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Responses to Learning Management System: A Case Study in Higher Education in Vietnam

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Abstract

This paper is to address the responses of Vietnamese undergraduate students and three teachers of English to the integration of a Moodle site during a language skill course. It particularly examines the teachers' perceptions of this interactive web-based technology and their actual usages during the course as well as the students' participation in this online environment. Qualitative data from the teachers' reflections indicated three factor groups that significantly contributed to their attitudes toward and employment of ICT, namely personal, institutional, and social. In addition, students presented the three patterns of online participation, namely task-oriented, content-oriented, and community-oriented. These reflected a transition in both teachers' practices and students' learning expectations and behaviors. The paper finally concludes with a number of pedagogical suggestions for the process of integrating technology in education in the local context to engage students in the online learning processes with more personalized learning environments.

Keywords LMS; interactive web-based technology; engagement; Vietnamese EFL

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INTRODUCTION

Although Information and Communication Technology (ICT) has been widely used in educational institutions for more than two decades, it is still in its early stages in Vietnam. Adopting a centralized mechanism, the national education system has been strictly monitored in various aspects, including

the national entrance exam, student cap, curriculum framework, and budget. Therefore, attempts to use ICT in education are closely associated with the national education policies both pedagogically and financially. Although this is not always the case of the private education sector, the number of students in public schools is far more outnumbered that in private schools. As a result, teaching and learning activities, the ICT integration in this case, in the public sector have a greater influence on the national labor quality.

Marked by the official letter No. 9772/BGDĐT-CNTT by Vietnamese government dated in October 2008, ICT applications started to be encouraged and invested in the school system. That means hardware infrastructure, software applications, and broadband internet connection began to be established and employed in teaching and learning activities across the national schools. Particularly in language education, the Decision No. 1400/QĐ-TTg and the Directive No. 55/2008/CT- BGDDT dated in 2008 prescribed the national policy and implementation of ICT integration in education. It is expected that the ICT infrastructure will be effectively employed in all language programs at all tertiary institutions by 2015. Therefore, the ICT usages of both teachers and students would be worth investigating in the local context.

Employing an interpretive paradigm, this paper begins with a brief review on the use of ICT in second language education. It then reports on an exploratory study, conducted during an English as a foreign language (EFL) course in a public university in the south of Vietnam. Responses from both lecturers and students to the employment of the LMS during a course were collected for analysis. The presentation continues with a discussion on the lecturers' reactions to and students' participation in the LMS. Finally, it concludes with several pedagogical suggestions for the process of integrating technology in education in the context to increase students' learning with the support of the online personalized learning environments.

LITERATURE REVIEW

ICT in Education

Developing effective pedagogical guidelines to create appropriate learning environments is a never-ended process of educators and stake holders. This process involves negotiations and critical reflections between evidence-based research and theoretical foundations. In such an attempt, seven good pedagogical principles for undergraduate education were identified by Chickering and Gamson (1987). Later, these principles were also seen to be well applicable to online learning environments by many other researchers (e.g., Bailey & Card, 2009; Brew, 2008; Morris & Finnegan, 2008-2009; Palloff & Pratt, 2005; Young, Cantrell, & Shaw, 2001). These principles are:

1. Interactions between students and teachers in and out of classes need facilitating.
2. Team learning brings better outcomes than solo learning.
3. Structured exercises, challenging discussions, team projects, and peer critiques can enhance learning engagement.
4. Proper and timely feedback is important for learning development.
5. Time management is a critical skill for both students and professionals.
6. Higher expectations need to be negotiated.
7. Diversifying course delivery is necessary; and different talents are expected.

With the achievements of internet technology and Web 2.0, it seems obvious that these seven principles can be technically satisfied in the online environment. Classroom time and space are no longer restricted in virtual world when internet access can be comfortably achieved via computers and various handheld devices. Web 2.0 also supports the process of building knowledge from large groups of people (Surowiecki, 2004). The interactive and collaborative dimensions of both synchronous and asynchronous tasks can be quickly enabled thanks to the availability of various platform infrastructures.

Therefore, the remaining question is how to execute these principles in the teaching and learning processes effectively. Morris & Finnegan (2008-2009) indicated that teachers need to involve actively in the program at the beginning to trigger students' engagement and identify suitable individual assistance. Students are also encouraged to bring their prior online experience to their academic life by working collaboratively with others to organize, share, modify and publish the content that they are working on (Lomicka & Lord, 2009a). As working cooperatively is always associated with negotiations, it is the teachers' role that makes the negotiating exchanges constructive and effective for learning purposes. In other words, facilitating the transactions of knowledge construction becomes critical in online learning environments. This urges research on teachers' perception and use of ICT as well as students' online behaviors.

Teachers' Perceptions and Usages of ICT

Extensive reviews on the process of ICT implementation in education (such as BECTA, 2004; Mumtaz, 2000) showed that teachers' attitudes toward and knowledge of ICT are important for any ICT integrating attempt. Their existing pedagogical beliefs can be used to predict if they will resist, adapt to or innovatively employ ICT in their teaching practices (Cox et al., 2004; Dwyer, Ringstaff, & Sandholtz, 1991; Higgins & Moseley, 2001; Webb, 2005; Webb & Cox, 2004). Those who would like to maintain extensive contacts with students and experience the advantages of ICT favor the adoption of technology while others do not (Drent & Meelissen, 2008). Other factors such as gender, age, and language proficiency of students, technology competence of teachers, and ICT policy of the schools are also important; but the driving factor remains in attributes related to teachers' perception.

