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FROM THE EDITOR

by **Jarosław Krajka**
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The editorial for the October issue of *Teaching English with Technology* is a tribute paid to a very special person who has influenced the development of our Journal to a great extent. After six years of extremely devoted voluntary work, Kamila Burzyńska steps down as assistant to the editor of TEwT. Due to changes in her professional life Kamila is no longer able to devote so much time and energy to managing the Journal as she used to do over those years.

We are very honoured to have had this opportunity to work with Kamila. All our authors, reviewers and editors are equally amazed at the way she could manage submissions, oversee the reviewing process, keep track of how papers are revised to fit the high standards that we set for *Teaching English with Technology*. We can say without any doubt that reaching the current status of TEwT as a well-recognised and highly readable international journal, indexed in Scopus, ERIC, EBSCO, ERIHPlus, CEJSH, CEEOL, Index Copernicus and many others, is mainly thanks to the high editorial standards that Kamila established and put into work.

All the people who have had a chance to work with Kamila are well-aware of how her tactful yet strict approach has made the publication process smooth and undisturbed, largely facilitating the job of editors and guaranteeing timely publication of issues. Given the fact that our Journal is a quarterly, that was actually continuous work, virtually day and night.

We would like to take this opportunity to express our gratitude to Kamila for all she has done for the international CALL community over those six years and dedicate the last issue she has prepared to her. We are certain that the new editorial assistant, Marcin Mizak, Ph.D., from Maria Curie-Skłodowska University, Lublin, Poland, will keep up Kamila's great job and will follow the high standards to ensure proper management of such an important research enterprise. We wish Marcin much satisfaction in the new job, hoping to see his involvement as long and as intensive as Kamila's.

This issue of our Journal gives voice to the many places in which foreign languages are taught with the use of technology, showing how the local contexts may influence the

choice of technologies, their modes of classroom use, degree of implementation and rate of adoption. To start with, **Rastislav Metruk** (Slovakia) investigates the self-reported frequency of watching authentic English videos by university EFL students with the intent of practicing listening comprehension skills, showing how practicing listening outside classroom through viewing English videos proves to be beneficial to the development of their listening skills.

Bringing the reality of Oman to our readers, **Joseph Decena Dayag** reports on the results of a qualitative study aimed to shed light on the stakeholders' perception towards Virtual Learning Environments as well as the significant concerns and challenges encountered by EFL lecturers and their students on their actual use of VLEs in a higher education institution.

Implementing Blended Learning and Flipped Learning in the university setting is the topic tackled by **Noor A. Sulaiman** (Jordan). The study concludes pointing out what factors a teacher should take into account when introducing blended learning and flipped classroom models in the classroom.

The contribution by **Kewalin Angkananon (**Thailand) and **Mike Wald (**United Kingdom) investigated whether the innovation of online video media spoken in both Thai and English with appropriate subtitles improved English skills for new students in Business Computing at a Thai university. Learning online using video and subtitles proved to help Thai students learn English IT content better than just learning face-to-face with similar content. Thus, it can be concluded that English could be learnt by Thai students through teachers providing similar online video materials with subtitles for the content of other subjects as well as IT.

Finally, a report on teachers' digital literacy in a Japanese setting provided by **Travis Cote** and **Brett Milliner** demonstrates how the investigated English teachers were very confident using digital technology to support their teaching both inside and outside their classrooms, however, they recognised the importance of developing their digital literacies and they were actively pursuing advanced skills.

We wish you good reading!

EXTENSIVE LISTENING PRACTICE OF EFL LEARNERS WITH AUTHENTIC ENGLISH VIDEOS

by **Rastislav Metruk**
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Abstract

The present study investigates the self-reported frequency of watching authentic English videos by university EFL students with the intent of practicing listening comprehension skills. The subjects, 37 Slovak university students, were divided into two groups: 17 first-year B.A. students and 20 first-year M.A. students with the same major Teaching Training: English Language and Literature. Both groups filled in a questionnaire regarding their watching of authentic English videos. The findings suggest that both groups of subjects reported viewing English videos either every day or every other day, which could be considered extensive listening practice. The subjects seem to watch videos on video sharing websites and social networking websites fairly frequently as the majority of B.A. and M.A. students chose *every day* or *every other day* options in the questionnaire. Moreover, the participants considered practicing listening outside classroom through viewing English videos as beneficial to the development of their listening skills. This indicates that watching authentic English videos should have a place in EFL learning.

Keywords: authenticity; listening skills; video sharing sites; EFL learner; English videos

1. Introduction

Listening is a basic language skill which should be given a major priority among the four language skills (Hamouda, 2013). It occupies an instrumental role within the process of L2 (second language, foreign language) learning; it is the first and most significant prerequisite for the skill of speaking (Barani, 2011). “A person’s ability to listen and understand spoken language is critical to oral communication in any language” (Atasheneh & Izadi, 2012). Furthermore, Alam & Sinha (2009) maintain that the significance of listening has been long recognized within the history of EFL teaching. Thus, developing listening comprehension plays a vital role in enhancing general communication skills and language competence (Hwaider, 2017).

Listening skills, however, have been long neglected in L2 acquisition, teaching, assessment, and research (Bakhtiarvand & Adinevand, 2011). In fact, teaching the skill of listening has not still received proper attention within the ELT process (Gilakjani & Ahmadi,

2011). Osada (2004) also indicates that the research into listening comprehension does not abound in literature as much as, for example, the research on reading comprehension. EFL teachers have to, therefore, remember that such neglect may severely impede the process of learning a foreign language since EFL learners might not be able to successfully establish and maintain communication. Listening skills are, without doubt, of vital importance in English language teaching and learning.

The current digital era has altered not only lifestyles of people, but also teaching and learning strategies (Tananuraksakul, 2016). Similarly, Sándorová (2013) states that the boom of technology in the last 20 years has made an impact on the world of education, including teaching foreign languages. In this day and age, technology is widely used for educational purposes at all levels (Solano, Cabrera, Ulehlova & Espinoza, 2017). Kruk (2017) explains that applying modern technologies in teaching and learning L2 is nowadays the norm in a substantial number of schools, universities, and different educational institutions since, according to Šimonová (2016), the ICT (Information and Communication Technologies) have penetrated every phase of the educational process. The 21st century EFL (English as a foreign language) learners are incessantly exposed to ICT technologies (Cinganotto & Cuccurullo, 2016), which offer great opportunities for both teachers and learners to experience EFL teaching and learning beyond the traditional classroom (Mulyono, 2016). As far as the development of listening skills is concerned, there is undoubtedly ample opportunity for practicing listening with the assistance of technological advancements.

Watching authentic English videos represents one of the ways how L2 learners can practice their listening skills outside the classroom. Movies, TV shows, soap operas, and a wide variety of video clips can be regarded as both attractive and useful source of authentic language for EFL learners.

The primary objective of this article is to investigate how frequently Slovak university EFL learners (upper-intermediate and advanced students) watch authentic English videos for the purposes of enhancing their listening skills, and how often they view the videos on video sharing websites and social networking websites. In order to address this issue, the following research questions regarding watching English videos outside classroom have been formulated:

1. How frequently do EFL university students at the CEFR B2 and C1 levels watch authentic English videos with the goal of increasing listening practice?
2. How often do they watch videos on video sharing websites?
3. How frequently do they watch videos on social networking services websites?

4. Do the EFL university students at the CEFR B2 and C1 levels agree that extensive listening practice provided through watching authentic English videos improves their listening skills?

2. Extensive listening and extensive viewing

Extensive listening can be regarded as "listening for pleasure and without obligating the listener to keep demonstrating a satisfactory level of understanding" (Field, 2008, p. 54). According to Mishan & Timmis (2015), when L2 learners perform extensive listening, they listen to longer stretches of audio (-visual) material, and, at the same time, they do not have to worry about comprehension checks, memory tests, or anxiety, which can be created by these. Furthermore, they are exposed to substantial amounts of comprehensible input and take part in listening for pleasure outside the classroom (Siegel, 2013). L2 learners are not expected to fully understand everything, but they should rather have a general understanding and find pleasure in doing such listening (Graham & Santos, 2015).

The importance of extensive listening is apparent in L2 learning (Onoda, 2012). This type of listening may also (as well as intensive listening) have a pronounced effect on language learning of an individual. It should be noted that the motivational power increases considerably when learners themselves make choices about what they will listen to (Harmer, 2007). L2 learners ought to listen to various language phenomena and gain knowledge through TV programs, radio, the Internet and as many types of exposure as they possibly can find (Gilakjani & Ahmadi, 2011).

