

ICT Tools Patterns of Use among Malaysian ESL Undergraduates

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ABSTRACT

The proposal to undertake major reforms in universities to cater to the need of the so-called “digital natives” has revealed the belief that there is a homogenous generation of university students highly skilled in the usage of technology is untrue. Instead these students seem more inclined to use technology for social rather than academic purposes. In Malaysia, the use of technology in learning English as Second Language (ESL) has generally been well received. However the characteristics of the “digital natives” have not been clearly defined until recently when Thang et al. (2014) undertook a study to investigate patterns of ICT use of students in a public university in Malaysia. Their findings are somewhat similar to those of other countries but they differ in that they found students show a preference for the teacher-centred approach. The current study extends on this by undertaking a study involving four different types of public universities. A questionnaire designed by the research team was used to collect data which were analysed quantitatively using SPSS. The findings revealed that students from all four universities generally felt that technology is useful for learning ESL. However, their usage is more for recreation than for learning ESL. It further revealed that the teachers used technology only moderately, but the students still felt that their teachers are competent in the use of technology. This shows their unwillingness to criticize their teachers openly. However, there were some variations which suggest that students from older research universities are more self-reliant and students from newer universities are more receptive to the use of technology for learning ESL.

Keywords: digital natives; technology and learning; perceptions of technology use; teacher-centeredness; ICT needs and use

INTRODUCTION

At the end of the 20th century, it was proposed that there was “an urgent need to recognize and adapt to the characteristics of a new generation of students” (Smith, 2012, p. 2) labelled as ‘digital natives’. Various other terms like ‘Net generation’, ‘Y-generation’ and ‘Millennials’, have been used to refer to them and characteristics ascribed to them include being tech-savvy, multi-taskers, team-oriented and collaborative (Smith, 2012). Proponents of the notion of “digital natives” further contend that their early exposure to technologies makes them think and act differently compared to the pre-ICT generation or the “digital immigrants” (Prensky, 2001, p. 3). They argue that teachers and educational institutions need to transform their methods of delivery and knowledge content in order to accommodate the different needs and ability of this new generation of learners. However, recent studies undertaken on the “digital natives have revealed that they are not a homogenous group in term of level of access and usage of technology. There was also evidence of a tendency to use technology for social purposes rather than academic purposes (Hew, 2011; Madge et al., 2009; Selwyn, 2009). This clearly suggests that the concept of “digital natives” warrants further investigation.

Studies on the use of technology in learning English have generally revealed positive influence of technology on learning (Afendi, Mohamed Amin & Haslinda, 2012; Thang & Bidmeshki, 2010; Thang et al., 2014; Thang, Najihah & Norizan, 2012; Nafiseh & Supyan, 2014). However, no Malaysian studies have actually attempted to identify the key characteristics of Malaysian “digital natives” in terms of needs and patterns of technology use in learning English until Thang et al. (2014) explored the characteristics of “digital natives” in one public university in Malaysia, i.e. Universiti Kebangsaan Malaysia (UKM). Their findings are not very different from studies undertaken in other countries. Generally they found students using a limited range of technology and this usage was more for social purposes than for academic purposes. Thang et al (2014) findings differed from the other contexts in that they found these students to show a preference for the teacher-centred approach, despite showing very positive responses towards the use of technology for language teaching and learning. The current study extends on this by undertaking a nationwide study to find out whether the findings from UKM, a premier research university located the heart of the Klang valley, is similar to other geographically different and diverse public universities located in various parts of Malaysia – Universiti Sains Malaysia (USM), the only Malaysian APEX-rated university located in the northern region of Peninsular Malaysia; Universiti Malaysia Sabah (UMS), a comprehensive university located across the South China Sea in East Malaysia; and Universiti Malaysia Kelantan (UMK), a focused university located in the East coast of Peninsular Malaysia. The focus and strength of each of these universities are different, thereby lending scope to this study (more information regarding types of universities in Malaysia will be provided later in Table 1). Before describing the Malaysian setting in greater length, the next section provides a brief overview on students’ perceptions of technology use in various parts of the world in order to set the scene for this study.