Further investigations into teachers' perceptions and usages of ICT in their practices have shown mixed results, regardless of numerous advantages that technology can presumably offer. Teachers in the study of Young, Cantrell, and Shaw (2001) claimed that asynchronous communication increased students' course engagement but was very time consuming because it was one-on-one interaction most of the time. Meanwhile, Farmer (2006) claimed that the discussion forum would potentially save time because everyone would focus on the shared space rather than the individual interactions. In addition, technical issue is always critical for both teachers and students. Although the young generation of students was often considered digital natives, many of them did not get that passport (Tapscott, 2009). There were always those who were not familiar with or had limited access to the technology employed in a program. These are probably among the reasons that prevent teachers from integrating ICT into their practice (Proctor, Watson, & Finger, 2003) and demonstrated the dilemma between the ubiquitous, personalized learning of students and the time management of teachers.

Teachers' perceptions of ICT have also been identified to originate from their beliefs on educational approaches. Given the interactive and ubiquitous nature of Web 2.0, ICT pedagogies have often been designed to empower students in their learning activities. Therefore, those who believe that the traditional teacher-centered pedagogy can work well in their contexts tend to resist ICT pedagogy. Meanwhile, those who believe in student-centered approach tend to move to ICT pedagogy (Drent & Meelissen, 2008; Hu & Webb, 2009). Therefore, to facilitate the implementation process effectively, the vision on ICT program needs to be communicated properly among parties involved (Hughes & Zachariah, 2001; Tondeur, van Keer, van Braak, & Valcke, 2008).

Students' Participation in Online Learning Environment

Research into students' perceptions of online learning environment has presented different results. In a beginning Spanish course in Hawaii, two thirds of students were reported to be interested in classes with ICT interactive activities such as pen pal and threaded discussion (Stepp-Greany, 2002). Meanwhile, the majority of students in another study in Western Australia said that they preferred to work alone after working with the online activities during the course. They did not appreciate the interactions that they got through peer exchange and group work activities (Dixon, Dixon, & Siragusa, 2007). These seem to suggest further investigations into students' online learning behaviors.

Research on learning styles and preferences in different socio-cultural contexts has indicated that the process of ICT integration needs to match with the local students' learning behaviors. As the online space is physically virtual, it is often perceived to be more relaxing and democratic in expressing their ideas collaboratively. However, not all students across the regions were reported to appreciate the same level of democracy and collaborations in a learning environment. For example, traditional Vietnamese often believe that students would not learn much if their classroom activities are not strictly controlled. Tharp (1989) also asserted that Navajo learners were not culturally programmed to work in group as collaboratively as the Hawaiian. Therefore, ICT may have greater influence on Western learners than Asian learners in promoting effective learning strategies and autonomy (Thang & Bidmeshki, 2010). These arguments have contributed to the motivation of the current study as there has been very little research on the ICT integration in education in the context of Vietnam.

RESEARCH DESIGN AND METHODOLOGY

Taking into account the seven principles for best practices of Chickering and Gamson (1987), the significant importance of teachers' and students' perception of ICT integration, and the socio-cultural values of the Vietnamese situation, this study used a learning management system (LMS) to create a collaborative and friendly learning environment for students. As there were always more than 45 students in each class, the LMS served as a virtual extension of the physical classroom to give students more opportunities to produce better quality communication for learning purposes (Beauvois, 1992). It was also used as a connection, linking the in-class and out-of-class learning activities to each other.

Research Questions

This exploratory study aimed to understand how Vietnamese EFL teachers and students responded to the online learning space which was physically and pedagogically different from their traditional learning environment. It particularly addressed (i) the teachers' perceptions and usages of ICT integration into their course and (ii) students' general attitudes toward and participation in the virtual interactive situation. Other learning mediating aspects were also examined, but they were not reported in this paper.

Subjects

Participating in the course were over 240 EFL undergraduate students in five groups from a public university in Vietnam. These five groups were taught by three teachers, the first two teachers working with two groups each and the other teacher working with one group. Most of the students were from 18 to 19 years old and in the second semester of their candidature. The teachers were in their mid-twenties and all female. The course was upper-intermediate Listening – Speaking, and the class met once a week during 16 weeks. Each meeting lasted for four hours. Both teachers and students had not worked with any LMS as part of their school activity prior to this study.

Research Design

As creating a constructive learning environment for reflective and collaborative activities was the aim of the LMS, this study was based on the knowledge construction theory of constructivism. It used various forms of the online discussion tool as the primary mode for students' interactions because this tool was suggested to support the nature of constructivist learning (Malikowski, Thompson, & Theis, 2006). Other tools such as synchronous chat and collaborative Wiki writing were also introduced. The environment design generally went aligned with the seven principles of best practice suggested by Chickering and Gamson (1987). In addition, the teachers were made aware of different methods to foster students' engagement in the learning process such as encouraging students to critically consider others' perspectives and use their own experiences to interpret the situation (Merriam, Caffarella, & Baumgartner, 2007).

Given the technical requirements for the LMS within the study, the open source Moodle was financially selected, and the site was hosted in the local city to facilitate loading speed. It was also trialed for six months prior to the study for technical quarantine. Before the course started, discussions among the faculty deans, the three participating teachers, and the webmaster were made. Upon the meeting, teachers were allowed to modify their course to include the online activities from the LMS. It could also be counted in the course assessment although these adjustments were not compulsory. After that, the LMS features were technically and pedagogically introduced to the teachers; and a space for follow-up discussions was created in the LMS to discuss both technical and pedagogical issues. The teachers had the opportunities to try all the LMS functions, practice designing their own courses, and choose what they thought appropriate for their course.

When the course commenced, students' email addresses were collected in the first class meeting for the LMS account generation. They were told to expect an email with their own account information and general details about how to access, navigate the site and seek for support by the end of the first week. A demo tutorial about all the functions of the site was conducted in each group in the second week by the webmaster. A question and answer section was followed, and technical support was

provided to both students and teachers during the course to minimize technical barriers. The LMS activities started in the third week and prolonged to the end of the course.