Renandya & Jacobs (2016) note that extensive viewing, which can be regarded as a related concept to extensive listening, has recently come into being. It refers to EFL learners watching television, movies, and videos for the purposes of L2 learning. However, it should be noted that research on extensive listening is still in its infancy.

Videos do not only represent an inseparable part of people's everyday lives, but they are also deemed to be a practical, powerful, and effective method when it comes to learning a language. There are numerous sound reasons why an English learner ought to spend time watching English videos.

Harmer (2007) explains that while the learners listen, they can also see language in use, which enables them to see a great deal of paralinguistic behaviour. For instance, they are able to recognize how facial expressions match intonation, and which phrases are accompanied by concrete gestures (such as shrugging shoulders when someone says *I don't know*). Moreover, the viewers can see how various people stand while they talk to each other

(proximity), or what types of food they eat. It seems reasonable to assume that unspoken rules of behaviour within particular social instances are easier to be noticed in videos rather than to be described in a book or merely heard by EFL learners. Muslem, Mustafa, Usman & Rahman (2017, p. 29) also commented on the usefulness of videos by claiming that "[f]inally yet importantly, videos also provide real models since they include all the characteristics of naturally spoken English in realistic situations and they allow students to experience and feel a certain situation without going there. Therefore, students do not have to visit England just to know how they order food at a restaurant there". Another advantage is that videos arouse curiosity and attract interest of L2 learners (İlin, Kutlu & Kutluay, 2012). Therefore, the learners' motivation for watching authentic English videos is increased, and the learners actually spend a great deal of time being exposed to the L2. Bajrami and Ismaili (2016, p. 503) highlight yet another benefit by stating that "[a] great advantage of the video materials is that they provide original and authentic input as they are produced originally for native speakers such as films, different TV programs, songs". Furthermore, authentic videos can be considered as helpful tools when it comes to learning the features of L2 in real contexts (Saeedi & Biri, 2016). Thus, the viewers are exposed to an L2 language in authentic settings and real contexts, which brings them somewhat closer to the native speakers of the foreign language.

3. Online videos and networking sites in enhancing listening skills

Several studies support the notion of using videos in order to enhance EFL learners' listening skills both inside and outside the classroom.

According to King (2002, p. 520), "[w]hen students are provided with well-structured tasks and activities designed to promote active viewing and stimulate involvement for making the most of learning opportunities of movies, there is no doubt that feature films are the most stimulating and enjoyable learning materials for the E-generation." Khan (2015) highlights the implications of using films in order to improve language proficiency of non-native speakers, suggesting that greater exposure to movies can result in significant second language acquisition increase within non-native English language learning environments. Dehaki (2017) investigated the method of using videos as a way of teaching. The results demonstrate that the listening comprehension of the participants involved improved, and that they displayed a positive attitude to learning by watching videos. Similarly, the study of Mekheimer (2011) suggests that teaching with authentic video is a valuable approach to the whole language learning.

Advocates of extensive listening for developing L2 listening state that this type of listening is likely to enhance learners' performance and attitudes (Gramahm & Santos, 2015). Chang (2016) indicates that while practicing listening inside the classroom is valuable, the learners ought to be encouraged to proceed independently with working on their listening skills outside the classroom as well. Rodger's research (2013) demonstrates that watching L2 television results in improving listening comprehension. The study of Rodgers & Webb (2011) suggests that watching a TV series in sequence, starting with the first episode, helps the viewers develop background knowledge which ought to help them understand episodes which follow.

However, research is scarce as to the effects of extensive listening (Renandya & Jacobs, 2016). "Due to the fact that EL is a comparatively new idea, its theoretical framework is underdeveloped; there has been little hard evidence supporting the effect of EL on improving L2 listening competence" (Chang & Millett, 2014, p. 31). Therefore, further research has to be conducted to cast more light on listening for pleasure taking place outside the classroom.

One of the ways how EFL learners can practice their listening skills extensively is watching videos, TV programs, and movies on YouTube. YouTube is an online service, officially launched in late 2005, which allows registered users to upload video clips for viewing by the general population of Internet users (Benson, 2015, p. 90). Halloran & Hearn (2017, p. 80) explain the power and enormous influence YouTube has gained by claiming that "YouTube is now the top video website globally (with 13 billion videos), is the third most visited website in the world, and attracts over 15 billion visitors a month (roughly twice the population of the world)". Therefore, YouTube is the leading video website in the world today (Silviyanti, 2014).

Kelsen (2009) performed a study on students from Taiwan regarding their opinions of using YouTube. The results suggest that both teachers and learners may be involved to implement YouTube in a number of classroom activities in a creative manner to improve the outcomes of learning and generate a positive classroom environment. However, using YouTube inside the classroom in order to motivate the learners to use the service outside the classroom is not exactly clear. Students have to be allowed to freely explore and take first steps on a journey of learning English via YouTube.

Another study on the use of a YouTube channel, performed by Balbay & Kilis (2017, p. 246), reveals that most of the participants benefited to a large degree from the playlist videos of a specially-designed supplementary material YouTube channel. Furthermore, the

"students actively utilize this particular technology for learning outside the classroom too, which may change the teachers' role in language and skills classroom".

In his study, Styati (2016) explored the effects of YouTube tutoring on the development of learners' writing skills, discovering that there exists a significant difference between the learners taught with the use of YouTube videos and the students taught by using pictures. Interestingly, the students who were taught by videos achieved a lower writing performance.

Kuo's experiment (2009) illustrates that the experimental groups which were taught using YouTube video segments did better on test measuring listening comprehension in comparison to the control group taught by traditional teacher-centred teaching methods.

Researchers have recently studied some social networking websites in order to investigate the relationship between social networking and educational outcomes (Bista, 2014; Kirschner & Karpinski, 2010).

As far as using social networking sites for the purposes of learning English is concerned, the study conducted by Kabilan, Ahmad & Abidin (2010) suggests that it is possible to learn English through Facebook since technologies and features of this social media website enable the learners to engage in meaningful language-based activities despite the fact that they primarily intended to join Facebook to socialize. Jin's study (2015) indicates that "the adoption of Facebook is a new, innovative, and practical way to facilitate effective intercultural interactions as well as promote IC in the EFL classroom" (2015, p. 38). Bista (2015) performed a study on using Twitter as a pedagogical tool for 15 weeks as an activity which was required in the classroom. On the whole, the participants reported positive experiences, and they regarded Twitter as a valuable tool which can be used inside the class, and also recommended it to be used in future classes, while having clear instructions and expectations. Finally, according to a study conducted by Mompean & Fouz-González (2016), Twitter can be beneficial for both teaching and learning pronunciation, encouraging teachers to incorporate this social networking website within online or on-campus learning programs.

Social networking websites have become an inseparable part of young peoples' lives and have an influence also on L2 learning process. However, it seems that little research has been conducted up to this day regarding social websites and language learning (Mohammed, 2016), and further investigation is necessary.

4. The study

4.1. The objective of the study

The main goal of this article is to examine how frequently Slovak university EFL learners (both upper-intermediate and advanced students) watch authentic English videos in order to improve their listening skills, and how often they view the videos on video sharing websites and social networking websites. In order to address this issue, the following research questions need to be addressed:

1. How frequently do EFL university students at the B2 and C1 levels watch authentic English videos with the goal of increasing listening practice?
2. How often do they watch videos on video sharing websites?
3. How frequently do they watch videos on social networking services websites?
4. Do the EFL university students at the B2 and C1 levels agree that extensive listening practice in terms of watching authentic English videos improves their listening skills?

4.2. Subjects and data collection

The participants were altogether 37 full-time Slovak university students of the study program Teaching Training: English Language and Literature at a Slovak university. They were divided into two groups: first-year B.A. students and first-year M.A. students. The B.A. group comprised altogether 17 students, 12 female and 5 male students. They were 20.4 years old on average, and their English was at the B2 level (Council of Europe, 2001). The M.A. group consisted of 20 students, 17 females and 5 males. They were 22.6 years of age on average, and they were at the C1 level. The Slovak language was the native tongue of all the subjects.

The subjects were asked to anonymously fill in a questionnaire so as to gather data on the exposure of subjects to authentic English videos. It was formed by four multiple-choice statements, and was administered in English.

