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# Technology Integration in a Communicative English Classroom

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**Abstract:** The purpose of this study is to analyse the integration of technology and its impact using Moodle activities from a teacher's perspective. This paper is a case study involving 59 Bachelor of Technology, 1st-year second semester students in a Communicative English course who were taught the same course in a face-to-face mode before the pandemic and then switched to online classes. Although several studies have focused on analysing the use of the Moodle platform as a whole, few have examined the use of each activity included and its potential impact on learning. Analysis and findings from the case study suggest that assignments, quizzes, and lessons are the activities that have a major learning impact and provides new educational scenarios. On the other hand, forum activity (communication tool), could not be utilised to its potential.

**Keywords:** Moodle activities, online learning, teacher perspective, teacher training, technology integration

## 1. Introduction

One of the most commonly used Learning Management Systems (LMS) for developing online academic courses is Moodle. The main feature that differentiates the traditional learning environment and using LMS such as Moodle is the degree of technology usage and the gradual shift of control and responsibility of the learning process to the learners. Moodle gives learners the opportunity to learn anytime, anywhere and it favours a student-centered approach with teachers acting as 'organizers, advisers, and sources of information' (Horváth 2007: 104).

## 2. Context of the Study

This disruption necessitated by the pandemic is unprecedented as teaching and examination has delayed student progression and this resulted in the sudden shift from traditional classroom teaching to online teaching. Keeping this context in mind, the study was conducted for one semester, November 2019-April 2020 in a Communicative English classroom. Weekly there were two Communicative English lab sessions for two hours each and two classroom teaching hours for fifty minutes each, a total of six hours of Communicative English class in a week. Different tasks such as reading comprehension, listening skills, grammar and vocabulary were taught through the platform.

## 3. Literature Review

A significant feature of using Moodle is that it optimizes the teaching-learning process besides being an effective and flexible learning environment for learners. A study conducted by Escobar-Rodriguez and Mongo- Lozano (2012) showed that the learning–teaching process is improved, and students obtain

better skills and grades by using Moodle. It also suggests that Moodle makes the whole learning process more interesting and friendlier (Martín-Blas and Serrano-Fernández, 2009). It was also found that most information technology majors perceive learning to be more fun and of better quality within a technology-enhanced online learning environment (Parker, 2003). However, lack of interaction, presence, or both may result in students' different observations on how well they may or may not have performed in an online class (Song, Singleton, Hill, & Koh, 2004). More recent studies include new learning benefits related to collaborative work, learning outcomes, learning interest and creativity, and learning strategies for the students (Petko 2012).

The implementation of constructivist notions of theory into practice has been attempted in many learning environments, and most recently in technology and higher education (Doolittle, 1999; Roth & Lee, 2007). Vygotsky's cultural-historical theory of psychological development informed the foundation of sociocultural theory and constructivist practices of teaching and learning (Kozulin, 1998; Vygotsky, 1978; Wells, 1999; Wenger, 1998). The technological design of Moodle underpins the social constructionism theory where learning is considered a process of constructing knowledge by negotiating meaning with others and creating shared cultural artifacts. It is a learning-centred management system which draws on the *social constructivist framework* (Duffy & Cunningham 1996; Williams & Burden 1997). When integrating technology as a tool for learning, the following are assumptions for designing contemporary pedagogical practices infused with constructivist theory in classrooms that view: (a) learning as a process of construction so there will be multiple constructions/perspectives, (b) learning in contexts that are relevant to the learner, (c) learning mediated by tools (technology) and signs (semiotic tools), and (d) learning as a social-dialogical activity (Duffy & Cunningham, 1996; Vygotsky, 1978). An LMS is needed to support constructivist theory with pedagogical recommendations. Moodle can provide a unique opportunity for students to engage in social negotiation and mediation in the form of asynchronous (e-mail, threaded discussions) and synchronous (simulations, web-based data collection, and ill-structured problem solving) technology.

## 4. Need for the Study

The sudden shift from conventional pedagogy to online learning due to the pandemic, requires teachers to adapt and integrate technology for online teaching overnight with little awareness or training. Students were already introduced to the Moodle platform before the lockdown but it was used only as a supplement to face-to-face classroom teaching. However, Moodle suddenly became the only platform for all activities, assignments, quizzes, sharing notes, etc once lockdown was imposed.

## 5. Participants

The study is based on a data collected from 59 1st year second semester students who are pursuing their Bachelor of Technology course. These 59 Computer Science students are from the same section and are part of a compulsory Communicative English course. All the students are from English medium school who have had an exposure to English language for more than 10 years. The class consist of 23% girls and 76.8% boys, and all the students are between the age group of 17-19 years.