The LMS was kept fairly clean with clear signposts to ease navigations. Players for the Voice of America (VOA) and British Broadcasting Corporation (BBC) radio channels were integrated and placed on the home page. A randomly shown clip box from YouTube was also added to the home. These add-ons were to provide updated resources for the listening practice. In addition, the default blog module of Moodle was replaced by the OU blog, giving students more flexible options such as comment adding and visibility setting for each entry. A function for posting voice messages, using NanoGong technology, was also included in the site. This module allowed students to record their talk in an audio file, replay it and embed it in their posting with a few clicks, instead of typing in the message. This was made to support the speaking practice.

The site was password-protected and structured into three main sections, namely personal section, course section, and public section. The first one allowed each student to update a number of personal details such as nick name, favorites, instant messenger (IM) username, blog url… The second section could be accessed by only members of each respective class. It featured a number of activities facilitated by the class teachers, and students' learning performance in this place was counted for the course evaluation. The public section included a *Notice board*, a *Technical support forum*, a *General discussion forum*, a *Chat room*, and a *Global blog*. In addition, every site member could always track the login record of the others with a simple click. It was expected that enabling this feature to students would encourage students' participation.

Methods

As this exploratory study attempted to document the responses of both teachers and students after they worked with the LMS, the data collection process was designed to be able to accommodate any possible kinds of reactions from the subjects. Therefore, the personal reflection and individual semi-structured interview were selected as the principle data collection methods. The reflection can help elicit human's insights into a situation because it is mirrored by lived experiences (Van Manen, 1997) and shaped by socio-cultural and professional factors (Paver, 2006). It is also a useful means for researchers to get into the participants' knowledge and belief. Similarly, the semi-structured interview (Bogdan & Biklen, 2007) can be used to access one's mind and extract his/her attitudes and preferences (Tuckman, 1999). In addition, other sources of supporting data such as LMS lurking observation, log file screening, and analyses of communication records between students and the webmaster were employed to profile the situation. The virtual observation was especially useful in the online environment as it provided an ideal opportunity for the researcher to see the scene without being seen. Thus, participants were not interfered by the presence of the observer.

Teachers' Perceptions and Usages of the LMS

The personal reflection method was used to collect data on the teachers' perceptions of ICT. When the course finished, the teachers were invited to write a reflection paper, addressing (i) their general perception of using ICT in the situation, (ii) the contributions of the LMS to their course, and (iii) their concerns about the LMS integration. They were encouraged to express their thoughts in either English or their native language, or a mixture of two. Their critical comments could be both personal

and professional or either. This reflection paper was designed to be implemented after the course because it was when the teachers had more time and could have an overall overview of the course that they had delivered. In addition, the written form was chosen to give the teachers opportunities to synthesize their comments, reread and even reflect on their drafts during the writing process. Content analyses were then used to interpret the teachers' reflections.

Students' Participation in the LMS

By the end of the course, all students were invited to take part in an individual semi-structured interview. Eighteen of them responded to the email invitation, but none of them was from the fifth group. Fourteen of them were selected on the first come first served basis, and they were arranged for the interview with the researcher. However, one of them could not manage to come in the last minute, and two of the interviews were poorly recorded because of the noise from a sudden heavy rain. The field notes taken during these two interviews were not rich enough to be included in the analysis. As a result, eleven of the interviews (two from the first group and three from each of the other three groups) were transcribed and translated into English for theme analysis. Any pattern of or trend in students' attitudes or behaviors during their LMS engagement process was planned to identify. Specific details that did not conform to any of the identified patterns were also taken into account. This set of data was then paired with the online participation profile which was described by the supporting data when necessary.

Similar to the teachers' data collection process, students were given time to actually experience the LMS for the whole course before the interviews with them were conducted. The questions for students to reflect on in the semi-structured interview focused on their general attitudes toward and engagement process in the LMS, for example, "*What do you think about the LMS?*" and "*What do you often do with the LMS and why?*" These questions were kept fairly open to give students enough space for expression with serious considerations on the local socio-cultural characteristics such as relationship maintenance, cheerful atmosphere, and appropriate motivating stimuli during the interview. Students were also encouraged to talk about any particular events that were of their interest and provide examples to illustrate their retrospective descriptions. In addition, they were advised to possibly use any English words or phrases that they thought more convenient to express themselves during the interview although the interview language was their mother tongue.