5. Results and discussion

Questionnaire item no. 1: *I watch English videos (TV series, movies, reality TV, video clips, etc.) in order to improve my English listening skills (circle one option; please, specify how many hours, if you circle "every day" option).*

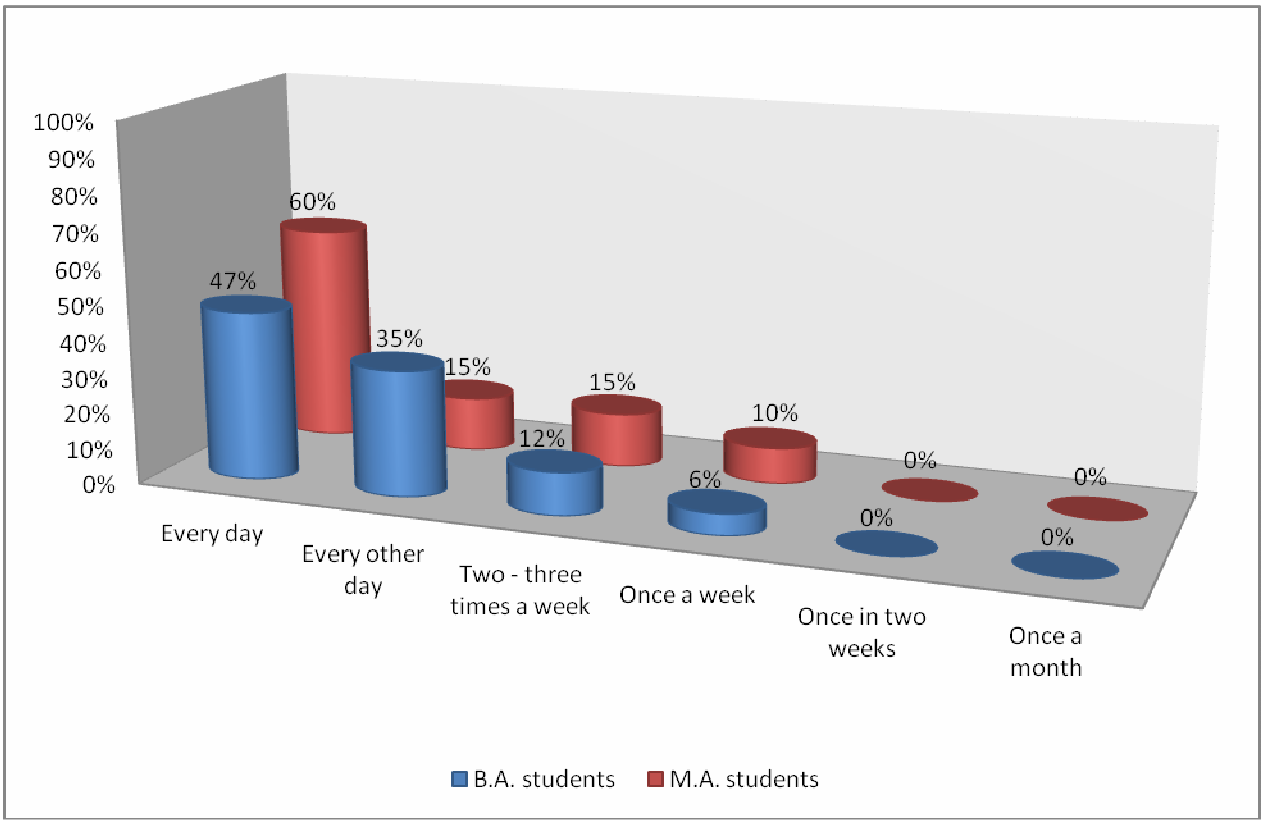

Figure 1. Amount of exposure to authentic English videos

8 of the total amount of 17 B.A. students, which accounts for 47%, watch English videos on a daily basis. On average, they are exposed to authentic English videos 2.2 hours a day. 6 B.A. subjects (35%) view the videos every other day, followed by 2 students (12%) who watch the videos two to three times a week, and 1 subject (6%) who watches the videos once a week.

12 M.A. subjects (out of the 20 M.A. students), which constitutes 60% of the total, watch English videos every day. On average, they spend 2.4 hours a day by viewing the videos. 3 subjects (15%) watch English videos every other day, and the same amount of subjects performs this activity two to three times a week, followed by 2 subjects (10%) who are exposed to English videos once a week.

It should be noted that the number of M.A. students (60%) watching video on a daily basis is higher in comparison to the number of B.A. students (47%), but a higher amount of B.A. students (35%) view the videos every other day when compared to the M.A. students (15%).

However, the difference between the two groups of subjects (B.A. group and M.A. group) does not seem to be substantial when it comes to the comparison of remaining 4

options. It should be also highlighted that the majority of both B.A. and M.A. subjects opted either for the first or second option in the questionnaire.

Questionnaire item no. 2: *I watch English videos on video sharing websites, such as YouTube, Vimeo, Dailymotion, etc. (circle one option; please, specify how many hours, if you circle "every day" option).*

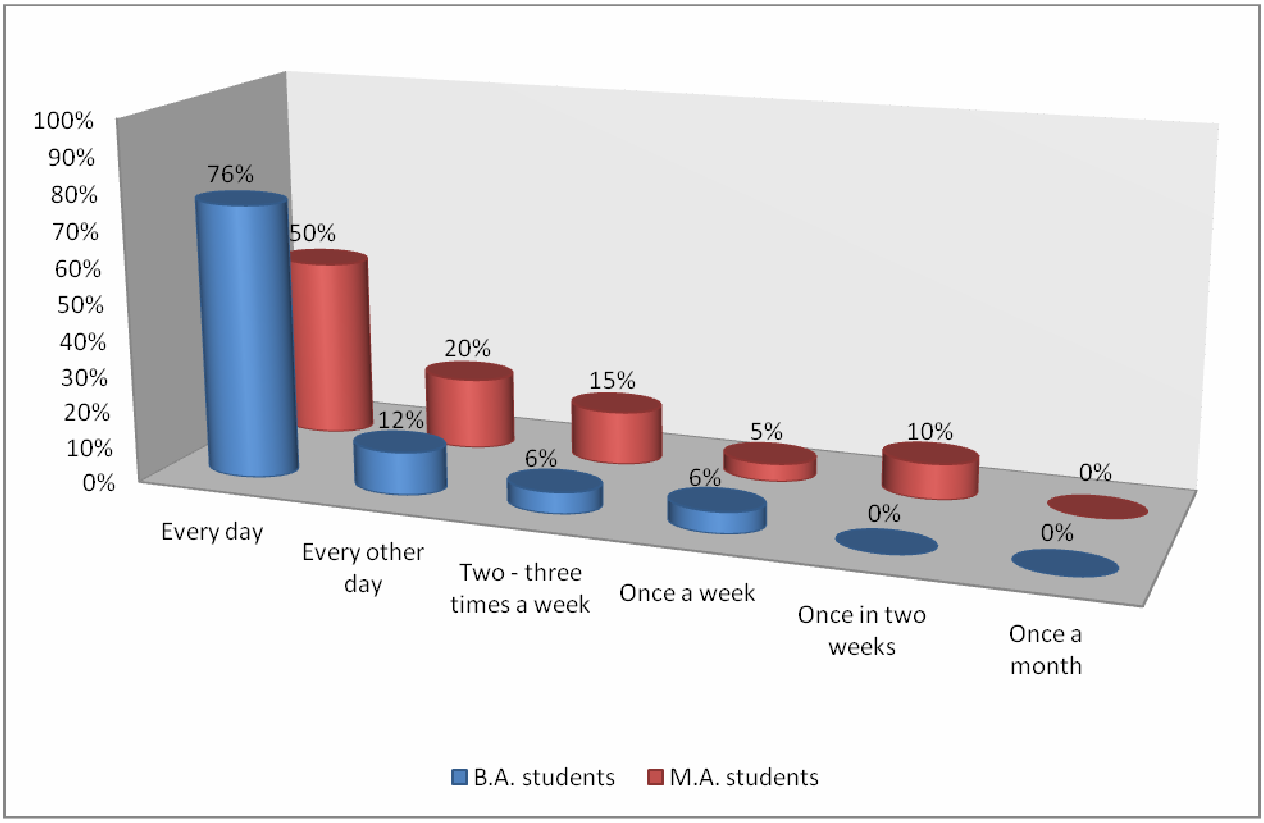

Figure 2. Using video sharing websites to watch authentic English videos

13 out of 17 B.A. subjects (76%) watch English videos on video sharing websites on a daily basis. On average, they view the videos 1.6 hours a day. 2 B.A. subjects (12%) watch the videos every other day, followed by 1 student (6%) who watches the videos two to three times a week, and 1 subject (6%) who is exposed to English videos once a week.

10 M.A. subjects (out of the total of 20 M.A. students), which accounts for 50% of the total, use video sharing websites for watching English videos every day. On average, they do this activity for 1.8 hours a day. 4 subjects (20%) watch English videos every other day, followed by 3 subjects (15%) – two to three times a week, 1 subject (5%) – once a week, and 2 subjects (10%) – once every two weeks.

