English Language Activities In Computer-Based Learning Environment: A Case Study In ESL Malaysian Classroom

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Abstract

Computer based learning environment has been widely discussed, especially in finding a better way to incorporate computer-based activities in the classroom. Lately, the use of computers in the classroom is particularly important in the context of teaching and learning English as a second language. This paper aims to investigate and to understand how computer-based activities are organized in a school situation that is totally dependent on the syllabus. This study is a case study that incorporates classroom observations, field-notes, interviews and written documents. Both computer-based activities and non computer-based activities in ESL classrooms were recorded and anaylsed. This study concludes that the opportunities for students to learn English as a second language using computers are very wide, and the use of L2 can be increased if authentic computer-based activities can be incorporated in the lesson.

Keywords: CALL, learning environment, language activities, technology

Introduction

The integration of computers in education has been discussed widely and much attention has been devoted to the role of computers in the classroom especially in finding a better way to implement effective ways to incorporate computers in the classroom. Technology in the classroom is widely believed to help teachers promote a constructive class environment and it is viewed by many researchers to have an influential effect on the teaching and learning process (Muir-Herzig, 2004). However, the integration of computers in the classroom may be difficult by some and may not be found effective in teaching and learning when introduced within the traditional curriculum setting (Jules Van Belle and Soetaert, 2001). Newby et al. (2000) argued that when the computer-based learning environment is implemented in classrooms, there is a need for the modification of educational goals.

Furthermore, from educators' perspectives, with a variety of computer-based activities, computer can help facilitate needs and challenge students' learning practices (Warschauer and Healey, 1998). However, many findings concluded that letting the students use computers in the classroom without any concrete activities that relate to language learning and without any understanding of the conditions of using computers in the

classroom may hinder the total utilization of them (Bromley, 1998; Gunderson and Anderson, 1999; Hartschuh, 1999; Muir-Herzig, 2004).

In other words, having excellent computer facilities, such as having good language software and programs and also with the Internet connection will not ensure giving students full benefits and opportunities of the English learning. This is because computer as itself without any good activities, "does not provide adequate instructional value in and of themselves" (Means, 1994, pg. 13). Means argues that in order to provide students with beneficial computer-based activities, it is important to plan instructions for activities that supported by computers. She further laid out four main categories to classify the various types of learning using computer. Means indicated that computers in language learning can be used a tutor, an exploratory environment, a tool and a communication medium. It is important for teachers to understand different categories of computer usage before they incorporate computers in their lessons. Without any understanding of the different categories, teachers may not be able to fully utilize the use of computers in their lessons.

Furthermore, most activities that are planned and framed by the curriculum, and the teachers can influence the outcome of the practical use of the computers in education (Egbert, Paulus, and Nakamichi, 2002). Computers like other teaching tools would not promise to bring any benefit to students unless the practical use of computer in a particular context is explored in detail and implemented accordingly (Kern and Warschauer, 2000). In addition, Warschauer (2000) discovered in his study that the activities in the language classroom were found successful when students understood the purpose of doing them and when they found the activities were culturally and socially relevant. The type of activities and how they are constructed in the classroom is found as one of the important factors that contribute to the success of utilizing the computer-based activity in the classroom. The teachers, on the other hand, are one of the resources to manipulate and to make the computer-based learning environment work and succeed. Although many are pointing on the teachers for the responsibility to make it works (Mooij and Smeets, 2001; Smeets et al., 1999), however there are other factors, such as administrative, capital, space and others that may influence and contribute to the computer-based learning environment.

In terms of language instruction, the uses of computers have a great influence in education, especially in teaching the second language. Computer-supported learning environment is predicted to be one of the ways to give students an authentic learning environment and this condition helps students to learn English better than the daily classroom context (Egbert and Jessup, 1996). The change of the education system direction that now focuses on the social context and no longer learning in isolation opens a wider perspective to implement computers in education.