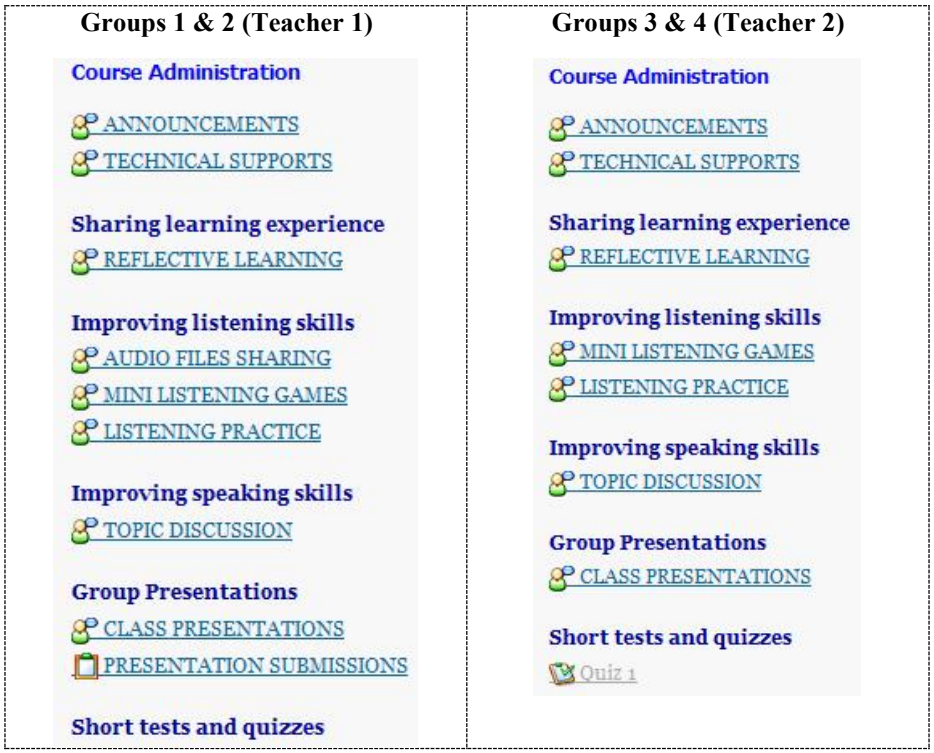
RESULTS

Teachers' Employment of the LMS

When the course started, the first two teachers who taught the first four groups used the LMS participation as a compulsory component of the course. It weighted 15 percent in the course evaluation. However, the teacher who taught the fifth group made the LMS component totally optional and the virtual class participation was not evaluated in any way. Different from the first two teachers who carefully designed the LMS virtual space for their groups and made the requirements clear to students, the third teacher just left her online class as default. The login record showed that she did not go to her virtual class after the course started. Therefore, reported in this study were the data collected from the first two teachers only.

After several follow-up discussions and trialing practices prior to the course, the teachers agreed on a general layout for the LMS course section which consisted of six categories, namely *Course administration, Sharing learning experience, Improving listening skills, Improving speaking skills, Group presentations* and *Short test and quizzes*. Each category consisted of subcategories. As one teacher was in charge of two groups, the LMS designs of the groups taught by the same teacher looked identical, but they were slightly different across the teachers. As presented in Figure 1, Groups 1 and 2 had *Audio files sharing* in *Improving listening skills* and *Presentation submissions* in *Group presentation*. Meanwhile, the teacher of Groups 3 and 4 attempted to make *Quiz 1* in *Short tests and quizzes*, but there was nothing in that category in Groups 1 and 2. Although *Quiz 1* was not finally made available to students, it was worth noting.

Figure 1. *The Virtual Course Layouts of Different Groups*



As indicated in Figure 1, the most adopted tool in the course was *Discussion forum*. Either *File submission* (in *Presentation submissions*, Groups 1 & 2) or *Quiz making* (in *Quiz 1*, Groups 3 & 4) was also used once. The Wiki collaborative writing tool was not used, probably because improving writing skills was not among the course objectives. The teacher of the first two groups (Teacher 1) attempted to use the *Grade book* of the LMS for the online component assessment, while the other teacher (Teacher 2) did not. Teacher 1 also required students to make at least one posting a week to share the listening materials, while Teacher 2 made it rather free to students. Both of them talked about the LMS component in their class meetings and encouraged students to participate in that environment during the course. Apart from the *Course administration* section, their postings were irregular but showed responsiveness to important issues, suggesting that they monitored the site on an ongoing basis.

Regarding the teachers' different choices of *File submission* and *Grade book* tools, it was necessary to note that although Teacher 2 did not adopt or asked about these tools during the course, she expressed her interest in using them in her reflection. She wrote:

> *"I do not remember well if [the LMS] can help create student groups within each class. This tool will be very good because students can post their presentations, and the teacher can evaluate those presentations online…"*
> (Teacher 2)

She then went on with the idea of *Group work, Grade book* and possible advantages of these functions regardless of the availability of these tools in the LMS. These raise a few concerns that are addressed in the discussion section.

4. 2. Teachers' general perceptions of ICT integration in the local context

Both teachers developed a very positive attitude toward the use of ICT in their situations. From their personal experience, they agreed that ICT in general and the Internet-based LMS in particular were necessary and useful for teaching and learning because of two major reasons. The first one was that it was a quick pathway to various and updated learning materials. The second one was that it created multi-directional and convenient interactions among students and teachers after class hours. The innovation of ICT integration in EFL education became even more necessary when "*several students and teachers* [were] *not familiar with using internet*" (Teacher 1) and when there were "*many crowded classes with little in-class time*" (Teacher 2). The latter comment was very aligned with advantages of the online learning space suggested by Garrison (2006).

4. 3. Teachers' perceptions of the LMS contributions to their course

Various comments on the significant contributions of the LMS to the teaching job in the local context were mentioned in the teachers' reflections. These comments could be categorized into three groups, namely communication enhancement, curriculum enrichment, and progress evaluation. Although these attributes would be separately addressed in the following paragraphs, they were interrelated and had certain effects on one another. For example, better communication among teachers and students outside of class through the LMS could encourage students to engage more in the course activities. Therefore, richer contents were created, and the teachers could have an opportunity to see students' progress and provided more appropriate facilitations.

Regarding the communication benefits generated from the LMS, both teachers admitted that it created a good channel for communication among teachers and students because they often forgot to discuss something or request students to do some task during class time. As any posting in the *Course administration* section was automatically emailed to every member in that group, the teachers did not have to wait for a class meeting to announce it or worry if anyone missed the email. This email could then be "*used as evidence if students' complaints arose*" (Teacher 2). Similarly, Teacher 1 was particularly interested in the flexibility of discussing with students any time. She said:

> *"When there is an interesting and useful topic but teachers cannot discuss it with students in class due to time limitations, teachers can stay at home and do that through the* [LMS]*."*
> (Teacher 1)

In addition, the data posted in the LMS could be retrieved again and again to facilitate further comments and reflections. It could also help teachers understand their students' emotions and expectations to respond properly and promptly.