Similarly to Figure 1, the majority of subjects opted either for the first or second option in the questionnaire. The largest difference (26%) can be recognized between the B.A and M.A. students in *every day* option in favour of the B.A. students. However, the differences between the two groups within other options of questionnaire item no. 2 do not appear to be substantial.

Questionnaire item no. 3: *I watch English videos on social networking services websites such as Facebook, Twitter, etc. (circle one option; please, specify how many hours, if you circle "every day" option).*

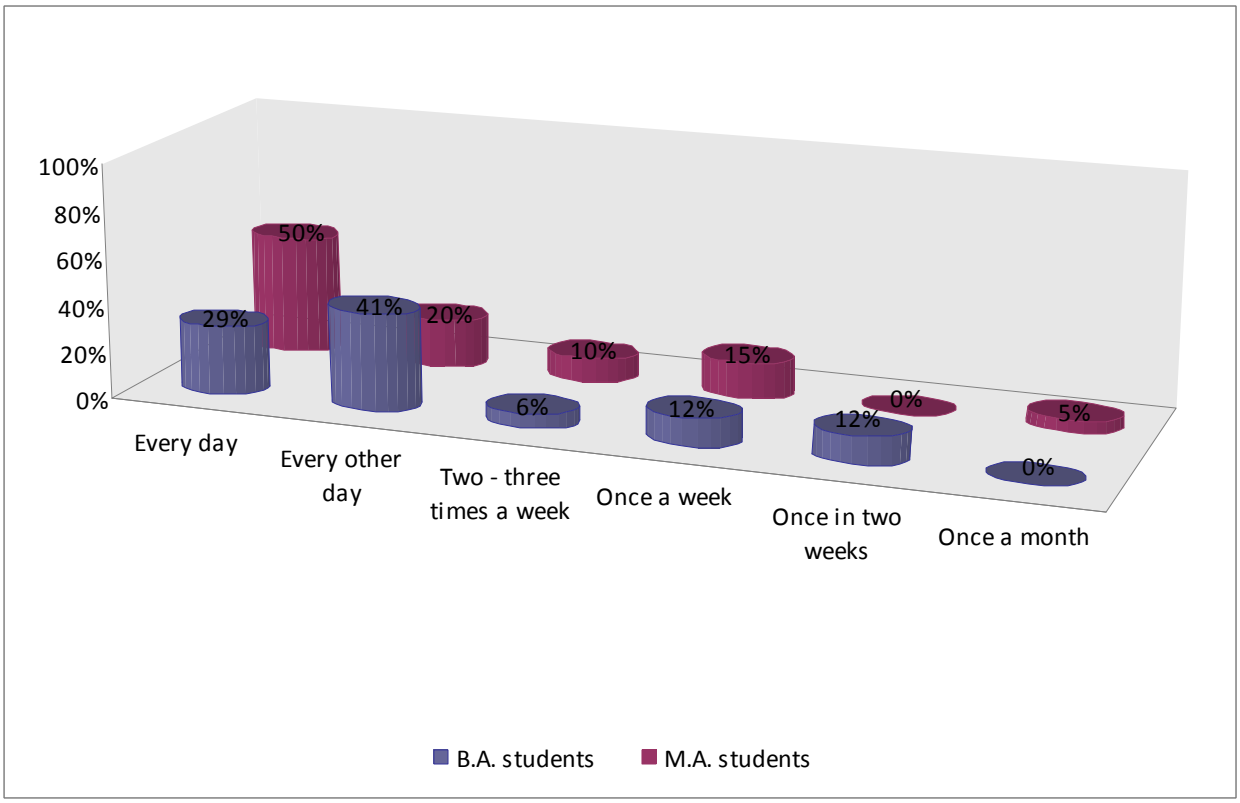

Figure 3. Using social networking websites to watch authentic English videos

5 B.A. subjects (29%) view English videos on social networking websites every day. On average, they watch the videos 1.6 hours a day. 7 B.A. subjects (41%) perform this activity every other day, 1 subject (6%) two to three times a week, 2 subjects (12%) once a week, and 2 subjects (12%) once every two weeks.

10 M.A. subjects (out of the total of 20 M.A. students), which accounts for 50% of the total, use video sharing websites for watching English videos on a daily basis. On average,

they do this activity for 1.2 hours a day. 4 subjects (20%) watch English videos every other day, 2 subjects (10%) two to three times a week, 3 subjects (15%) once a week, and 1 subject (5%) once a month.

Similarly to items no. 1 and 2, most of the subjects selected the options *every day* and *every other day*. It should be noted that the number of M.A. students (50%) watching video on a daily basis is higher in comparison to the number of B.A. students (29%), but a higher amount of B.A. students (41%) view the videos every other day when compared to the M.A. students (20%). However, the difference between the two groups of subjects does not seem to be dramatic when it comes to the comparison of the remaining 4 options.

Questionnaire item no. 4: *Extensive listening practice outside school in terms of watching movies, TV series, soap operas, video clips, etc. improves my listening skills (circle one option).*

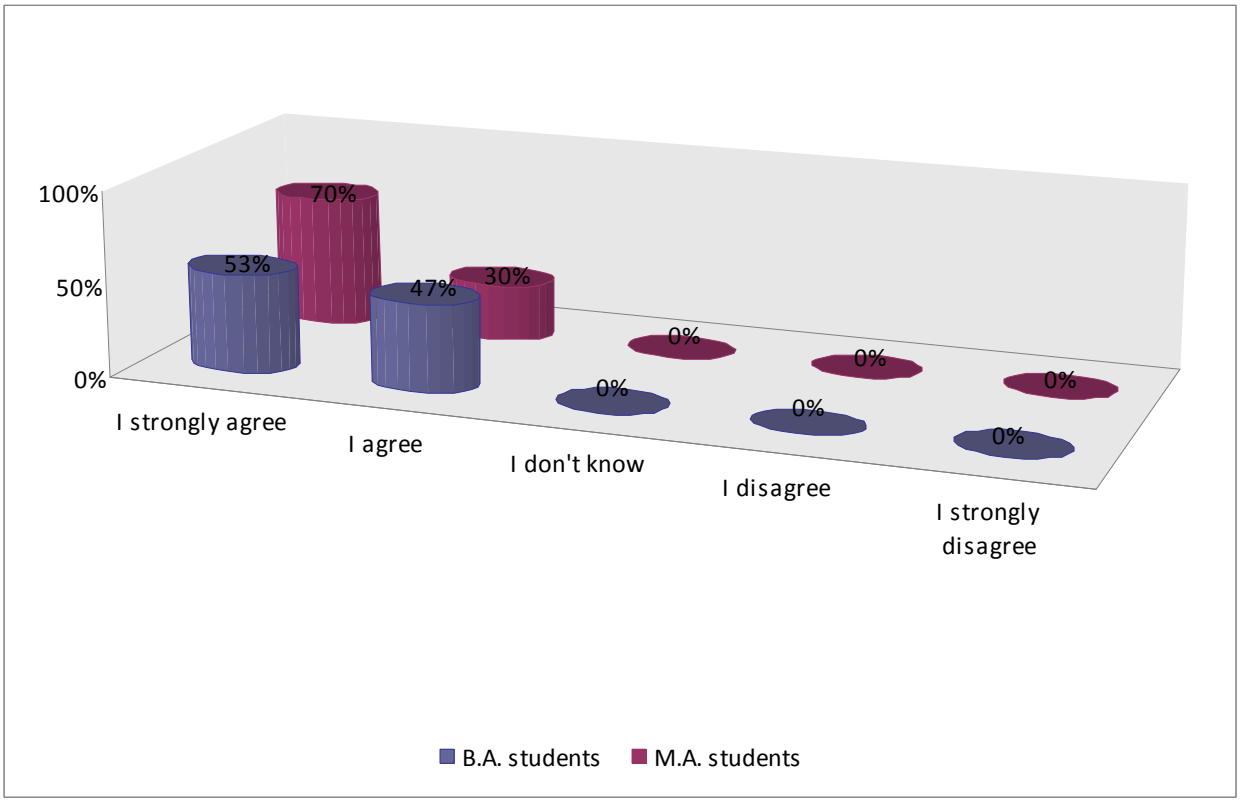

Figure 4. Subjects' attitudes to extensive listening practice

9 B.A. subjects (53%) chose the option *I strongly agree*, while 8 subjects (47%) opted

for the second choice *I agree*. 14 M.A. students (70%) strongly agree with statement in questionnaire item no. 4, while 6 subjects (30%) chose the option *I agree*.