ICT in the Malaysian Education System

The impact of globalization and the rapid growth of Information and Communication Technology (ICT) have brought an opportunity in the teaching sector to implement the use of computers in the classroom. In Malaysia, the importance of ICT in the education system has been realized as one way to achieve the 2001-2010 Education Development Plan. The aim of the Ministry of Education (MoE) to implement ICT in education is to educate students to become computer literate citizens, and to position ICT as a teaching and learning tool, and to increase the productivity, efficiency and effectiveness of the management system (Malaysia, 2000). The importance of ICT was stressed by the former Prime Minister, Tun Dr Mahathir Mohamad in 1991, that for the country to be developed it is important for citizens to be technologically informed. Therefore, the government has facilitated the integration of computers in school education (primary and secondary) in order to improve the usefulness of the education received by the students on a personal and a national level. The Ministry has invested a large amount of money to ensure the success of technology use in the classroom. Yet the question remains as to whether schools, teachers and students are ready for the changes.

The Federal Inspectorate Report (1998, cited in Rahman, 2000) reports that whilst computer facilities in schools are sufficient, computer usage in education remains low. Teachers are not keen to use computers in their lessons, and now with the implementation of the new school concept (the Smart School), it is a challenge for schools and teachers to incorporate computer use in their lessons and meanwhile to keep up with the syllabus and have students perform well in the examinations.

The realization of computers in education is not new. The development of computers in education is reported in the Pembangunan Pendidikan 2001-2010 (Kementerian Pendidikan Malaysia, 2001). The earliest used of ICT in schools was in the early 1990's. The implementation of ICT in schools was carried out in stages in selected schools. By 1996, more schools were supplies with computers and with Local Area Network (LAN). By 2000, 2418 schools were supplied with computers, and each computer laboratory had LAN and Internet connections for teaching and learning. Teachers were given trainings for teaching and learning using computers. Another major project implemented by MoE is related to computer use in education in the Malaysian Smart School project.

Smart School is a new school concept in Malaysia. The school was first implemented in 1999. The aim is to give students skills, knowledge and a background technology use and application (Ministry of Education Malaysia, 1997). The Smart School curriculum attempts to provide learning and teaching approaches suitable for students' academic levels by integrating different strategies into teaching and learning practices. The computer system used in the Smart School is known as the Smart School Management System (SSMS). Its purpose is to manage resources and processes required to support the teaching and learning functions of the school. The system is divided into nine primary components, and there are two main components in SSMS that are related to teaching and learning. These are Educational Resources and External Resources. For the purpose of Educational Resources, learning software from the MoE were installed in the SSMS for

students to use and monitor by the teacher. As for the External Resources, students used the system to search information externally.

There are, however, many factors that teachers need to address when implementing new approaches to teaching and learning. One of these factors that was found and being stressed in Malaysia is the teachers' awareness. A study done by Jusoh (2000) found that Malaysian teachers were aware of the advantages of computers use in the classroom for teaching and learning. The teachers also claimed that students lacking computer skills exhibited less concentration in their learning and some teachers indicated that the students' work using computers was not up to standard. Therefore, it is important for teachers to be aware of learning potential that students may gain during doing activities using computers.

Another study done by Kong Siew (1997, cited in Rahman, 2000) identified three key factors that hold teachers back form integrating computers into their classes. She surveyed primary school teachers and listed the factors that inhibited teachers' use of computers in the classroom. The three key factors preventing computer use in the classroom are (Kong Siew, 1997, in Rahman, 2000: 536):

1. There are limited time for the teachers to incorporate computers in the teaching and learning.
2. There are very limited computers in the schools
3. Teachers have limited computer knowledge or skills to integrate the computer in their lessons.

Teachers in general may have positive perceptions of integrating computers in the classroom, the use of this technology is not widely ventured in Malaysia. Under the right circumstances computers can become a helpful and well-functioning instructional tool. However, all parties especially the education organization as a whole, need to take part in significant changes for the effective use of computers to be realized.

English Language Teaching in Malaysia

The teaching of English is aimed at more the use of language in a situation and not teaching language skills separately, such as engaging in oracy and literacy practice while engaging conversation and discussion. The topics for each lesson are taken from various areas, such as form the discipline of science or from current issues. As for schools with computer facilities, the uses of computers in the classroom have been incorporated into the curriculum to enable the use of computers for the teaching and learning of English.