STUDENTS’ PERCEPTIONS OF TECHNOLOGY USE IN INTERNATIONAL SETTING

Some researchers are beginning to be skeptical about the argument that digital natives in generally have strong affinity towards the use of technologies in their learning as empirical studies from various parts of the world have found that students varied considerably in terms of access, usage and perceptions of technologies. Kennedy et al. (2008) and Thinyane’s (2010) studies for instance, found considerable variations in the patterns of technology access

among their respondents. Among the 11 technologies listed in Kennedy et al.'s (2008) study, the majority of the Australian respondents had unrestricted access to seven types of technology (mobile phones, desktop computers, digital cameras, memory sticks, MP3 players, laptop computers and broadband Internet). However, many did not have access to PDAs and wireless Internet. Thinyane (2010), on the other hand discovered that the majority of her South African respondents had unrestricted access to only four types of technology (mobile phones, memory sticks, Bluetooth modems and desktop computers) and most respondents did not have access to dedicated video game consoles, web cams and PDAs.

Other researchers also found diversity in the patterns of technology use. Corrin, Lockyer and Bennett (2010) who examined Australia's university students' access and usage of technology in the contexts of everyday life and academic study, found that the students used a wide range of technologies and used them more frequently in everyday life than in the academic context. Their results further revealed diversity in students' technological ability and access to the technologies. In USA, Thompson (2013) observed that the range of technologies her respondents used was fairly limited. Most of the university freshmen were shown to frequently use only two out of the eight groups of digital technologies examined in her study. These two groups were Rapid Communication Technology users (such as using cell phones to send text messages) and Web Resources users (that includes watching videos online). Majority of them did not or rarely use technologies with educational potential. Jones et al.'s (2010) found active use of technologies among a group of Net-generation age students but they were not able to identify any pattern of homogeneity in usage. Therefore, it would appear that there is "a complex picture of minorities" (Jones, 2010, p. 731) who would frequently engage in a wide range of technology uses but did not display the kind of participation and generational homogeneity as described by the advocates of the concept of digital natives.

In addition to that, some studies revealed that their subjects differed from what is expected of digital natives in term of perceptions of the use of technology in learning in the classroom. Kvavik and Caruso's (2005), and Margaryan, Littlejohn and Vojt (2011) found that their subjects preferred traditional teacher-centred approach to learning to the more autonomous approach to learning involving the use of technologies. The studies reviewed provide empirical evidence to refute the existence of a homogenous generation of students called the digital natives who all have strong affinity towards the use of technologies in learning. In the Malaysian context it is also generally believed that the current generation of undergraduates is ICT savvy and hence, desires the use of technologies in teaching and learning and this has led to initiatives from the Government to promote the use of technologies in schools and universities. Thus, it is essential to find out to what extent this belief is true so that any future initiatives undertaken are firmly established on empirical evidence. This motive serves to be the driving force behind this research study. More information regarding the Malaysian scenario is given in the next section.

THE MALAYSIAN SCENE

The use of Information and Communications Technology (ICT) is central to Malaysia's vision of attaining a developed nation status by the year 2020. In view of this, the government has called upon educational institutions to equip students with relevant ICT skills and knowledge which would ensure quality human capital. The government's call for the diffusion of technology in the education system is not only limited to schools but also institutions of higher learning. In charting the direction of Malaysian higher education for the future, the Ministry of Education for example, has identified e-learning as one of the Critical Agenda Projects (CAPs) in the development of quality human and intellectual capital

(Mohamed Amin, 2012). The belief that university students are ‘digital natives’ (Prensky, 2001) may have influenced decisions to promote ICT-based instructional and learning approaches, in many Malaysian universities. A study by Mohamed Amin (2012) on the implementation on e-learning in 26 institutions of higher learning (IHL) revealed that all 26 institutions had a learning management system. It was reported as being widely used for communications, course delivery and production, and content development and administration. In most cases, it was also supported by face-to-face learning. Other studies also revealed the use of web-based technologies to gather materials for class presentations (Chong, Sharaf & Jacob, 2005; Yasmin et al., 2008 as cited in Siti Rafidah et al., 2009) as well as for content sharing and management and development sharing (Mohamed Amin Embi, 2012).

However, findings also revealed conflicting perceptions and practice among teachers and students with regard to the use of ICT for teaching and learning. Kaur and Abas (2004), for example, found that university students indicated readiness and commitment for e-learning, however, their teachers found them not committed in their use of online lectures and tutorials for their studies. Mohamed Amin’s study (2012) revealed possible reasons for this lack of commitment. He found that students were frustrated in their usage of the e-learning portals due to lecturers’ slow online feedback and uninteresting content. Afendi, Mohamed Amin and Haslinda (2012), and Thang et al. (2014) further disclosed that online activities that Malaysian university students embarked on were limited to online activities such as social networking and blogging. Their findings are in line with those in the West which showed that technologies seem to be used more for interacting and communicating with peers than for formal learning purposes (Corrin, Lockyer & Bennett, 2010; Thompson, 2013).