The number of M.A. students (70%) who strongly agree is higher in comparison to the number of B.A. students (53%), and a higher amount of B.A. students (47%) opted for the option *I agree* when compared to the M.A. students (30%). On the whole, however, it can be concluded that all the subjects agree that watching English videos enhances their listening skills.

The study findings demonstrate that both B.A. and M.A. subjects are exposed to watching English videos to a relatively high degree as the majority of them opted for the *every day* or *every other day* options within questionnaire items nos. 1, 2, 3. Therefore, their frequency of watching authentic English videos regarding extensive listening practice can be considered as fairly high.

The B.A. students' everyday exposure (76% of B.A. subjects) to watching English videos is considerably higher on video sharing websites in comparison to the amount of B.A. subjects (29%) in terms of social networking websites. The B.A. subjects spend on watching the videos 1.6 hours a day in both instances.

The numbers are equal (50% video sharing websites and 50% social networking websites) when it comes to the everyday exposure of the M.A. students to English videos. However, the M.A. students watch the videos 1.8 hours a day on video sharing websites, but 0.6 hour less (1.2 hours) on social networking websites.

As far as the questionnaire item no. 4 is concerned, all the students agree with the statement *Extensive listening practice outside school in terms of watching movies, TV series, soap operas, video clips, etc. improves my listening skills*. Thus, it can be concluded that EFL learners attach extensive listening practice considerable importance.

6. Conclusions, recommendations, and limitations

This small-scale study explored how frequently university EFL students watch authentic English videos in regard to extensive listening practice. Furthermore, video sharing and social networking websites used for watching the videos were also examined from the standpoint of frequency, along with the opinions of students on watching authentic English videos in relation to the improvement of their listening comprehension skills.

It can be concluded that most of the subjects (both B.A. and M.A.) are exposed to watching English videos either every day or every other day, which could be described as relatively satisfactory from the point of view of exposure to the target language since

extensive listening (extensive viewing) occupies a useful and important role within L2 learning.

It appears that the B.A. subjects use video sharing websites for watching English videos very frequently, while the M.A. students use them fairly frequently. As far as watching videos on social networking websites is concerned, both groups (B.A. and M.A.) of subjects seem to watch English videos fairly frequently.

Finally, as already mentioned, the subjects agree with the statement *Extensive listening practice outside school in terms of watching movies, TV series, soap operas, video clips, etc. improves my listening skills*, which can also be regarded as a positive sign of attitude towards extensive listening (extensive viewing).

The outcomes of this study are not to be generalized due to the limited number of subjects involved in the study. Employing a larger sample of subjects would definitely yield more reliable data. Moreover, other research methods such as observation, interview, or testing may be employed.

Taking pedagogical implications into account, the following recommendation, based on the study findings, can be offered. Watching authentic English videos seems to represent an attractive and useful way of practicing and developing listening skills. Thus, EFL learners should be encouraged to perform as much extensive listening practice in terms of watching English videos as possible. Furthermore, EFL teachers ought to bear in mind that extensive listening (extensive viewing) seems to hold an important place in EFL learning when it comes to the development of listening skills, and this type of research merits further attention of educators, academics, scholars, and researchers. It is, therefore, vital that further research into this area of EFL teaching and learning is performed, also due to the fact that exploring extensive listening and extensive viewing is still in its infancy.

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EFL VIRTUAL LEARNING ENVIRONMENTS: PERCEPTION, CONCERNS AND CHALLENGES

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Abstract

Virtual Learning Environment (VLE) is a fad in the 21st century academic landscape. A number of studies found out that students perceive VLEs positively and that VLEs facilitate learning English as a Foreign Language (EFL) and provide an avenue for educators to extend a helping hand to their EFL students. Sustaining VLEs is not an easy task as it raises various concerns and challenges, particularly in the domain of EFL learning. This paper reports on the results of a qualitative study aimed to shed light on the stakeholders' perception towards VLE as well as the significant concerns and challenges encountered by EFL lecturers and their students on their actual use of VLEs in a higher education institution. Furthermore, the study unveiled the practical tips to create efficient and effective VLEs, based on the suggestions of both the EFL students and their lecturers.

Keywords: Virtual Learning Environment; e-learning; higher education

1. Introduction

Virtual Learning Environment (VLE) has become a significant part of the 21st century academic landscape. It is a fad that continually gains immense popularity in the academe, which is gradually influenced by technology, blended learning, and the students' increasing propensity to use their smartphone or tablets wherever they are and whenever they like (Kukulska-Hulme et al., 2011, Tuzlukova, Al-Busaidi, Coombe & Stojkovic, 2016; and Scully, 2008). VLE refers to a particular form of e-learning technology that uses networked computers to provide a range of functions to tutors, students and other users (O'Leary, 2004). VLE is also defined as a web-based learning platform or learning management system created by a lecturer for his/her students, and intended for various academic purposes (Martins & Kellermanns, 2004). In a VLE, students can communicate, collaborate, access learning materials, upload homework and requirements, answer online quizzes, seek assistance from their lecturer, etc. beyond the confines of their classroom and beyond the official class hours. Created in various social networking sites or learning platforms like *Moodle, Edmodo, Schoology* and *Google Classroom*, VLE provides an avenue for educators to reach out to their

students by uploading ample learning resources, encouraging the students to raise questions about their lessons and making them more independent and responsible of their academic advancement (Kear, 2007; Dayag, 2018).

Recent studies suggest that VLE is perceived positively by students and that it has a positive effect on their educational experience (Al-Kathiri, 2014; Bicen, 2014; Al-Said, 2015; Al-Ruheili and Al-Saidi, 2015; Dayag, 2018). VLE fosters interaction and collaboration among students (Kear, 2007; Dayag, 2018) as it offers a number of communication tools that facilitate effective communication and collaboration among the primary stakeholders — students and educators alike — of the academe (Weller, 2007; Warner, 2013; Al-Kathiri, 2014). In several settings, VLE is perceived to have a positive impact on students' communication, collaboration and participation in the classroom (Mimirinis & Bhattacharya, 2007; Balasubramanian, Jaykumar & Fukey, 2014; Al-Ruheili & Al-Saidi, 2015, Al-Kathiri, 2014, Al-Said, 2015).

In the context of EFL, recent studies suggest that VLE is perceived by students as a helpful tool that offers a safe learning environment that allows them to deepen their knowledge and enhance their communication skills beyond the confines of their classrooms (Al-Kathiri, 2014; Bicen, 2014; Al-Said, 2015; Al-Ruheili and Al-Saidi, 2015). VLE is also deemed useful to students in terms of providing timely opportunities for learning and providing supplementary instructional materials that enrich students' learning experiences (Bataineh & Mayyas, 2017; Dayag, 2018).

2. The study

2.1. Statement of the problem

The study endeavored to ascertain the perception of selected EFL lecturers and Omani students on virtual learning environments. Specifically, it aimed to shed light on the following:

1. What learning platforms/sites/ learning management systems do the informants use?
2. How do the informants perceive VLEs?
3. What are the merits and demerits of VLEs?
4. What are the primary concerns (considerations) in sustaining VLEs?
5. What challenges have the informants encountered while using VLEs?
6. What are the informants' suggestions or tips to enhance VLEs?

2.2. Methodology

This qualitative research was conducted in Shinas College of Technology (ShCT), Sultanate of Oman, during the first and second semester of 2016-2017 academic year.

2.3. Research participants

The key informants were two lecturers and a total of 21 EFL students — comprised of 12 female and 9 male students who are members of at least one virtual learning environment (VLE) during the conduct of this study. All the student-informants (aged 17 to 21 years old) are enrolled in ShCT's Foundation Program. The lecturer-informants were selected because they are both creators and active users of VLEs; whereas, the student-informants were identified based on the following criteria: 1) they are enrolled in ELC's Foundation Program, 2) they currently belong to a VLE, and 3) they are willing to be interviewed for this study.

2.4. Data collection

Semi-structured interviews were conducted to encourage the informants to freely offer their insight and observation on virtual learning environments. The semi-structured interviews were then recorded and transcribed. To unveil the common themes, patterns, concepts, insights and understandings (Patton, 2002), the qualitative data were analyzed thematically.

3. Results and discussion

3.1. General perceptions of VLEs

The qualitative data revealed that the informants generally have positive perceptions of virtual learning environments. This supports the findings of earlier studies that students perceive VLE positively (Mimirinis & Bhattacharya, 2007; Al-Kathiri, 2014; Bicen, 2014; Al-Said, 2015; Al-Ruheili and Al-Saidi, 2015; Dayag, 2018). As shown in Table 1, the informants conveyed that they are members of VLEs created in free learning platforms or learning management systems, namely: Edmodo, Moodle, and Google Classroom. Some student informants indicated that their choice of VLE depends on what VLE their lecturer opts to use in their class.