The integration of computers in Smart School focused on four selected subjects and English language is one of the four subjects. Recently, the teaching and learning of English has been an educational issue because of the drop in the quality of students' English language in national examinations and the lack of proficiency among students generally. One of the ways to encourage students to learn English is to change the teaching approach and one way is by using computer as tools in the classroom. The Ministry of Education in Malaysia hopes, as it was stated in the curricular guideline, that

by making ESL the focus of computer integrated lessons that the level of English proficiency among students will increase as it is an alternative to the traditional way of learning. However, despite the addition of computers to the classroom, students may not get the full benefits of computer use unless suitable activities related to computers are developed and used. Even if the students are interested in undertaking activities involving computers, these activities may not be effective for learning language and the learning outcomes may be no different from those traditional methods unless the teachers can identify activities that involve students' use of computers in a useful way.

The Study

The purpose of conducting this study was to investigate and understand how computers were integrated in the classroom by looking at the types of activity carried out by teachers and students. It is important to know how the teachers integrate computer use into class when the teaching is restricted to the syllabus. In order to understand the computer-based learning environment better, the teachers' roles in constructing the language activities and how English language were used by students in the classroom were investigated in this study.

Methodology

The data were collected using classroom observations and interviews. The two methods were used for the purpose of understanding how teachers and students use computers in the class as teaching and learning tools. In order to get more information, the study used other data collected such as written documents and students' learning diary as secondary data to support the primary data. The data were collected for one semester. During the observations, which was done over a period of three months or one semester, a few lessons were audio and video recorded (Patton, 1990).

Classroom observations were done in the classroom and in the computer laboratory for English language lessons using computer-based activities and non-computer-based activities. When permission was given by the teachers involved in this study to video-recorded the lessons, the classroom activities were video recorded other wise the observations were jotted down in field notes. Information from the observation notes that was not clear was noted and later asked in the interview for clarification.

Two types of interviews were used. They were formal structured and semi-structured interview, and informal conversation-like interview. Teachers and students were interviewed in a formal and informal situation. The interview was done twice in a formal situation, first at the beginning of the study and the second interview was at the end of the study. The interview was done twice with the students. This was because students were not able to express themselves unless they were familiar with the interviewee. Most of the students in this study were intimidated during the first interview. They were shy and not comfortable with the researcher and they were reluctant to speak. In the second interview, the students were more relax because they had enough time to get familiar with the researcher, and they were able to give detail answers to the interview questions. A second

interview was necessary in order to clarify vague meanings or phrases from the students' first interviews.

The informal interviews were regarding the activities done in the classroom. The interviews took place in different places and time such as before, during or after the lessons. The purpose of having interviews was to get an immediate feedback from the teachers and the students regarding the language activities and to understand more of the activities done and to know their reactions regarding the activities. There were no structured questions asked but the questions were based on necessity, such as when further clarification was needed from the participants. All interviews recorded were later transcribed verbatim (Lacey and Luff, 2001).

The data were analyzed thematically and then they were put into categories and later triangulated with other data in order to understand the use of computers for teaching English. The English lessons were three times per week, which consisted of one single period (40 minutes) and two double periods (80 minutes per double period).

Participants

This study was done in one of the Malaysian secondary Smart School. The subject of this study consisted of Form 2 students in the English language class. They are mixed ethnic groups; Malays, Chinese and Indians. The students participated were 14 years old girls from two classes. They had the computer skills needed and were able to use the computer with minimal help from their teachers. They had computer skills such as the basic computer skills, PowerPoint, Word Processing and Internet search skills.

Teachers involved were two Form 2 teachers of English, and they had gone through a few computer trainings organized by the Ministry of Education and in-house training organized by the school. The training is designed to update the teachers with new technical and pedagogical knowledge for teaching and learning, as well and administrative work. The teachers had attended the following training courses, both externally and in-house:
- Computer skills – to learn basic use of the computer.
- PowerPoint presentation - for their teaching.
- Word processing – for their teaching.
- Filing system – for administrative work.
- "INTEL" training – for lesson planning, to produce modules for teaching and learning
- SSMS – to input the data on students, teachers and others in the system.