The LMS was also indicated to enrich the course materials and diversify types of assignments. As students were required to post links, audio files, video clips, and other resources as well as their discussions related to the course, the group then had a very rich collection of materials that the teachers alone could not created (Teacher 1). Students were encouraged to look for different kinds of reference resources and do more practices outside of the class. These shared materials could then facilitate more discussions and idea exchanges. Continuous reflections and negotiations on various topics would enhance students' engagement in the course. More importantly, every class member had a sense of belonging to this content because they were the creators (c.f., Garrison, 2006). Therefore, they were encouraged to revisit the content more often, and a challenging environment among students was produced. Teacher 1 asserted that "*it would be impossible to implement such a kind of assignment without the* [LMS]."

Another important contribution of the LMS was its support for teachers monitoring students' progress. As asserted by Morris and Finnegan (2008-2009), the teachers in this study believed that students' participation in the LMS activities could suggest certain aspects of their learning behaviors and investment. Teacher 1 wrote:

> *"The* [LMS]*... can help me understand my students' learning attitude… For example, through students' postings and comments on their peers' work, I can know which students learned actively and devoted more energy to the course outside of the class."*
> (Teacher 1)

This contribution was also acknowledged by the other teacher who indicated that the LMS log file allowed teachers to check the participation of each student in a class. Interactions among students and their postings could also tell about their levels of learning involvement and even their out-of-class activities.

Regarding the LMS benefits to the local students' learning processes, the teachers focused on the interactive impacts of the LMS and opportunities for learning personalization and autonomy. Similar to what was documented in prior studies (e.g., Lomicka & Lord, 2009a), it was reported that students could always raise questions to and share ideas with their peers and teachers out of class time. They could also reflect on their own work and expect comments from the others. The internal message system which could be linked to external mail accounts made the communication process between two or among several students easy with a few clicks. Students did not *"have to save all the email addresses of the people they would like to contact*" as they were supposed to do with email communication (Teacher 2). In addition, as there was a variety of materials available to them in the LMS, they often had to choose the most suitable and interesting to them. As a result, their critical thinking skills and learner autonomy capacity were fostered (Teacher 1).

Teachers' Concerns about the LMS Integration in the Local Context

Computer proficiency of both teachers and students was the first concern that both teachers

mentioned to in their reflections. One teacher described her experience of technical difficulties at the beginning of the course and commented on her students' situations. She wrote:

> "*I myself was not very good at using the* [LMS] *at the beginning of the course, and my internet skills were also limited. Therefore, I had to learn it, and that was time consuming. Similarly, several students, particularly those from other provinces are not familiar with using internet* [for school purposes]."
> (Teacher 1)

The students' technical problem was reinforced by the other teacher, who said:

> *"Students, especially those who come from rural areas, are computer-shy. Therefore, they often find it complicated to use the* [LMS]*, even though clear instructions are available on the website."*
> (Teacher 2)

However, it seemed that these technical issues were minimized by the technical support provided during the course. Teacher 1 confirmed that her students and she "*only encounter*[ed] *these difficulties at the beginning of the course.*" Therefore, she believed that appropriate technical support and course organizing know-how would make any LMS integration attempt successful.

Online habits and internet access opportunities were also of teacher concerns. Teacher 2 indicated that working frequently with the internet to support students after class hours may not be of many teachers' preferences. If involving in the cyber-activities was part of the teachers' daily routine, they might find their routine more interesting when the LMS activities were added. Otherwise, the LMS actually gave them more work to do for the course, and they did not like it. This piece of work even became more critical as it was "*only beneficial once the teachers invested on it* [properly]" (Teacher 2). In addition, some teachers and students might not have internet access regularly because of the facility shortage at home, given that they had no computer access at school. Many students, particularly those in the dormitory or rented rooms had to go to the internet café, and it was not very convenient.

Another issue which was referred to in the reflections of a teacher was about teachers' behavioral preferences in the online environment. She indicated that

> *"Some teachers tend to feel hesitating to expose themselves to online activities. Some elder teachers might not be eager to constantly interact with the internet, or they do not want to spend time learning how to use the web…"*
> (Teacher 2)

Although the issue of exposing to the virtual world was not applicable to the two teachers in this study because it was evidenced that they had a lot of actual contributions to their virtual classes, this reflected a very socio-cultural perspective of the local teachers in the cyber world. Because interacting with the online dimension may entail exposing to the whole world, teachers in the local context may find it uncomfortable to communicate their ideas in that environment. It also touched upon the issue of time constraint, workload, and resistance to pedagogical change in the local context.

These clues are considered in the discussion section when the absence of the LMS activities in the group of Teacher 3 (teacher of Group 5) is addressed.

Students' General Attitudes toward the LMS

Students' responses in the study presented mixed attitudes toward the LMS, ranging from neural to positive and very positive. A few interviewees indicated that they initially participated in the LMS because it was part of the course requirements. However, after taking part in the online activities, they became interested in the diversity of friendly topics and relevant content available there. As a result, their attitudes toward that learning environment became more positive. A few others said that they were interested in such a type of interactions right from the beginning, and their attitudes were even more enhanced as the course went on thanks to the useful discussions and reflections in the LMS. However, there were two comments addressing their loose relationship with the LMS, and it was not developed till the end of the course. For example, Student T4a indicated that because he did not know much about how to use the internet, he only logged in the LMS a few times during the course.

There were also two opposite perspectives of the kinds of comments that the teachers should make on students' postings. Student D4 did not expect to have many specific comments from the teachers because "*that would make students have a feeling of being checked for mistakes all the time.*" In contrast, Students T1 and H2a would like to have as many as possible specific comments from their teachers such as about spelling, grammar, word use, content, or personal thoughts. They believed that the teachers were more experienced and could clearly point out the mistakes for them to learn from. Although they may feel a little embarrassed once their mistakes could be seen by all of their classmates, they thought it would be good for their progress. Moreover, the LMS was the only opportunity to get teachers' specific corrections because there was no time for that during in-class hours. These comments were obviously similar to what was reflected in the teachers' attitudes toward the online space.