Table 1. Informants and their virtual learning environments

#	Informant	VLE/ Learning Management System
1	Lecturer 1	Edmodo and Moodle

2	Lecturer 2	Edmodo, Google Classroom and Moodle
3	Yaqub*	Edmodo
4	Saleh	Google Classroom
5	Sultan	Edmodo and Moodle
6	Wael	Moodle
7	Mohammed A.	Edmodo and Moodle
8	Moosa	Edmodo and Google Classroom
9	Majid	Edmodo and Moodle
10	Mohammed B.	Google Classroom
11	Hussein	Edmodo
12	Zainab A.	Edmodo and Google Classroom
13	Sumaiya	Edmodo and Moodle
14	Hajer	Moodle
15	Baraah	Edmodo, Google Classroom and Moodle
16	Sheikha	Google Classroom
17	Ruqaya	Moodle
18	Fakharia	Edmodo and Moodle
19	Zainab B.	Edmodo and Moodle
20	Hanoof	Edmodo and Moodle
21	Jumana	Edmodo and Moodle
22	Marwa	Edmodo, Google Classroom and Moodle
23	Aisha	Edmodo and Moodle

**Not the actual names of the informants*

When asked to elaborate upon their choice of VLE, the informants gave varied responses that underscore their opinion on the learning platform they use. Some of the responses are as follows:

> "I like Edmodo because it is safe and easy to use. Now, I regularly open our Edmodo group to get updates, communicate with my classmates and submit my homework to our Mister"[the term used by many Omani students to address their male EFL lecturers]."
>
> "My virtual classrooms are found in Moodle and Edmodo. I think I like to use Edmodo more than Moodle though because most of my classmates are active in our Edmodo group."
>
> "I join all the VLEs created by my teachers in Google Classroom, Edmodo and Moodle because I get the chance to ask my teacher a lot of questions and message my classmates when we have homework."
>
> "My teacher in Speaking (Foundation Program) introduced me to Edmodo. At first I did not want to participate in our group, but I was encouraged when many of my friends joined and told me that our teacher often upload links to videos from TED talks."

It is also noteworthy that the lecturer-informants regard VLEs positively and that they recommend it to their fellow EFL educators. As one informant expressed: "VLE is a fascinating and useful innovation. It may be challenging and hard to maintain VLEs but the benefits that our students get from joining VLEs make the sacrifice worth it. Every EFL lecturer must try using a VLE."

Figure 1 shows a sample VLE created in a free social learning platform (Edmodo). Some of the informants claimed that they actively participate in the VLE named "Writing for Life" because they are regularly reminded of their homework and course requirements. The figure illustrates how an EFL lecturer makes use of the VLE to reach out to his students by sending them a gentle reminder and a link to a YouTube video, which students can access and watch wherever they are and whenever they like.

Figure 1. Screenshot of a sample VLE created in Edmodo

3.2. Merits of VLEs

Informants perceive that VLEs have a number of merits or strengths. The informants regard VLE as a good avenue for lecturers to reach out to their EFL students. Through the VLEs, EFL lecturers can easily lend a hand to the students in varied ways. Some of the informants'

responses were as follows: “VLE is good because I can ask help from my teacher”; “Shy students like me can ask questions in the discussion board and my teacher gives answers on the same day or maybe after two days;” “My teacher reminds me of my projects or essays so I do not forget what I need to do and submit these on time.” This finding runs parallel to the findings of recent studies (Kear, 2007; Bicen, 2014; Al-Ruheili & Al-Saidi, 2015; and Dayag, 2018).

Moreover, the informants pointed out that VLEs are perceived to be useful in deepening the students’ knowledge by providing students with meaningful learning experiences and enhancing their communication skills. Some of the informants’ responses include: “It is helpful in learning English;” I like the videos shared by my teacher in our VLE;” and “I can communicate with my teacher and classmates even outside our classroom.” This finding lends support to the outcomes of earlier studies, proving that VLEs facilitate EFL learning and help develop their communication skills in the target language beyond the confines of their classrooms (Al-Kathiri, 2014; Bicen, 2014; Al-Said, 2015; Al-Ruheili and Al-Saidi, 2015).

The informants also conveyed the idea that they perceive VLE as a useful tool in fostering collaboration and making EFL learning enjoyable. As one informant aptly put it:

> As I can connect with my classmates and friends through our VLE or even Whatsapp, we can do our homework and projects more easily and submit these before the deadline. We usually have fun when we study and do our projects together.

This supports the findings of previous studies that VLEs encourage collaboration among students (Bicen, 2014; Bayburtsyan, 2016; Al-Said, 2015; Al-Ruheili and Al-Saidi, 2015; and Dayag, 2018). With the opportunity to seek help and lend a helping hand to each other, EFL students regard VLE as an avenue for cooperation; hence, VLE boosts collaboration among the students.

Furthermore, the informants suggested that VLE promotes autonomy among EFL students. Some of the informants’ responses were as follows: “Through our VLE, I can get many learning materials shared by our teacher and learn from these during my vacant time”; “Our VLE make[s] it easy to do our homeworks like essays and posters”; and “I can do our requirements like presentation and portfolio at home, without time pressure.” It can be gleaned from the informants’ responses that they become more responsible and independent when they join a VLE. This affirms the findings of recent studies that VLEs foster learner independence (Bicen, 2014; Bayburtsyan, 2016; Bataineh & Mayyas, 2017; and Dayag, 2018).

3.3. Demerits of VLEs

A number of informants made it clear that much is left to be desired in terms of offering an excellent, apt and efficient VLE to Omani EFL students. The informants pointed out two demerits or weaknesses of the VLEs they use in their EFL classes: cultural sensitivity and time constraint. Some of their responses include: "Some boys send me messages and ask my [phone] number (lady informant)"; "VLE is not good if boys can send messages to us" [lady informant].

Furthermore, one key informant reported that her group's VLE is sometimes used by some male students to grab attention for themselves by posting unnecessary materials that are not relevant to their lessons.

The first demerit dwells on the possible problem that may prop up once male students begin to interact with their female classmates. Hence, the lecturer must see to it that students do not make use of their VLE as a dating site. If the VLE is not properly managed, the available learning platforms or sites that serve as an avenue for the creation of VLE may not be appropriate to the context of students in Oman. As far as the culture of Omanis is concerned, EFL lecturers need to be wary of the possibility of intimate communication between male and female students. EFL lecturers must ensure that their VLEs discourage direct interaction between male and female students.

The second demerit — time constraint — affects both the lecturer and the students. For the lecturer, it is a challenge. As VLEs require time, a lecturer needs to balance his/her time in doing all his other responsibilities and keeping his/her VLE up-to-date. Although it may seem effortless for some educators, sustaining a VLE (i.e. updating its contents and sending prompt replies to students) devours a considerable amount of time, which may otherwise be allotted to other academic responsibilities like attending meetings and doing academic research. Actually VLEs may take much of the educator's free time if the students are so much engrossed with their virtual learning that they interact with their teacher regularly by sending queries, submitting drafts and asking the teacher to critique their drafts, and sharing their insights on the topics/issues raised in the VLE. On the other hand, students may be pressured when there are many homework tasks or requirements which are to be submitted online through the VLE. Hence, the informants suggested that EFL lecturers must not be too demanding in setting deadlines and they should give a reasonable number of homework considering the courses of the students.

3.4. Pervading concerns in sustaining VLEs

The informants expressed their conviction that the success of VLEs depends on at least three concerns or factors that must be given serious consideration. Figure 2 shows the following pervading concerns: interest, support and time.

First of all, lecturers must have a genuine interest to reach out to their students in order to create VLEs for their students; whereas the students must also have the interest to use VLEs to further their foreign language learning. Without the sustained zeal and initiative to try the VLE for their class, students cannot benefit from VLEs. The VLEs created by lecturers are futile if their students do not use them. Furthermore, without ample support from the college officials in the form of policies and provision of IT staff, lecturers may not be encouraged to go the extra mile in creating and sustaining VLEs for students.

Second, support is a significant concern as both technical and administrative support boost the confidence of the lecturers and students to enhance and patronize their VLE. Technical support is needed especially in uploading photos and videos which may need a heavy amount of time.

Finally, time is the third concern among students and lecturers alike. Creating a VLE and uploading instructional contents may easily be done in the college premises beyond the lecturers' class hours; however, responding to the students' queries may need so much time. Hence, lecturers must allot some of their free time for the sustenance of their VLE, particularly for sending responses to students' query, and sharing audio, video or textual contents on a regular basis.