Data Analysis

The data were analyzed into sections in order to understand the activities that involved computers by categorizing the type of programs, and the type of activities used in the English class. Firstly, the data were analyzed by adopting the framework of investigating computers in language teaching and learning by Jarvis (2004). This framework as shown

in Diagram 1 helped to understand a broader use of computers in language teaching and learning in the ESL class as well as conceptualize the use of computers in the language classroom.
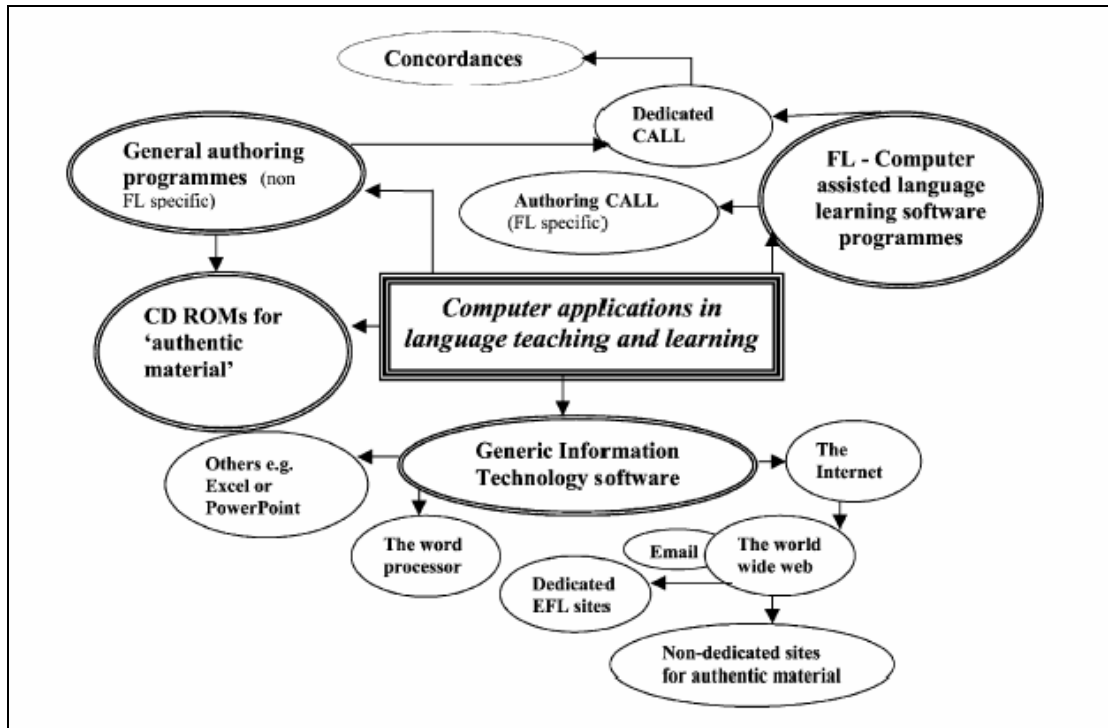

Diagram 1: A framework for investigating computers in language teaching and learning
(Jarvis, 2004: 177)

Secondly, the data were analysed using themes. Boyatzis (1998: 5) stated that "thematic analysis enables scholars, observers, or practitioner to use a wide variety of types of information in a systematic manner that increases their accuracy or sensitivity in understanding and interpreting observations about people, events, situations, and organizations". According to Boyatzis (1998: 11), there are four ways of developing a thematic analysis. These methods are sensing the theme, "doing it reliably, developing codes, and interpreting the information and themes in the context of a theory or conceptual framework". Thematic analysis involves reading and rereading the transcriptions until patterns or themes emerge. The themes are identified through a systematic and objective process that requires the researcher to carefully review, code and recode, compare, contrast and categorize themes that emerge from within the data (Hodge, Tannehill, and Kluge, 2003).

Discussion and Interpretation

In general, the data indicated that the activities using computers in the class were subjected to the demand of English syllabus. The teachers followed the attended learning outcome in the syllabus closely for the computer-based activities.

Computer-based Activities - Functions of Computers

The English language curriculum emphasizes a shift from students being totally dependent learners to being independent or autonomous learners. In the observations, it was noted that the activities carried out in the class involved three different classroom environments. These environment engaged students by using different teaching approaches, changing from a teacher-centered class environment to a student-centered class environment. The teachers varied the ways in which computers were used to complement the various activities. For the majority of time in the class students were involved in group work activities.