THE STUDY

This study intends to extend the study of Thang et al. (2014), which used a questionnaire survey to explore the patterns and perceptions of use of technology in learning English as a Second Language (ESL) by undergraduates of Universiti Kebangsaan Malaysia, a public university in Malaysia. This study used the same method of investigation on four Malaysian public universities in an attempt to find patterns that will allow the findings to be generalised. The universities involved are Universiti Kebangsaan Malaysia (UKM), Universiti Sains Malaysia (USM), Universiti Malaysia Sabah (UMS) and Universiti Malaysia Kelantan (UMK). Specifically, the study seeks to find answers to the following research questions:

- i. What are the patterns of use and perceptions of usefulness of ICT in learning ESL of the students from each university?
- ii. What are their perceptions of their teachers’ use of technology in teaching ESL?
- iii. What are their patterns of use of technology for recreation?
- iv. Are there any differences in (i), (ii) and (iii) across universities?

CONTEXT OF STUDY

UKM and USM, are research universities, UMS is a comprehensive university and UMK is relatively new focused university. The public universities in Malaysia according to categories are given in Table 1.

TABLE 1. Categories of Public Institutes of Higher Education in Malaysia

University Category	Characteristics
Research Universities	▪ Fields of study focusing on research
i. Universiti Malaya	▪ Competitive entry requirements
ii. Universiti Sains Malaysia	▪ Quality lecturers

iii.	Universiti Kebangsaan Malaysia	▪ A ratio of 50:50 of undergraduates to post graduates
iv.	Universiti Putra Malaysia	
v.	Universiti Teknologi Malaysia	
Comprehensive Universities		▪ Various areas of study ▪ Competitive intake ▪ Quality lecturers ▪ A ratio of 70:30 for undergraduates to post-graduates
i.	Universiti Teknologi MARA	
ii.	Universiti Islam Antarabangsa Malaysia	
iii.	Universiti Malaysia Sabah	
iv.	Universiti Malaysia Sarawak	
Focused Universities		
i.	Universiti Utara Malaysia	▪ A focused field of study ▪ A competitive intake ▪ Quality lecturers ▪ A ratio of 70:30 for undergraduates and post graduates
ii.	Universiti Pendidikan Sultan Idris	
iii.	Universiti Tun Hussein Onn Malaysia	
iv.	Universiti Teknikal Malaysia Melaka	
v.	Universiti Malaysia Perlis	
vi.	Universiti Malaysia Terengganu	
vii.	Universiti Malaysia Pahang	
viii.	Universiti Sains Islam Malaysia	
ix.	Universiti Darul Iman Malaysia	
x.	Universiti Malaysia Kelantan	
xi.	Universiti Pertahanan Nasional Malaysia	

Source: Adapted from Ministry of Higher Education (2007, p. 91; 2011, p. 26)

In Malaysia, it is generally accepted that students who have high proficiency in English will find it easier to find a job. In view of this, all university students in public universities in Malaysia are required to take English courses to help them attain the level of English that are deemed appropriate for the job market. The courses they have to take depend on their English proficiency level on entering the university concerned. Students with low scores in the Malaysian University English Test (MUET), i.e. those with bands 1 and 2, are generally required to take foundation or preparatory courses whereas students with higher proficiency (Bands 3 to 5) usually take only higher level courses. Generally a blended approach is used to teach the students in each university. UKM, USM and UMS have their own learning management systems whereas UMK, a new university, has to depend on free learning management systems such as Moodle. However, all four universities claimed that their teachers are aware of the importance of technologies in enhancing the learning of English and hence use them extensively in their teaching of ESL. The present study is interested to shed more light in this matter too.

METHODS

RESEARCH DESIGN AND INSTRUMENT

The students were chosen using the purposive sampling technique. This technique allowed the researchers to focus on students who majored in three academic disciplines: Sciences, Social Sciences, and Economics. The students were required to complete a questionnaire designed by the research team. The questionnaire was based on the experiences of the researchers in the project as well as ideas drawn from a variety of questionnaires in the field (e.g. Margaryan, Littlejohn & Vojt, 2011; Thinyane, 2010). The questionnaire which is a descriptive survey with a non-experimental design was used to measure the characteristics of the sample at a certain point in time (Fraenkel, Wallen & Hyun, 2012). It comprises two sections: Section 1 gathers information on the students' personal background through a demographic profile; Section 2, which has two parts, collects information on students' patterns of computer use. The first part elicits information on students' ownership and usage of technological tools when learning ESL as well as using the tools for recreational purposes.