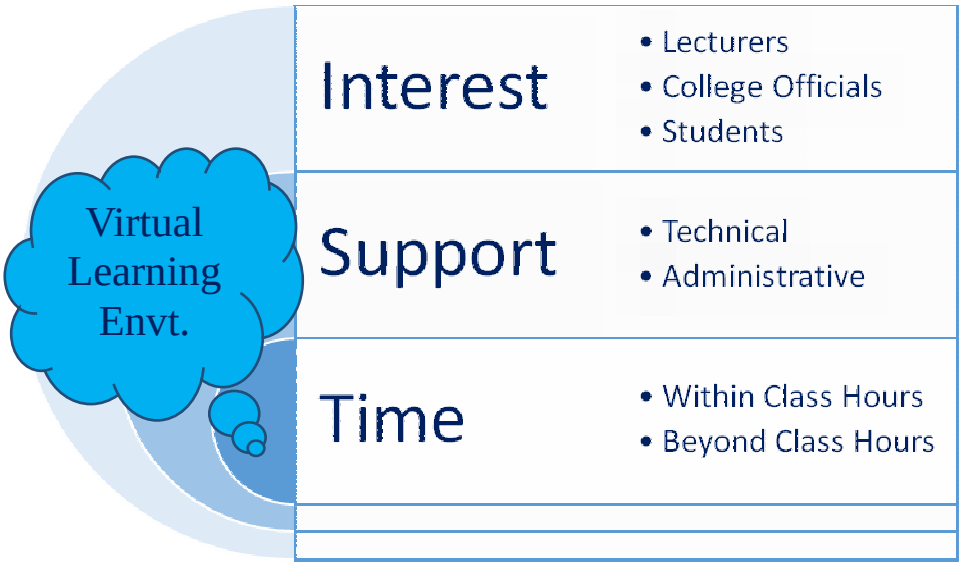

Figure 2. Pervading concerns in sustaining Virtual Learning Environments

3.5. Challenges encountered while using VLEs

The informants identified five challenges that they often encounter and address to make their VLEs successful. These include difficulty to collaborate, time management, students' native language preference, lack of support, and weak internet connectivity. Three of the challenges were identified by the student respondents, while the others were pointed out by the lecturer respondents.

Some student-informants claimed that they found it difficult to collaborate with other students as some lack motivation or technical knowledge to participate in their VLEs. Some of their classmates do not have the initiative to learn the basic features of the VLEs as they readily complain about the intricacies or complexities involved in accessing their virtual classroom.

Another challenge pointed out by the student-informants is time management. This is evident in the responses of two informants: "I do not have much free time to open my VLE regularly; No time for submitting homework in Edmodo." This challenge may be addressed if the lecturers do not overload their students with homework.

In addition, the native language preference among some students likewise poses a challenge. As observed by some student-informants, many of their fellow students frequently prefer to communicate in their native tongue, which is Arabic. This is quite understandable as some of them are not yet that confident to use the target language, hence, they resort to Arabic whenever they communicate with either the lecturer or their classmates.

Meanwhile, the lecturer-informants identified two challenges: lack of support, and working with luddites and pessimists. An informant claimed that lack of technical support affects the sustenance of VLE. "Sometimes, I need technical support to solve the issues in our virtual learning environment." The informants also pointed out that weak internet connectivity is another challenge. "It is difficult to log in once in a while so I have to open my VLE in the College, especially if I need to upload video clips."

Regardless whether EFL lecturers have created their VLEs to promote learner independence or to effectively reach out to their EFL students, they certainly need to go the extra mile and have an unwavering resolve to overcome the challenges that may hinder the success of their VLE.

3.6. Suggestions to enhance VLEs

The key informants put forward a number of suggestions and tips to improve VLEs and make these suitable and sensitive to the context of Omani EFL learners. As the VLEs are owned

and managed by the lecturers, it is appropriate to enumerate the pervading tips offered by the primary users — the EFL students — who would benefit much from attractive, secure, user-friendly and effective VLEs.

a) Make the VLE eye-catching by putting familiar icons or images related to English language learning in particular and education in general.
b) Upload instructional materials (e.g., PowerPoint presentations and handouts) regularly. This will encourage as many students as possible to join VLEs.
c) Share links of audios and/or videos of lessons to maximize the power of blended learning.
d) Encourage students to send messages, raise questions, and request clarifications exclusively in English; however, male students must not be allowed to interact with their female classmates.
e) Conduct online quizzes. This is a good way to check EFL students' progress.
f) Announce homework in the VLE and follow this up in the classroom.
g) Encourage students to turn in or submit their work on time. Once students have developed the habit of submitting their homework or project on time, they would surely deserve a pat on their back.
h) Praise students who actively participate in the VLEs. Do this both in the VLE and in the classroom.
i) Let students revise and resubmit their homework or project if they have submitted outputs of poor quality. If they do so, it is a positive sign that they are becoming intrinsically motivated to learn and enhance their skills.
j) Conduct online polls to let students feel that their opinion and insights are taken into consideration.
k) Let students do some collaborative homework or group projects.
l) Encourage students to share great quotes, informative articles, or links to informative audio and video clips related to their lessons.

The informants posited that following the aforementioned suggestions or tips to enhance VLEs would certainly help the lecturers to create interactive, user-friendly and effective VLEs for their EFL students

4. Limitations of the study and implications for future research

Some of the limitations of the study include the following:

a) results of this study do not provide conclusive evidence on the effectiveness of VLEs because the study primarily focused on the key informants' perception towards VLE and not on the students' actual learning performance after joining VLEs;
b) most of the key informants use Edmodo as their VLE, hence their observations are primarily based on their actual experience in using Edmodo, which may have features that are quite different from those of the other VLEs;
c) the insight and opinions of the informants were predominantly based on their actual experience with the VLEs during the conduct of this study.

Considering the findings of this study, the researcher recommends the following:

a) conducting more comprehensive studies on the impact of VLE in EFL learning and teaching;
b) determining the effect of VLE on developing learner autonomy, collaboration and communication through the conduct of an experimental, or quasi-experimental study;
c) encouraging EFL students to participate actively in VLEs;
d) empowering EFL educators to create VLEs and to explore the various features of VLEs that may be helpful to students;
e) encouraging EFL educators to post or upload challenging and fun-filled activities in respective VLE;
f) ensuring support for EFL lecturers who reach out to their students by sustaining interactive and effective VLEs;
g) evaluating EFL lecturers' actual use of VLEs in varied EFL contexts.

5. Conclusion

VLE is perceived by Omani students to have a positive effect on their EFL learning. With carefully designed VLEs, Omani EFL students feel that they can enjoy better collaboration, communication and learning at their own pace; whereas the lecturers can easily promote learner autonomy, lend a hand to their EFL students, and eventually kindle students' love for learning. VLEs in the EFL setting have several merits and demerits, nonetheless the merits outnumber the demerits. While using VLEs, lecturers and students encounter five challenges: difficulty to collaborate, time management, students' native language preference, lack of support, and weak internet connectivity. These challenges must be addressed judiciously to ensure that students participate actively in their EFL virtual classrooms and benefit from the perceived advantages of using VLEs. Meanwhile, the success of VLEs depends on at least three primary concerns: interest, support and time. Hence, sustaining an effective VLE cannot

be possible without the lecturers' genuine commitment to reach out to their EFL students and the authentic zeal to touch their lives.

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Appendix

EFL VIRTUAL LEARNING ENVIRONMENT: PERCEPTION, CONCERNS AND CHALLENGES

Interview Guide

A. Perception towards VLEs
   1. What VLEs (sites/ learning platform/learning management system) do you use in your EFL classes?
   2. A. For students, do you like virtual learning environment/s? Why or why not?
      B. For lecturers, do you recommend VLEs in EFL context? Why or why not?

B. Merits/Strengths/Advantages of VLEs
   1. Considering your actual use of your VLE, what do you like best in that VLE?
   2. Does VLE help you in learning English as a Foreign Language? If yes, in what way/s?

C. Demerits/ Weaknesses/Disadvantages of VLEs
   1. What do you like least in your virtual learning environment?
   2. Which of the features of your VLE do you like least? Why?
   3. Which of the features do you want to be improved? Why?

D. Concerns in sustaining VLEs
   1. What are the primary concerns (considerations) in sustaining a VLE?

E. Challenges encountered while using VLEs

1. What challenges/ problems have you encountered while using your VLE?

F. Suggestions to enhance VLEs

1. What feature/s should be found in your VLEs?
2. What are your suggestions to enhance VLEs?

IMPLEMENTING BLENDED LEARNING AND FLIPPED LEARNING MODELS IN THE UNIVERSITY CLASSROOM: A CASE STUDY

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Abstract

Mobile technologies have increasingly become more and more widespread not only for making our daily lives easier and simpler, but also for their enormous potential in educational development. This case study examines university students' satisfaction with and perceptions towards the use of blended learning and flipped classroom models in foreign language learning (FLL) contexts. The methodology used in this study involves the descriptive and quantitative analysis of responses generated from students studying English as a foreign language at the Faculty of Foreign Languages at the University of Jordan. The analysis of these responses gave the author of this study an idea about what factors a teacher should take into account when introducing blended learning and flipped classroom models into a classroom.