The types of activities in class were varied according to the teachers' planned learning outcomes. Activities carried out in the classes were closely related to desire learning outcomes taken directly form the curriculum and the syllabus. Most activities in the classes engaged students in using English interactively, as is reflected in the high proportion of group work undertaken. The curriculum emphasizes a shift from students being totally dependent learners to being independent or autonomous learners. This can be seen in the group discussions. The students were left to work independently in their small group in order to complete the task.

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Table 1: The functions of computers in the classroom

Subject	Place	Situation	Used	Functions
Teacher	Classroom	Traditional teacher-centered classroom	Computers were used for instructional purposes: Computers for data / information transmission.	Presentation tools
Students - Group work	Classroom	Student-centered classroom.	Information search using the Internet.	Exploratory devices
Students – Group work	Classroom	Student-centered classroom	The computer is used for the students' group presentation: Computers for data / information transmission	Presentation Tools
Students - Individual work	Computer laboratory	Student-centered classroom	The computer is used as a practice-learning device to achieve the three language skills; reading, writing and listening.	Tutorial aids
Group work	Computer laboratory	Student-centered classroom	The computers are used for word processing and creative layout of the tasks.	Presentation Tools

Computer used as tutorial aids

According to Means (1994: 452), the function of computers as tutorial aids is when computers are "used directly to teach students by providing information, demonstration, and practice opportunity". In this study, there were very limited used of computers as tutorial aids. The only program used by the students was installed in the SSMS (Smart School Management System). This program was provided by the Ministry of Education to support teaching and learning. The content in the English language software was based on the English syllabus and was geared towards the expected standard of the students' language proficiency, such as advanced, intermediate, and beginner. During the period in which students worked with this software, students worked individually with computers in the computer laboratory. In order for students to access the intended task for particular lessons, the students needed to log into the system using their allocated username and password. Completed exercises and students' results were recorded automatically by the database and saved in the students' files. Students were expected to complete the task during the class hour.

The computer-based activities done in the classroom using the SSMS gave students opportunity to use English language. For example in reading section, besides providing

students with a text to read, this section gave students opportunities to practise their listening, to learn new words, to learn making short notes, identify topic sentences and supporting sentences from the reading text.

Computer used as tools

The meaning of the function of computers as tools given by Means (1994) is the general uses of computer to accomplish task such as computers for the purpose of writing, data storage and data analysis. During the observations, we noted that computers were mostly used as tools to accomplish the writing activities, such as using word processing and PowerPoint presentation. Most of the writing activities were done as group work in class. Since computers in the classroom were very limited students had to share using the computers when doing computer-based activities. We found that students did not use the computer for the purpose of data storage and data analysis. Most of the time, students used computers for typing the end product of the tasks and PowerPoint to present the result of their group discussion.

Computer used as exploratory devices

Means (1994) classified the use of computers in this category as to encourage active students to explore and discover their learning. When looking at this category, we found there were not many computer-based activities done to explore the Internet, except for searching information for the purpose of collecting new information to complete tasks. The exploration of information on the Internet was done during group work. Students searched reading materials from the Internet for the purpose of discovering new information or knowledge related to their learning purposes. Information gathered from the Internet was used to prepare them for their group work presentation, such as using the information for guideline of their project work.

Computer used as means of communication

The function of computers as means of communication categorised by Means (1994) includes e-mail, computer conferences, computer-collaborative learning system (CCLS) system, and the Internet. In the observations done, computers were not used as means of communication. We have the opinion that the lack use of computers in doing such activities was not because of insufficient facilities, but because of factors that were related to time. One of the factors is the syllabus. Teachers are to follow the syllabus closely, which they needed to complete within a certain period of time. The teachers indicate several times in the interviews the importance of following the syllabus closely and finishing up the syllabus within a certain period of time. This commitment may hinder them to incorporate extra computer-based activities in the lessons. The importance of examinations was another factor that inhibited them to have extra English language computer-based activities. They followed the syllabus and the learning outcome planned for every week very closely.