The Likert scale, with 1 for ‘never’, 2 for ‘seldom’, 3 for ‘sometimes’, and 4 for ‘frequently’, is used to score the items. The second part investigates students’ opinions on the use of technologies to learning ESL. The Likert scale designed for this has 1 for ‘strongly disagree’, 2 for ‘disagree’, 3 for ‘agree’, and 4 for ‘strongly agree’. To avoid failure to comprehend and respond appropriately due to a lack of proficiency in English, the questionnaire was translated into Bahasa Melayu (the Malay Language).

Administration of the questionnaire took place at the beginning of the semester during one of the English classes and collected the following day. Students who failed to return their questionnaires on time were required to submit them personally to their course instructors within the following week.

SAMPLE POPULATION

The respondents in this study are students from four public universities: UKM, USM, UMS and UMK. The distribution of respondents according to universities is displayed in Table 2.

TABLE 2. Distribution of respondents according to universities

University	Number of respondents	%
UKM	303	25.4
USM	277	23.2
UMS	340	28.5
UMK	273	22.9
Total	1193	100

As mentioned previously, all respondents were drawn from three academic disciplines: Sciences, Social Sciences, and Economics. However, for this study, disciplines were not taken as a variable. The distribution of respondents according to their disciplines is displayed in Table 3. It can be seen that the students comprise a good representation across faculties.

TABLE 3. Distribution of respondents according to academic disciplines

Discipline	Number of respondents	%
Sciences	433	36.3
Social Sciences	323	27.1
Economics	437	36.6
Total	1193	100

Additionally, the respondents comprised both low and high English proficient students. MUET (Malaysian University English Test) scores were used to measure their English proficiency. MUET bands range from 1 to 6 with 1 being the lowest and 6 the highest. As shown in Table 4, there is a fair distribution of students from both proficiency levels.

TABLE 4. Distribution of respondents according to English proficiency

Proficiency	Number of respondents	%
*High	628	52.6
*Low	565	47.4
Total	1193	100

* MUET bands 3 and 4

** MUET bands 1 and 2

RESULTS

The data obtained from the questionnaire survey were analysed using Statistical Package for Social Sciences (SPSS) version 19. The statistical procedures carried out were frequency counts, item analyses, reliability analyses and ANOVA.

OWNERSHIP AND USAGE OF TOOLS

Based on the frequency analysis, almost all the respondents owned a laptop (98.8%). Other tools that a majority of them possessed were camera phones (96%), and music phone (94.1%). The tools that they least possessed were games console (23.3%), handheld computers (20.9%), and portable games console (19.3%). To identify the most and least used tools, item analysis was conducted. The analysis revealed that the three most used tools include mobile phones, laptops and camera phones while the least used tools are handheld computers, games consoles and portable games consoles.

USE OF TOOLS IN THE LEARNING OF ENGLISH

Eleven tools that are commonly used in English language teaching and learning were examined. They are emails, blogs, Facebook, Skype, Twitter, discussion lists or online forums, learning management systems, digital videos, online submission assessments, particular subject websites and online self-tests, quizzes or practices.

Table 5 indicates the highest mean scores of tools used in learning English by students in each of the four universities. The most commonly used tools across universities were Facebook, emails and online self-tests/quizzes/practices. The scores for Facebook, emails and online self-tests, quizzes or practices hover between 2.5 to 3 which suggest that these tools were “seldom to sometimes” used for learning English.. However, the mean scores of the other tools are only near to 2 demonstrating that these tools including the learning management system (e-learning portal) were “seldom” used by students in learning English.

TABLE 5. Top 5 tools used in English language learning

No.	Items	UKM	UMS	USM	UMK
1	Facebook	2.94	3.10	3.06	2.91
2	Email	2.82	3.17	2.88	2.34
3	Online self-tests/ quizzes/ practices	2.65	2.43	2.34	2.36
4	Blogging	2.22			
5	Online assessment submission	2.13			
6	Digital videos in lectures		2.46		2.23
7	A subject website		2.36	2.10	
8	A learning management system			2.08	2.18

*Rating scale: 1=never; 2=seldom; 3=sometimes; 4=frequently

Table 6 presents the lowest mean scores of tools used in learning English by students in each of the four universities. Among the tools used in all four universities, the online discussion forum, Skype and Twitter were less commonly used by students. Even blogging was seldom used. It is also apparent that online assessment submission and a subject website created for students were infrequently utilised by students.