Students' Participation in LMS

Students' participation in the LMS reflected the outcomes of teachers' attempts to nurture the virtual class community. Because Teacher 3 only introduced the LMS to her students but did not try to integrate it into the course as the others, there were only a few login attempts and no posting was found in her virtual group. One of her students even emailed the webmaster, requesting to move her LMS account to another group because she would like to have opportunities to engage in the online learning space. In the other four groups, more communications were found toward the end of the course because students became more familiar with one another and could identify their own favorite content and peers to interact with.

The synchronous *Chat room* in the public section was not much used by students. The chat log showed only a few chat lines because students did not log in the chat session at the same time to be able to communicate with each other although many were probably in the LMS at the same time. Further investigations indicated that their chat community was in other channels such as Facebook, IM, or mobile phone. However, the *Global blog* in the public section was unexpectedly favored by a lot of students, given that this section was only for general communication, not part of the course

requirements. There were a lot of new entries and comments every day, and many students even found this public section more interesting than their course section.

As expected, reading, reflecting, and posting were the activities that students reported to do most in the LMS. Some of them said that they were very careful when placing a posting in the LMS; some others were not simply because meeting the course requirements was their only purpose. Some of them liked reading the messages and resources only; some others preferred reading to sharing materials; and many others were interested in doing both. Those who had postings reported that they often engaged in a cyclic process of placing a posting, following it up, reading the comments if any, responding to comments, and following it up again. Going through this process also triggered a lot of other activities such as reading the comment-makers' profiles and postings in the LMS (Student A3), googling for further details of the posting topics (Students D1 and D4), and going to the original sources of the postings for other materials (Student H2a).

Through the study sampling, three patterns of students' LMS engagement that could be identified were task-oriented, content-oriented, and community-oriented participation. Task-oriented participants were those who logged in the LMS only to meet the course requirements of the online component. As the number, not the quality, of postings counted, these participants often had an idea in mind before coming to the LMS. After placing a posting, they probably kept staying in the LMS to meet the onsite time requirement, but they did not actively participate in the LMS activities. In other words, they did not cooperate with their peers as documented in previous studies (e.g., the volume of Lomicka & Lord, 2009b). Very often, their postings were not well-prepared, their interaction with the LMS was one-way directional, and their tie with the online space was very loose (as suggested by Kent & Facerw, 2004). For example, a student said:

> *"Because my teacher only required the number of postings, … I just posted anything. I did not have to proofread it carefully because even if I did, no one would read my postings"* (Student D1)

The second type of participation was content/information-oriented. These students tended to target the postings of their interests. They preferred to work with high quality contents and often ignored short messages for relationship establishment or maintenance. They could also become frustrated easily and left the LMS if they could not see anything appealing to them. They often paid more attention to the thread titles and the length of the messages before coming into details (Students H2a and D4). They did not care much about the authors (Student M2). Their postings were often initiated by what they read on the LMS. They particularly prepared their postings carefully before hitting the post button and followed them up seriously (Student H2b). Sometimes, they typed their message down but did not post it because they did not find it interesting enough.

The third type was community-oriented participants, who tended to come to the LMS to interact with the peers that they knew about. They often targeted messages written by familiar people (Student H2b) or those attracting many people (Student T1). Also, they often expressed their personal feelings and dialoging connectors such as saying hello or thank you in responding to the authors. They did not care much about or even felt irrelevant to a discussion topic if they could not see any of their close friends participating in it. In other words, their online participation was significantly mediated by their relationship with their online peers and the number of online crowds.

Student T4a said:

> *"I do not go online very often… However, if there is a close friend of mine posting something in the LMS, I'll have to come to see what he/she writes about… For the postings of the others, I may look at them later."*
> (Student T4a)

Student A3 added:

> *"I look at the number of people participating in each discussion thread* [to decide if I need to read it]*... If the thread has already attracted two or three comments, I will come to see. If the thread has not received any comment, I will not come to it... Therefore, never am I the first person responding to a posting."*
> (Student 3A)

DISCUSSION

Teachers' Perception and Employment of the LMS

Relating what the teachers' perceptions of ICT in general with their actual usages during the course suggested three mediating groups, namely personal, institutional, and social factors. Personal factors were those related to individual workload, ICT knowledge (also in BECTA, 2004), working habit, and level of online interactions (also in Russell & Bradley, 1997). Institutional factors included the school infrastructure, policy, vision, and actual plan. Social factors were those associated with the teachers' understanding of students' general learning styles and conditions, social trends, and expectations. The following section attempts to illustrate each of these three factors separately and suggest possible effects created by the relationship among them.

Personal factors

As the data collected were mainly driven by the teachers' personal reflections, several personal attributes were suggested. Although the study did not receive the reflection from Teacher 3, who neither used the LMS as a compulsory course component nor provided necessary facilitations for her virtual group, the situation seemed to suggest that the LMS employment was more of a personal issue. This was because all of the three female teachers were rather similar in age and bounded in the same school environment with very similar students in a similar social context, but only Teachers 1 and 2 were active in using the LMS for the benefits of their own and their students.

In addition, while it was quite understandable about the positive relationship between computer proficiency and the LMS adoption as previously suggested, the teachers' willingness to accept the workload outside of the class was more worth contextually noting. Local teachers are often expected to work with students in class only. In another word, school is the only place where teaching takes place. Therefore, any extra-teaching out of class would be considered unconventional and of course non-paid. However, these teachers valued the interactions with students out of class, tried to monitor their after-class learning processes, and even were interested in their daily life stories. These reflected the enthusiasm and commitment of young teachers as well as the working preference of the digital natives which were very different from the Vietnamese teachers' traditional styles. In this

respect, they were not much different from their Dutch counterparts (in Drent & Meelissen, 2008), who preferred to use ICT in their practices because they were interested in gettting more interactions with students.