Although one of the functions in SSMS program stated in the Flagship of SMART Schools (Ministry of Education Malaysia, 1997) is to connect teachers and students with outside world, the computers were not fully used for this purpose. One of the examples is using emails as a means to connect with people outside the school and as a way to communicate between teacher and students as well as teacher and parents. The study found that the email accounts were not fully used by both teachers and students. There are many reasons for the limited use of emails as a way of communication. The reasons are as below:

- One of the reasons is because the students were not awareness of their personal email accounts provided by the school. Some students indicated that they were not aware of the existing of their personal e-mail account.
- Secondly, the students had difficulties with retrieving the mail from home, as some of them had no Internet line at home. They had to go to the cyber café or the school to read their mails.
- Thirdly, the email system was not functioning very well, such as emails sent did not reach the recipient, or the email system rejected attachments. Announcements sent by the teachers sometimes did not reach the students, and the same problem was faced by the students too when their homework attachments did not reach the teachers.
- Fourthly, the server was always down or the server was busy that cause their emails to be rejected many times.

Teachers' Role in Constructing Language Opportunities in Computer-Based Learning Environment

The Malaysian English language syllabus is taking into account students' needs in holistic way. This is implemented by integrating different skills in a lesson. There are two components of skills. The first skills include component of learning skills that consists of the interpersonal skills, informational skills and aesthetic skills. The second skills are component of language skills which are grammar, phonology and vocabulary. Both groups of skills are embedded in the lessons. Thus, computers are used as tools for English language activities, either used in individual work or in group work activities. The teachers' role, on the other hand, is to construct a teaching and learning environment that could fulfill the requirement of the syllabus and open learning opportunities for the students to use the language.

The teachers in this study believed that students learn L2 through interactive use of the language. Because of this belief the teachers created an environment / activities that opened opportunities for students to optimize the use of English freely during English lessons. One of the regular activities is group discussion and using computers as a tool to initiate the discussion. Three lessons recorded during the English lessons indicated students used computers as a tool to complete their tasks. Most computer-based activities

conducted by the teachers focused on group discussion activities. The lessons and the activities were constructed derived from the objective of the syllabus.

Further in this section, we are evaluating the teachers' responses to several aspects of English language learning opportunities initiated by them during computer-based English language activities. Although using computers is considered as an approach to encourage students to use the English language but there are other teaching/learning ways that were used to encourage students to use the language. Two of the most outstanding ways used by the teachers are "Feedback" and "Peer Involvement".

Feedback

Giving feedback to students regarding the language students used during the interaction while doing English language activities gave students opportunity to learn and to use the language (Lochtman, 2002). Students are able to think and to understand the mistake they have made when the feedback is given to them immediately. However, teachers in this study regarded giving feedback or error corrections as an interruption to the flow of the activity and thus disturb the students' learning. One of the teachers believed that when there is any interruption the students' sense of alertness or the concentrations would be disturbed, and this might disturb the students' learning that is presume to take place during doing tasks. The teacher did not stress the grammar error corrections during the student presentations and the group discussions. Lack of feedback on grammar errors gave a chance for the students to use the language freely as they found that there was no interruption from the teacher. T1 said that, when not corrected, students' grammar errors during the oral activities can open an opportunity for the students to use the language in their own way; such as code-switching and speaking in different slang. T1 indicated that she was more interested to know if the students understood the content and could convey the right content during the presentation, rather than correcting the grammar during the presentation. She stressed that the learning happened when students involved actively in the activities. She believed that any interruption while the activity was in progress might distract the students learning focus. This was observed during the students' presentations, the group discussions and open discussions where there was no interruption from the teacher until the activity completed. She wanted her students to build-up their confident using the language. This is because when the students are confident they are be able to do the activity and at the end they are able to acquire the language unconsciously through the activities.

Peer involvement

This study found that peer involvement in the learning process to have a substantial effect on the students' level of motivation. Students from the same ethnic group, especially the Malay students, felt self-conscious to speak in English when they were talking among them. Some of them indicated that they did not like to hear negative remark from their friends in the same ethic group regarding their use of English.