TABLE 6. Bottom 5 tools used in English language learning

No.	Items	UKM	UMS	USM	UMK
1	Digital videos in lectures	2.08			
2	A subject website	1.99			
3	Online discussion forum	1.89	2.17	1.81	1.69
4	Skype	1.69	1.81	1.95	1.53
5	Twitter	1.50	1.75	1.58	1.57
6	A learning management system		2.22		
7	Blogging		1.83	1.78	1.68
8	Online assessment submission			2.02	1.93

USE OF TOOLS IN TEACHING OF ENGLISH

Tables 7 and 8 show the technological tools that have the highest mean scores for each university. Three main tools seemed to be more popular than others – e-mails, online self-tests/Quizzes/Practice and learning management system. However, the mean scores are approaching or below 2.5. This means that these tools were only “sometimes” to “seldom” used by their ESL teachers. Another technological tool that was also moderately used in all the universities (except UKM) is digital videos in lectures. As shown in the Table 5, the mean scores for use of all tools in the bottom five list are all approaching or below 2.0, which implies the other tools were rarely used by their ESL teachers.

TABLE 7. Top 5 tools used in English language teaching

No.	Items	UKM	UMS	USM	UMK
1	Online self-tests/ quizzes/ practices	2.61	2.29	2.20	2.43
2	Email	2.59	2.45	2.50	2.21
3	A learning management system	2.28	2.37	2.10	2.66
4	Online assessment submission	2.25			
5	Blogging	2.18			
6	Digital videos in lectures		2.35	2.10	2.58
7	Facebook		2.23	2.05	
8	A subject website				2.19

TABLE 8. Bottom 5 tools used in English language teaching

No.	Items	UKM	UMS	USM	UMK
1	Facebook	2.09			1.98
2	A subject website	2.03	2.10	1.93	
3	Online discussion forum	1.93	2.09	1.74	1.75
4	Twitter	1.45	1.42	1.44	1.49
5	Skype	1.44	1.43	1.51	1.39
6	Blogging		1.56	1.53	1.54

OPINIONS ON WHICH TECHNOLOGY TO USE IN TEACHING AND LEARNING OF ENGLISH

Tables 9 and 10 below show the technologies that were preferred by the students in learning English. Emails were most favored across universities followed by Facebook which was the choice of students from all universities except UMK. Some interesting features were revealed through a comparison across universities based on the status and types of universities. It was

observed that for research universities such as UKM and USM, the top three types of technologies preferred were emails, Facebook, and online self-tests/quizzes/practice. For UMS, which is a comprehensive university, the top three preferred technologies were emails, digital videos in lectures, and learning management system. In the case of UMK, which is a focused university, the top three technologies preferred were digital videos, email, and learning management system.

TABLE 9. Top 5 opinions on which technology should be used in teaching and learning of English

No.	Items	UKM	UMS	USM	UMK
1	Email	3.32	3.22	3.15	3.09
2	Facebook	3.11	2.97	2.95	
3	Online self-tests/ quizzes/ practices	3.02			2.94
4	Blogging	2.83			
5	Online assessment submission	2.81			
6	Digital videos in lectures		3.06	2.83	3.12
7	A learning management system		3.00	2.79	3.07
8	Online discussion forum		2.96		
9	A subject website			2.71	2.88

TABLE 10. Bottom 5 opinions on which technology should be used in teaching and learning of English

No.	Items	UKM	UMS	USM	UMK
1	Digital videos in lectures	2.78			
2	A subject website	2.67	2.79		
3	Online discussion forum	2.58		2.57	2.68
4	Skype	2.12	2.14	2.25	2.21
5	Twitter	2.12	2.14	2.08	2.23
6	Online assessment submission		2.83	2.55	2.69
7	Blogging		2.41	2.41	2.51

Interestingly among the list of technological tools with the lowest means scores, there are a few tools that have mean scores approaching 3.0 (i.e. above 2.5) which suggest that the students believed that these tools should also be used for teaching and learning of English too. The items are digital videos, subject website, online assessment submission, and online discussion forums. The findings clearly suggest that the students generally would like to see the incorporation of more technology in the teaching and learning of English.