As constantly suggested in the literature, time or workload constraints and computer proficiency were again implied in this study especially in Teacher 2's query about the *File submission* and *Grade book* tools. Although she was keen on trying more tools for the course such as *Quiz*, she did not probably have enough time to learn and explore all during the course. Thus, it could be expected that she would definitely use the tools that she asked for in her future LMS courses. In other words, only adequate technical support was not enough to draw teachers' attention. They needed to deal directly with the tool (the LMS in this case) to work out the best practices for them.

The teachers' LMS usage to enrich their course materials and participate in the communicative community indicated that their professional practices were partly shaped by technology and their technological habits. As teachers in Vietnam, they were expected not to make any mistakes, especially in public. Taking part in such a digital environment could be very risky for them because their mistake, if any, could be recorded and spread out. In addition, allowing students to contribute resources to the course and encouraging others to use that were a starting point for curriculum negotiation which was hardly adopted in such a strictly centralized education system like Vietnam.

Institutional factors

Included in the teachers' reflections was the influence from the local institution. As there was no computer lab for language students, having computer access at school was impossible for them. While they came from different areas of the countries, and the school fee of such a public university was low, it was pretty obvious that there were those who did not have computer access at home. Therefore, both teachers who adopted the LMS were very concerned about the unequal opportunities potentially created to students. This should be among the reasons of the three different LMS requirements during the course, namely mandatory online participation and at least one posting a week per student, mandatory online participation but no specific number of postings, and totally optional online participation.

The teachers' decision on the LMS integration was also partly mediated by the faculty plan and policy. As this was an initial attempt to use ICT in the faculty for the first time, and the deans agreed to let the teachers make their own choice, not all teachers were driven enough to actually use the LMS. They understood that once they started, they would involve in new and unnecessary obligations and failure in using the LMS might potentially threaten their job. This could be inferred that from the management's point of view, the shared vision was crucial (Hughes & Zachariah, 2001), but in this particular context, the vision also needed to be implemented in actual plans and associated with specific responsibilities and benefits.

Social factors

The third group of factors which influenced the teachers' LMS employment was related to the contemporary attributes of the local society. As indicated in the section of institutional factors, once computer access was limited at school, teachers were concerned about students' access to computers

at home and in computer services. The teachers were also indicated that they were very aware of their students' online habits and social networking because they interacted with their students via email, Facebook, and IM very often. Their awareness was reinforced by the understanding of the expectations of the society, particularly of the students' parents, toward making use of the facilities that they prepared for their kids. A lot of parents currently in the local context did not think that staying online is learning. Therefore, they expected formal attempts to build up an appropriate connection between school life and their kids' online habits.

Overall, it was almost impossible to distinguish the impact of each factor group on a certain piece of teachers' decision making on the LMS employment. These factors were interrelated and altogether used as a filter for the production of the teachers' acts on certain aspects of the LMS. Positive impacts from every factor group would significantly trigger teachers' mind shift to the adoption of ICT in practice. It was these mediators that created different responses from the teachers and reflected their role changes in practices such as negotiating the materials with students, giving them more opportunities for reflections, interacting more with them outside of the class for the course purposes, and using evidence to settle complaints. In other words, different from the arbitrary authority that Vietnamese teachers often adopted in the local setting, the two teachers in the study attempted to shift the power source to their students and prepared to negotiate with them when disputes arose. These changes were really important for a move to the learner-centeredness approach which was recently encouraged in the local context.

Students' Attitudes toward and Participation in the LMS

Teachers' concerns about students' computer proficiency and access were partly reflected in the student interview sample. Students T4a and A3, both living away from home, reported that they had technical difficulties with and limited access to computer. However, they reacted differently to the LMS activities. As reflected by Teacher 1, Student A3 only encountered technical problems at the beginning of the course. She then quickly learned how to use the LMS and participated in the virtual class regularly even though she had to go to a computer service. In contrast, Student T4a indicated that his computer skills were not improved and had the same problems till the end of the course although he often went home almost every weekend and had access to a home computer. These suggested that the LMS activities were not strong enough to motivate him to learn more about computer.

Students' significant use of *Global blog* and very little use of *Chat room* indicated their desire for communicating with a bigger audience and community ties. Although these two sections were not included in the course evaluation, the students' participation in these two spaces was completely opposite. Blog entries about topics other than those prescribed in the course seemed to trigger a lot of voluntary communication, bringing forward the issue of community building and learning opportunities. The free growth of this spontaneous community was probably fostered by friendly topics and the supervision-free atmosphere. Similarly, as the content in the synchronous *Chat room* could only be spread to those concurrently in the *room*, and it was not archived, a very small audience could access to that content. Therefore, this tool was almost ignored by students. Obviously, topics of interest and democracy were suggested to be among the most important facilitators for online environment engagement.

The data on students' attitudes toward the LMS and their participation patterns indicated a positive relationship between them. If students recognized the benefits of the LMS to their learning, they would be more active in that environment. In addition, the more they interacted with their peers in the LMS, the more sense of belonging that they had to it. As a result, the more positive attitudes toward that space they could develop. Of course the engagement quality was also very important in mediating these relationships. Importantly, these reflected the diversification of Vietnamese students' online participation styles which were different from their traditional stereotype such as culturally working alone preference (c.f., Dixon et al., 2007; Tharp, 1989) or passive learning only. This suggestion needs further investigations from cross-cultural studies.