## 6. Data Analysis

From the online survey administered it was found that 75% of the students access the internet many times a day, while 10.7% access several times a week, 8.9% access once a day, and only 5.4% once a week. It was found that in spite of the students using the LMS for the first time, 83.9% stated they are comfortable while 16.1% stated that they are not very good with it. Another interesting observation was the students did not have much difficulty in accessing course materials uploaded and 67.9% says they can easily navigate through the platform while, 30.4% finds it a little challenging. Though students were using LMS for the first time 80.4% enjoys learning using the platform and 17.9% says they are neutral

and just okay and 1.8% says they did not enjoy learning using the platform. In line with what the study intends to analyse, 76.8% stated that the course activities helps them learn and also prepare for examinations better, 21.4% stated that it helps them to a certain extend only and 1.8% does not find it helpful.

The Moodle activities used in this study are quizzes, assignments, lessons, and forums. All these activities used either in the classroom or outside the classrooms were monitored using progress completion chart. This is very useful for teachers as well as students as it gives an indication of the activities that the students completes or missed. This also provides a holistic view on the topics completed and one need not make note of activity completion elsewhere. When it comes to Forum (discussion tool) activities, in spite of many advantages it was very challenging to monitor what students respond to each other, especially when the strength of the class is more than 50. The purpose of a discussion forum was to engage in a discussion just like the physical classroom discussion. However, students can get personal with their comments which could lead to unnecessary arguments or unpleasant situation.

After observing how students respond to each other in the discussion forum, there was a need to change how forum is used. After the total lockdown with only online teaching possible, forum discussion activity was altered and very specific tasks were given, even a discussion topic had specific pointers to be included. For example, students were given a reading passage and they have to post their response on the forum. A deadline for all such activities were given and students could complete the task at their own convenience within the stipulated time. It was observed that these kind of tasks were very useful in completing the syllabus and engaging students outside the classroom as well.

Another useful activity is the lesson activity which allows teachers to create branching exercises and upload content including multimedia. This activity can also be used to upload reading texts from a prescribed textbooks or any other sources. Quiz is another powerful tool that meets teaching needs as it can be used to check understanding of simple concept that has been recently taught or it can also be used as formative assessment. Students enjoyed taking quizzes as they were able to see their performance immediately and also get feedback for each question. Another benefit of this activity is that it records the submission details which eases the teacher's burden of having to keep track of late submission of work.

## 7. Discussion and Finding

The non-productive engagement of students on the communication and collaboration tools such as forum, as well as the need to adapt the use of these activities, brings into question whether teaching practice using Moodle is really in line with the social constructionism theory of learning which underpins the technological design of Moodle. This finding may be attributed to students lack of interest or a negative perception of collaborative work unlike in a face-to-face mode. Also, findings may be due to teachers' beliefs that students will most likely have a negative perception of collaboration using Moodle (Psycharis et al. 2013) in face-to-face scenarios. This belief makes it necessary to rethink the role that Moodle should realistically have in face-to-face educational setting, particularly since it was designed to develop communication in online scenarios.

After using different Moodle activities as shown above during a course of time, from a student's perspective this shift of control of the learning process to the learners seems to positively influence their learning effectiveness. The results showed that students engagement level is also high. Overall, students had a positive attitude while working on the task and using the medium. However, from the above analysis and from a teacher's perspective, the integration of technology is yet to have the desired impact in the classrooms. The successful use of such platforms in the teaching and learning context critically depends on the teachers having knowledge about the tools, being aware of how they should be used and being capable of organizing all the communication process. This calls for the need to systematically integrate technology over a period of time and that teachers need to be trained.

Another significant point to keep in mind is that studies indicated that the technology integration practices of teachers in the classroom often did not match their teaching styles. This could be due to external barriers that prevented teachers from using technology in ways that matched their practiced teaching style or it could be the lack of professional support, lack of in-service training, lack of available

technology, restricted curriculum, training and above all time to practice how to use such tools. Another factor to consider is that increasing the amount of technology in the classroom was not sufficient to change teachers' technology practices without a shift in the teachers' pedagogical practices. Therefore, all these indicates the need to restructure the professional development on strategies for contextualizing technology integration in the classroom.

## 8. Conclusion

The results of this study suggest the need for teachers to exploit technological tools for professional development and the urgent need for training. While integration of technology is important in the education system, just providing access to technology is not adequate. Meaningful development of technology-based knowledge is significant for all learners in order to maximize their learning. The technology of today shortly becomes the technology of yesterday in education. Technology and its uses are constantly changing to incorporate new ways of managing interactions on the digital plain (Dede, 2010). Many teachers are still struggling to achieve meaningful technology integration within their classrooms and there are implications for practice, specifically related to the continued professional development because of the current situation.

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