THE EXTENT TO WHICH STUDENTS USE TECHNOLOGY FOR RECREATION

Tables 11 and 12 below illustrate the technologies used by students for recreation purposes. It is apparent that the students regardless of their universities, appear to have similar tendencies. All of them used Facebook most frequently, followed by emails and blogs. It could be that these tools are the most popular social media platforms used by all, including students. The regular use of these tools indicates the students used them to connect and communicate with others on a daily basis for social reasons and entertainment.

TABLE 11. Top 5 tools used for recreation

No.	Items	UKM	UMS	USM	UMK
1	Facebook	3.46	3.61	3.43	3.27
2	Email	2.94	2.84	3.00	2.73
3	Blogging	2.65	2.45	2.59	2.32
4	Skype	2.31	2.25	2.52	2.08
5	Online self-tests/ quizzes/ practices	2.22		2.27	2.13
6	Digital videos in lectures		2.29		

TABLE 12. Bottom 5 tools used for recreation

No.	Items	UKM	UMS	USM	UMK
1	Online assessment submission	2.16	2.15	2.08	1.93
2	A subject website	2.11	2.21		2.05
3	Twitter	2.09	1.96	2.18	2.03
4	Online discussion forum	2.01		2.10	1.91
5	A learning management system	1.97	1.95	2.06	1.98
6	Online self-tests/ quizzes/ practices		2.06		
7	Digital videos in lectures			2.25	

However, the mean scores of all other items are below 2.5. It is probable that students could have viewed the other tools such as ‘a subject website’, ‘online discussion forum’ and a learning management system’ as those related to teaching and learning specifically; hence their underutilization as recreation tools. Based on the findings, even Skype was only occasionally used for recreation purposes.

OPINIONS ON THE USE OF TECHNOLOGY IN THE LEARNING OF ENGLISH

Items in this section are categorised into three discussion themes: (1) technology makes learning easier, (2) affective effects of technology, and (3) opinion of teachers’ use of technology.

Item analysis was conducted on all items and revealed that the top-ranking items are all associated with Category 1. The mean scores of the five highest ranking items (as shown in Table 13) are all above 3.00. This ranking suggests that students from all four universities considered technology as advantageous to their learning as it makes learning easier for them.

TABLE 13. Top 5 opinions on the use of technology for learning

No.	Items	UKM	Rank	USM	Rank	UMS	Rank	UMK	Rank
1	Using technology enables me to learn many new things. (Category 1)	3.58	1	3.50	3	3.65	1	3.67	1
2	Technology has made learning English easier today. (Category 1)	3.50	2	3.52	1	3.54	2	3.59	2
3	It is easier to search for suitable English materials online than looking for suitable printed texts. (Category 1)	3.46	3	3.51	2	3.53	3	3.56	3
4	Students nowadays need technology to help them learn English. (Category 1)	3.43	4	3.39	4			3.55	4
5	I can get my assignments done faster using online services. (Category 1)	3.36	5	3.36	5	3.31	5	3.39	5
6	I am more motivated to learn English when technology is used. (Category 1)					3.31	4		

Rating scale: 1=strongly disagree; 2= disagree; 3=agree; 4= strongly agree

Table 14 shows the mean scores of the bottom-five items. As can be seen, all the items in the list are negative items. Five items (1, 2, 4, 6 and 8) are on the affective effects of technology. The low mean scores (of below 2.5) indicate that the students across universities believed that the use of technology would not affect them adversely. In addition, the low mean scores of the three items (3, 5 and 7) on their opinion of teachers’ use of technology suggest that they disagreed that their teachers were not competent in using technology.

TABLE 14. Bottom 5 opinions on the use of technology for learning English

No.	Items	UKM	Rank	USM	Rank	UMS	Rank	UMK	Rank
1	Web 2.0 devices have no place in the English classroom. (Category 2)	2.20	1						
2	I am not comfortable using the latest digital tools for language learning. (Category 2)	2.04	2	2.15	2	1.99	4	1.91	2
3	I think my English teachers use technology because they have to and not because they like to. (Category 3)	1.92	3	2.15	3	2.14	2	1.70	4
4	The use of digital technologies in learning English is not worth the time and effort. (Category 2)	1.88	4	2.11	4	1.79	5	1.76	3
5	My English teacher is not competent in the use of technology. (Category 3)	1.81	5	2.06	5			1.45	5
6	The use of digital technologies in the English course is unfair to the less IT-savvy students. (Category 2)			2.32	1				
7	Students do not expect their English teachers to use any Web 2.0 devices for teaching. (Category 3)					2.19	1		
8	The use of technology in learning English has increased my workload. (Category 2)					2.02	3	1.98	1

