thought, emotion, and belief, while external context is defined by the presence of other people, the physical setting, and any tools or objects present.

*Sure. It is fundamental for us to apply all the theories learned since I am going to teach second language to my pupils (Respondent 10)*

*In my opinion, the content of this subject will help me in future especially during the next practicum as I will be particular when I design my lesson plan so that I can sufficient input to my pupils (Respondent 11).*

In these examples, participants claimed that they would apply all the skills that they have learned through LMS in their future career as a teacher.

## **Principle 6 – Engagement**

Learners will often engage in certain activities as a matter of habit, though they are also influenced by their current capacity to engage, as well as factors of motivation and inhibition related to the activity as a whole, part of the activity, its circumstances, or its expected results. Majority of the participants engaged in certain activities, do things in a certain way, or avoid certain activities, based on previously established habits.

*The presentations and the discussion are here, it provides an easy access to the materials and allows the exchange of viewpoint and ideas among others (Respondent 11).*

*My first reference is in Schoology even when I did my assignments I came here first before I search for other reference from other sources (respondent 12).*

In these examples, participants admitted that Schoology was beneficial for them to access information and to exchange ideas.

### **Principle 7 – Agency**

Learners are not passive recipients of learning, but active agents with the ability to choose how they will apply their attention and effort, and to choose what learning activities they will engage in. Others may exercise their agency to promote or inhibit the agency of the learner, and may play a role in facilitating or impeding successful learning. Majority of the participants are assumed to be an active agent, able to determine their learning targets, practice models, contexts of practice, and reasons for engagement. They are also able to choose whether or not to engage with learning opportunities that are determined by others, and to decide what level of effort to give. Participants 4 and 5 mentioned that they were given the authority to decide whether to use it or not based on their preferences.

*Yes. But why do we have to print everything if we are going towards 21st century learning? what's the point? might as well use printing and not use this platform at all. if we just want to share files, email or even drop box is also fine. save the trees! (Respondent 4)*

*I'm not sure about this because sometimes the notes are too lengthy for me and I need longer time to produce a graphic organiser to get the gist of the text. However, I will then look for other notes in shorter form to make myself understand the topic. But the book really helps. (Respondent 3)*

## **DISCUSSION AND IMPLICATIONS**

The major findings of this study indicated evidence of student-centred, content focused e-learning approach when using LMS. Both the teacher trainer and the teacher trainees indicated their willingness to learn and engage more in the online environment via LMS. LMS acts as a learning enhancer in which it makes the content management

simpler with one centralized repository for the users' personal, shared, and third-party resources. It can be implemented by building and engaging content through creating, integrating, or embedding any media, including audio and video to personalize learning. Besides, it ensures the consistency of the lesson by aligning the content to the learning objectives and sharing it with the entire department. Furthermore, the teacher trainees were able to share the content instantly by housing all the contents of the lesson in one place. This will create easy access to materials.

In addition, the principles of learning as proposed by Weibell (2011), which are potential, target, change, practice, context, engagement, and agency were evident after using LMS. The participants mentioned that they developed their potential in learning by increasing their capacity in learning and establishing their habits. They were aware of their learning targets and they made changes in their learning process. They became active learners in constructing their own learning (Koszalka & Ganesan, 2004). They became more engaged through peer interaction and presentations. They learned from each other by exchanging ideas with their peers. These findings are in line with earlier studies which indicated the benefits of LMS in promoting students' engagement (Aggilanda Easwary Muruthy & Mat Yamin, 2017; West, Waddoups, & Graham, 2007; Lee Yen Chaw & Chun Meng Tang, 2013). As such, it offers some opportunities in innovating the learning and teaching process (Dutton, Cheong, & Park, 2003).

### *As a teacher*

What was learned from this research is that by making database available for practitioners in LMS, decisions could be made faster and practitioners were able to quickly modify their curricular and pedagogical approach to meet specific needs of their learners. In addition, there are a few guidelines that have been highlighted by Woolfolk (2013) on how to apply Vygotsky's ideas in teaching. First, practitioners need to tailor scaffolding to the needs of the students before they start to perform any new tasks or topic. By providing models, prompts, sentence starters, coaching, and feedback, the students will gain confidence in doing the tasks with less support besides giving them more opportunities to perform independently.

### *About the learners*

LMS is also encouraging the teacher trainees to share the content with their peers. By sharing the content with others, it will effectively reduce the instructional gap from one student to another. Some teacher trainees were able to modify shared resources by utilizing and modifying shared resources in a way that suit their students' needs without compromising the resources' original integrity.

Secondly, the accessibility of the powerful tools, such as computer searchers and word-processing programs that support thinking will give greater chances for the students to use them in their learning processes. Thirdly, by building on the students' cultural fund of knowledge (Gonzales, Moll, & Amanti, 2005; Moll, 1992) the students will be able to relate whatever knowledge that they can gain from the friends through the learning processes. Lastly, the students can be taught on how to ask good questions and give helpful explanation through peer tutoring and cooperative learning strategies. However, it is worth noting that not all the participants are techno savvy and some of them need more time to master LMS. Furthermore, limited access to the internet poses some problems in applying LMS among the participants. As such, practitioners need to learn to accommodate the learners' diversity and needs.

## **CONCLUSION**

In conclusion, with the wide spread of the use of internet and technology, many LMS platforms are increasingly available to be used in educational and non-educational settings. Due to the abundance and sophistication of LMS, teachers need to be very selective in getting the right teaching platform for the right purposes. It is not the WHAT but HOW teachers manipulate the learning tools to make the teaching and learning processes effective is more important. As teacher trainers and practitioners, we should become the role model in using the latest learning platform in enhancing the teacher trainees to be more focused in learning the content subject and applying them in their real classroom contexts. It is recommended that future research should look into the use of different LMS with different features in learning all the subjects at higher education institutions.

In a nutshell, LMS offers unrivaled access to a whole world of passionate educators, instructional resources to share their best practices, and innovative ideas. It also makes collaborating and sharing of ideas among peers easier and more efficient than before. Most importantly, it promotes our students to be active learners in constructing their own learning.

### ACKNOWLEDGMENT

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

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