> S8:   Today I heard another critic on me. Obviously, it was from the Malay girl who thinks I hate the Malays. They think I'm arrogant because I speak English …

This kind of feelings may hinder the students to speak in English effectively and actively. And this situation may demotivate the students to use English. Therefore, when putting the students in mixed ethnic groups, the opportunities for them use the language without feeling any self-conscious are greater. In addition, they are able to build up higher self-esteem that leads to a stronger self-confidence. One of the positive effects of having a mixed ethnic group in the class during the activities encouraged the students to assist each other and the mixed group functioned as a push factor that motivated them to communicate in English.

In addition, the students used all opportunities they had to communicate in English such as in group work discussions, teacher-students and student-student interactions. However, in building up the students' self-esteem and self-confidence, this study shows that the students applied a common learning practice, that is code-switching. In certain occasion students code-switched especially when they wanted to share their knowledge on the subject discussed but did not have enough vocabulary to express them.

Discussion and Recommendation

This study shows that the use of computers in school is highly dependent on the type of syllabus and the objective of the curriculum. The findings supported the findings of studies undertaken by Muiz-Herzig (2004) and Newby et al. (2000), that syllabus and examinations were the most important factors influencing the constructing of English language activities using computers in the classroom. The restrictions of the syllabus and the requirement of the examinations also affected the teachers' and students' attitudes towards the use of computers in the classroom. Although computers were used encourage students to participate actively in English and as tools to help students to accomplish the tasks given, computers were used very few times in the classroom.

The students and teachers used computers basically for the purpose of searching for reading materials and as a presentation tool in which they could be successfully done without the computers. This school was facilitated with a grade A computer system for the Smart School criteria, in which it was equipped with WAN and LAN system. It would be a waste if they were not used widely. The advanced computer system in this school could be used in a better way by studying the purpose of implementing the computers in the classroom. Computer-based activities should be integrated in the lessons by taking the students' needs into account, and not only strictly based on the syllabus and examinations. Creating a broader learning environment with computer, such as connecting the students with outside world, may give students a great prospect of using the language in authentic situation.

In a study done by Becker (2000), he argues for a more advanced and extensive use of computers in teaching and learning. Becker stressed that teachers should focus on multiple-contexts for learning activities instead of single contexts and that this is simpler to achieve by integrating computer use in the classroom. Yet, with examinations and syllabus completion as the main focus of teaching, Malaysian teachers may not be able to easily create multiple context learning activities using computers that would provide more English language learning opportunities for students.

Opportunity for students to use L2 can be increased if authentic computer based activities can be incorporated in the lesson. Involving the students in collaborative learning online, for example collaborating in a project in which the discussion is done via chat room, e-mail or messenger board, would give the students a good learning experience in an authentic situation. In this situation, students have the benefit to use English as a tool to communicate meaningfully with someone online(Yuan, 2003).

In addition, in order to assess the usefulness of a computer-based activity as a means of realizing the learning outcomes specified in the curriculum, the following guidelines are proposed for planning the computer-based activities into lesson:

1. Identify the key learning objective of the lessons
2. Preparation – how much time is needed for explanation to ensure comprehension
3. How much time is required to complete the proposed task
4. The range of proficiencies in the target language present in the class
5. The facilities required to complete the task – Internet line, computer software
6. Can all level of student benefit from undertaking the task? (does the task contain sufficient challenges for all levels of student proficiency?)

Conclusion

In conclusion, this study shows that there are benefits and great opportunities for students to use L2 in computer-based learning environment. However, the learning benefits the students received from using computer-based activities are depending on many related factors that need to be studied. With good computers facilities in schools may not promise a good use of computers in the classroom (Muir-Herzig, 2004) unless the objective of having computers in the school is studied and implemented. Teachers need to be guided on how to integrate computer use into their lessons and instructed regarding what learning software to use to achieve the best results. A lack of useful guidelines will slow the process of successfully promoting computer use in schools.

Computer use in ESL teaching and learning can no longer be associated with individual learning activities undertaken in an isolated environment. Computer use can support and augment the learning and use of English by promoting the use of language in an authentic environment. However, integrating computer use into lessons focused on the extant curriculum requires the development and application of new approaches to teaching. Incorporating computer-based activities, such as electronic messenger boards, bulletin boards and on-line chat, into lessons that maintain the learning objectives enshrined in the

curriculum requires teachers to think in creative ways about fulfilling students learning needs, and a re-orientation of currently accepted and practiced teaching methodologies.

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