To determine the reliability and validity of the findings on the use of technology in the learning of English derived from the descriptive statistics, inferential statistical analysis was carried out. However, before proceeding further, the internal consistency of the items in each category needs to be determined. To do so, Cronbach's Alpha reliability coefficient was used. The internal consistency of items in Category 1 (technology makes learning easier) is 0.718, for Category 2 (affective effects of technology), 0.768 and for Category 3 (opinions on teachers' use of technology), 0.561. Since the internal consistency of Categories 1 and 2 was above 0.7, the reliability of the classification was therefore confirmed. However, the internal consistency of Category 3 was much lower, and thus the reliability of its classification was lower than expected, hence the findings for this category were not compared.

Table 15 displays the ANOVA results that compare the students' perceptions of technology use in learning English across the four universities.

TABLE 15. ANOVA results comparing students' perceptions of technology use

Category	University	Mean	Std. deviation	df	F	Sig.
1	UKM	3.2829	.40668	3	3.723	.011
	UMS	3.2446	.35241			
	USM	3.2736	.39694			
	UMK	3.3453	.34321			
2	UKM	2.7503	.40848	3	8.683	.000
	UMS	2.7836	.36299			
	USM	2.6660	.47418			
	UMK	2.8391	.38341			

The results support that of the item analysis. Category 1 obtains the highest mean scores (all above 'agree') across universities, suggesting that the majority of the students agreed that technology make learning of English easier. The mean scores of Categories 2 also

approach 'agree' which indicates that majority of the students perceive the affective effects of technology in a positive manner.

The analysis reveals that there were statistically significant differences between groups with regard to all three categories: Category 1 = $F(3, 1185) = 3.723, p = 0.01$ and Category 2 = $F(3, 1179) = 8.683, p = 0.00$. Scheffe test indicates that with regard to Category 1 (technology makes learning easier), the mean scores of the UMK students are significantly higher than those from UMS suggesting that UMK students had the most favorable view of technology.

With regard to Category 2 (affective effects of technology), the mean scores of the UMS students are significantly higher than those from USM. Similarly, the UMK students' means are significantly higher than the USM's. This indicates that both UMK and UMS students considered the affective effects of technologies most positively.

DISCUSSION OF FINDINGS

The findings of this study indicated a great deal of similarity in patterns of use and perceptions of usefulness among the students from the four universities. Similar to the findings of Thang et al. (2014), this study indicated that the tools that were most common owned by the students were laptops, camera phones and music phones and the tools. They also commonly used Facebook, emails and online self-tests/quizzes/practices to learn ESL. With regard to teachers from the four universities, the tools that were most popularly used in teaching ESL were e-mails, online self-tests/quizzes/practice and learning management system. The findings further revealed that students from all four universities generally felt that technology is useful for learning ESL under all situations and should be introduced widely and more regularly.

They also felt that their teachers were competent in using technology though they admitted that teachers only moderately used technology. Students from all four universities also used social networking tools like Facebook and emails regularly and they tended to use them mainly for recreation. These findings are in line with those undertaken in the west which also indicate that students generally use technology for social networking than for academic purposes (Corrin, Lockyer & Bennett, 2010; Kvavik, 2005; Margaryan, Littlejohn & Vojt, 2011). The findings suggested that although students have a very favourable view towards the adoption of more technology in the teaching and learning of English, they are not personally taking any actions to integrate technology in their learning of English. This lack of commitment was also found by Kaur and Abas (2010). However, Mohamed Amin's study (2012) suggested that the possible reasons for this lack of commitment could be due to the lecturers' slow online feedback and uninteresting content.

There were also some variations that are worth exploring. Although emails and Facebook were preferred by most university students, a comparison across universities based on the status and types of universities, showed that students in the research universities (UKM and USM) were more inclined towards online self-tests/quizzes/practice for learning of English whereas students from UMS and UMK opted for digital videos in lectures and learning management system. Since the tools used in all four universities were rather similar, the only possible explanation for this is that students in research universities are more self-reliant in that they preferred online self-tests/quizzes/practice. On the other hand, students from the newer and less established universities with students whose academic results are generally lower than those in the research universities would opt for the more didactic tools such as digital videos and learning management system. However, this is just a conjecture and more research need to be undertaken to investigate the truth of this claim. A comparison across universities using statistics revealed that students of UMK, a relatively new university,

seemed most positive towards the use of technology in teaching and learning English than students of the other universities. The fact that many of the students in this university come from rural areas may be a contributory factor as they would probably be less exposed to technology than students in research universities who are mainly drawn from urban areas. To a lesser extent this trend is also evident in UMS, a university from East Malaysia, which is not a research university and also has a large population of rural students.