In addition, it was suggested that the quality of students' online interactions was characterized by the participating roles that they adopted. It seemed that task-oriented participants anticipated in the LMS at a peripheral level, given that the task provided in this study only counted on the number of postings, not really on the quality of the postings. Meanwhile, content- and community-oriented participants seemed to engage extensively in and even tried to control the virtual environment. While Farmer (2006) indicated that the LMS could force the participants to work on "*shared communication spaces, rather than on the individuals"* (p. 95), this study suggested that it depended on the type of participants. Content-oriented participants would be more interested in the shared spaces, while community-oriented participants would focus more on interacting with few individuals that they had good relationships with.

Students' adopted participation roles could also be among the indicators for their development patterns of attitude toward and engagement in the LMS. It was indicated from the sample that those whose adopted goals were content-oriented and community-oriented tended to move from peripheral to integral levels of participation because more interesting contents were produced and better community ties were developed as the course went on. Once their participation level increased, they might find themselves more associated with the environment and developed more positive attitudes toward that space. These brought forward pedagogic considerations on the activity design, not just on the learning styles as proposed in previous studies (e.g., Dixon et al., 2007; Stepp-Greany, 2002), to effectively engage task-oriented participants in the virtual learning space.

The relationship among the three types of participants was complicated. The interview data showed that students often reported to exhibit characteristics consistent with more than one type of participation. For example, Student T4a indicated that he was task-oriented and community-oriented participant, while Student H2b was content-oriented and community-oriented. The relationship among these adopted/shifted roles also depended a lot on the quality of each object orientation. For example, a good posting should be able to draw attention from different people, and more comments would be added. Similarly, when a student came across a thread with many comments, he/she expected that the posting would be interesting (e.g., Student T1). However, these were not always necessarily accurate as a lot of students responded to a thread simply because of their relationship with the author. These preliminary findings proposed suggestions for further investigations on students' role change in online learning environments.

The fact that students expected different degrees of teachers' comment and participation indicated individual differences and led to concerns about mediating variables. Looking across the interview data, it seemed that those who were more task-oriented (such Student D1) did not expect a lot of

comments from the teachers. Meanwhile, those who were more content-oriented and community-oriented (such as Students T1 and H2a) preferred to receive more teachers' comments. These preferences were understandable because task-oriented participants did not often prepare their work carefully, while the other two were interested in the quality of their postings and opportunities for community interactions. However, if the requirement of the online task was more about the quality, not just the quantity as in this study, of the postings, task-oriented participants would have probably expected more comments from teachers to improve their score. These assumptions therefore provide suggestions for further research in task design and students' goals.

Limitations

It was the study design and scope that limited its analysis on certain aspects. First, it could not collect any data from Teacher 3 and her students because of the socio-cultural situation although more insights might probably be generated. Second, the nature of the online task in this preliminary investigation was not interactive enough and probably contributed to the peripheral participation assumption of task-oriented students. Third, students' academic achievement was not targeted although it should be among the fundamental objectives of the course, especially in such an exam-oriented system as Vietnam. Fourth, a few mediating variables such as gender, age, and language proficiency were not comparatively addressed in this study, given its limited scope. Fifth, the data generated from the study did not allow it to examine the relationship between the level of engagement and reinforcement that teachers contributed to the LMS and its effects on their students' participation pattern. Follow-up studies may probably address the issue of teachers' online preferences and its potential impact on students' online behaviors.

Pedagogical Implications

Given the three groups of mediating factors on teachers' employment of the LMS identified in the study, the study puts forward a few considerations during the implementation process of the national ICT policy in local universities. First, the ICT pedagogy, which empowers students by giving them more opportunities for content generating, interacting and negotiating, is contradictory to the one that Vietnamese teachers are traditionally and culturally familiar with. Therefore, resistance is unavoidable, and professional development needs to go in line appropriately when the ICT integration is actually employed in class. Second, Vietnamese teachers are culturally expected to be mistake-free while mistakes in online communication are normally archived and can be captured for negative purposes. Thus, teachers need to be backed up with the course regulations which can protect the online materials and communication exchanges. Third, while a shared vision is important, sufficient support, attached obligations, and workload considerations are even more important for the success of a plan.

The three patterns of students' online participation presented in the study sample propose different ways to promote students' online learning engagement. As effective interactions for learning purposes cannot be automatically created, proper facilitations are required. First, an online task needs to be designed in such a way that its completion needs a certain level of students' interactions. Second, general guidelines for a posting to be counted for evaluation need to be provided and possibly negotiated with students at the beginning of the course. Third, the relationship among online community members has significant impact on the quality of the online learning process.

Therefore, taking advantage of students' offline relationships to develop the online community and using their online relationships to promote new offline connections would enrich the learning community. Forth, the level of teachers' comments in the online environment is critical as it can either trigger or inhibit further interactions. Thus, it is necessary for teachers to pay attention to students' individual differences as making online comments.

SUMMARY

Driven by the ICT policy from the government and the socio-cultural education practices, the study attempted to preliminarily understand the LMS perceptions and usages of local students and teachers. The study data indicated the three mediating groups of factors that contributed to shape teachers' employment of the LMS and three patterns of students' participation in the virtual space. It was suggested that the ICT integration in general was favored by some teachers while others just ignored that, indicating that the local teachers' practice was in a transition toward student-centered approach. It also proposed a number of considerations on personal, institutional, and social attributes for the process of ICT implementation in the local context.

Similarly, students' online participation reflected changes in students' learning styles and preferences in the current situation. There were those who only wanted to complete their tasks as traditionally expected, but there were also those who went beyond the course requirements and tried to establish interactive linkages with either the information or other peers. As a result, the boundaries between online and offline life were very big to some, but rather small to some others. However, with the connection between school and home activities created by the LMS, students indicated that their offline life was significantly enriched by their online participation (c.f., Kent & Facerw, 2004). These put forward considerations on how to build online community for academic purposes to meet the seven good pedagogical principles effectively, leading to the important and complex roles of teachers as facilitators in technology enhanced environments.

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