Having perused, analysed, and discussed the findings obtained; what implications can be drawn from this study with regard to the teaching of English using technology in Higher Institution of Learning (HILs) in Malaysia?

IMPLICATIONS AND CONCLUSION

The evidence of the present study suggests that Malaysian students tend to use technology for social networking rather than for academic purposes; and that although they have a very favorable view towards the adoption of more technology in the teaching and learning of English, they tend not to invest their time nor energy to integrate technology in their learning of English. There are a few plausible explanations for this. Earlier studies (Bingimlas, 2009; Hew & Brush, 2007), and in particular Thang et al. (2014) posited that social influence (such as peer pressure) and instructors' personal factors (such as instructors' confidence, competence and attitudes) might be the reasons for the lack of ICT integration. In other words, without pressure and push, students are less likely to make serious effort to use new technologies for learning English. Another possible explanation for this phenomenon could be attributed to the way in which technology is used in the English classroom.

Thus, to engender learning with technology, it is imperative for instructors not to think of technology as a silver bullet for language teaching and learning, but instead understand the pedagogical reasoning for using technology. For example, if language instructors are aware of the students' preference for internet and social networks, they could incorporate tasks and activities that utilise social networking tools such as discussion boards to encourage students to collaborate with others and participate in experiential learning experiences (Lacina, 2004). Language instructors can try to create discussion boards that require students to be actively engaged in academic and social English outside the classroom environment, thereby providing authentic communication opportunities that are often lacking in language class. There are a number of social networking programmes available on the Internet, such as Classroom 2.0, and Moodle-based like learning management systems. Schoology is another example of social networking programme that provides a safe and secure learning environment for instructors and students to stay connected. Schoology allows instructors to post learning materials, assignments, discussion topics, links and even videos easily, and students can comment on and discuss these topics within the learning system. Here, students can interact with their classmates within a controlled environment, thereby making it easier for instructors to track student behaviour and language development. An advantage of this learning management system is that students can submit assignments online, thereby allowing instructors to grade and comment on assignments through the site as well. In so doing, the earlier mentioned issue highlighted by Mohamed Amin's (2012) study pertaining to the lack of language instructors' commitment and slow online feedback and uninteresting content can be ameliorated.

Another implication of the study concerns how to deal with students' preference for a more teacher-centred approach to learning. As evidenced in the present study, students clearly indicated their preference for teacher-centred approach to language learning. This is hardly surprising considering findings from earlier studies such as Nurjanah and Thang (2013), Thang (2012), Thang and Azarina (2007) by also indicated so. What these findings

seem to indicate is that Malaysian students believe that teacher-centred approach to learning is more effective. There is nothing inherently wrong with such a perception in language learning, particularly if we are concerned only with Cognitive Academic Language Proficiency (CALP) (Cummins, 1996) per se, i.e., the academic language needed to comprehend and analyze a textbook or understand a presentation by an instructor. CALP skill acquisition can be acquired via teacher-centred approach. According to Cummins (1996), for students to acquire the academic language necessary to succeed in university, they also need another type of skill - Basic Interpersonal Communication Skills (BICS), which refers to social or conversational language. The acquisition of BICS, however, is more difficult to be facilitated through teacher-centred pedagogy. To engender acquisition of BICS skills, a more student-centred approach to language learning ought to be employed. Towards this end, the internet and ICT have a significant role to play. The affordances of networked communication and multimedia can help create an environment for authentic language exploration and use in the language classroom.

It is encouraging to know that 26 institutions of higher learning (IHL) have already developed learning management system for communications, course delivery and production, and content development and administration (Mohamed Amin, 2012). This is indeed a positive move and if these efforts are coupled with efforts to support teachers in using such systems more effectively and to upgrade their technological skills, then teachers will be able to undertake the activities as described in the last few paragraphs. Training and supporting teachers are important as studies have shown that many Malaysian English university lecturers are still reluctant to utilise technology in their language classrooms (Nor Aziah & Ahmad Marzuki, 2005; Thang et al., 2014).

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