Key words: blended learning; flipped classroom; technology; case study

1. Introduction

Nowadays, mobile technologies, the Internet, TV, and mass media have expanded opportunities for learning, enabling learners to access and receive any piece of information they want anytime and anywhere.

Such phenomena have, therefore, led many higher education institutions to realize the importance of integrating technology into their educational systems to replace the traditional, teacher-centered, non-interactive methods that are based on memorization, rote learning, and accumulation of information for students with student-centered and task-based approaches that can extend learning beyond the classroom walls. This integration of technology to push the learning process to the next level involved introducing digital learning methods such as e-learning and blended learning on which a large body of research has been conducted to assess the effectiveness of their employment in education.

According to Kafyulilo (2015), e-learning incorporates using an electronic device (such as computers, mobile phones, tablets, etc.), Internet connection, and a particular platform to deliver part or all of course content to students inside and/or outside the campus. Conversely, Picciano (2014) refers to blended learning as a combination of traditional, face-to-face

classroom meetings and a mixture of online learning components. Many researchers (Picciano, Dziuban, & Graham, 2013) also define a blended learning course as a hybrid offering that encompasses a blend of face-to-face instruction with technology-based learning, deemed as a significant force for driving educational change. Similarly, the Department of Education and Early Childhood Development in the State of Victoria (2012) refers in its paper to blended learning as a mixture of traditional and technology-based learning approaches and resources to help learners accomplish their learning aims. According to Rovai and Jordan (2004), blended learning scheme is a "hybrid of classroom and online learning that includes some of the conveniences of online courses without the complete loss of face-to-face contact" (p. 1).

Blended learning comes in many formats and the teacher can choose the format that suits their pedagogical context. The Ultranet and Digital Learning Branch of the Department of Education and Early Childhood Development in the State of Victoria refers in its report published in 2012 that blended learning is not a recent creation; it refers to a teacher's successful use of some activities and extra resources in addition to the textbook(s), a practice that some teachers have adopted for years to provide their students with learner-centered experiences. The report also mentions another version of blended learning that involves using the internet with its wide array of information sources as well as mobile technologies to take advantage of the connectivity they offer to both students and teachers. Another format of blended learning, as described by Picciano (2006), requires determining specific percentages of face-to-face classroom meetings and online instruction to encourage independent, student-centered learning and active interactions among learners rather than the mere provision of knowledge to them, so that instead of meeting in a classroom three hours a week, the class meets two hours per week with the third hour dedicated to an online discussion.

Graham (2013) noted that many universities and colleges have designed their own blended learning models which vary depending on how much of a course is taught face-to-face or virtually.

As per the components of blended learning, Bullmaster-Day (2011) suggested that any blended learning course combines three types of instruction. The first is the traditional way of teaching; in which the instructor presents the course material directly to students through lecturing, visual materials, quizzes and other means. The second type emphasizes learning actively through researching information, doing exercises or solving problems. The last type is interactive learning in which students work with their peers in groups. She also concluded that effective blended learning is a personalized way of learning that can be tailored to meet students' individual needs and preferences, stressing the importance of constantly assessing

students' work and providing feedback to increase the involvement in their work and enhance their ability to become independent learners. Bullmaster-Day (2011) also pointed out that in a blended learning scheme the material is broken down into small manageable parts that students can easily access and process in a variety of ways; thus boosting cognitive engagement levels. The last finding pertaining to blended learning is that it enhances instruction by balancing teacher control with learner control, as students are given a chance to plan how much time they need to spend on each part of the material, arrange these parts in a sequence that makes it easier for them to learn them and access any learning support materials such as worked examples or exercises.

These findings were to a great extent consistent with the study by Lord and Lomicka (2008), in which they examined how to assist teachers to model cross-institutional situations for their students through integrating technological tools into blended learning. According to their findings, a teacher can implement a wide selection of technological tools in a blended course, including chats, blogs, and wikis to encourage distant discussion and interaction.

The study conducted by Banerjee (2011) in which he investigated the effectiveness of combining face-to-face and online models of instruction using a variety of tools including Blackboard and Google at a small college in translation demonstrated students' satisfaction with the use of technology for learning purposes. They noted that it offered more convenience, better self-learning control and better communication; however, they still favor face-to-face teaching for it entails dealing and interacting with a human being rather than with computers.

In a study examining the effect of blended learning on the critical thinking skills and attitudes of high school students towards a geography course, it was found that blended learning contributed more to student attitudes towards the geography course and was positively correlated with students' critical thinking skills (Korkmaz & Karakus, 2009).

Al-Zoghby and Doumy's study conducted in 2012 (as cited in Fakhir, 2015) showed that fourth graders in selected Jordanian schools displayed a positive attitude towards using the blended learning approach in teaching mathematics with greater motivation towards its learning.

Yapici and Akbayin (2012) examined the views of high school students on applying blended learning in a biology course. The results of the study showed that students' attitudes were positive.

Alseweed (2013) investigated the effects of blended learning on university students' achievements in the listening course of the English language and their attitudes towards this

approach. The results of the study show that students' attitudes as well as scores in achievement test were in favor of blended learning.

Obiedat, Nasir Eddeen, Harfoushi, AL-Hamarsheh, Koury, and Alassaf (2014) reported in their study which aimed to evaluate the effectiveness of blended learning on the academic achievement of students in the University of Jordan that there is a significant and positive impact of blended learning on academic achievement of the students in the University of Jordan.

Fakhir and Ibrahim (2018) explored in their study the effect of using blended learning on the achievements of the sixth-grade students in English. The results were in favor of blended learning.

Despite this large body of research on blended learning, only a limited number of studies, according to the researcher's knowledge after reviewing the related previous studies, have been conducted on the perceptions of students towards employing blended learning in English Language contexts in Jordan. In this study, the researcher aims to investigate students' attitudes towards using blended learning and flipped classroom models in English language learning contexts.

2. Methodology and description of the course

For the purposes of this study, the blended learning model of instruction was applied to two separate sections of one course entitled "Essentials of Public Speaking," offered to 2nd year students by the Department of Linguistics at the Faculty of Foreign Languages in the University of Jordan. The number of students in each section was 30.

As stated in the department's approved study plan, this speech communication course initially aims to strengthen the student's self-confidence to speak in public within the student body. During the course, the student is given the opportunity to develop their accuracy and fluency as well as their effective use of gestures and appropriate body language to reinforce their overall communicative ability and confidence. Two genres of speech are usually emphasized: the informative and the persuasive.

In this course whose classes took place five times a week, one-day of class time was utilized for corresponding online learning tasks. The other four classes were traditional face-to-face classroom meetings in which students were asked to give speeches in front of their classmates.

The course also used a flipped classroom design, which meant that the student is responsible for reading the class texts and watching the assigned videos before the lesson so

that class time can be used for presentation delivery and thoughtful discussions. No textbook was used for the course. This was remedied by readings selected from different websites, Power Point presentations, and YouTube videos shared with students. The new course format necessitated different assessment methods and requirements. To convert the course into a blended format, the University of Jordan's E-Learning Moodle platform was used in the course as the online learning environment. The course portal was organized into a weekly format with a topic to be tackled with in each class during the week.

Each topic had a video simulating the course content retrieved from YouTube, a Power Point presentation and a class reading (sometimes only one or two of these three components was shared); a plan of the lecture; and a clearly-stated mini-task for the students to do. The mini-tasks, which were assigned to students before the face-to-face classes, required information processing and a summary of the assigned class readings, slide shows, and/or YouTube videos recommended for watching. Delivering one mock speech every week and taking part in a forum discussion on a selected course subject were also a must. These activities were monitored and evaluated in the period between the face-to-face class meetings. The virtual class meetings' tasks were meant to enable the students to apply the knowledge they acquired from the mini-tasks through analyzing, synthesizing, and problem solving.

To evaluate students' progress, a new rating system was adopted. It allocated 30% of course work, rather than the usual 20% allowed by the university, to activities and learning tasks carried out inside and outside the classroom. The midterm and final exams consisted of oral presentations and were worth 30% and 40% respectively.

A questionnaire (appended at the end of this paper) to get students' feedback on combining face-to-face and online learning was carried out. The survey addressed their overall impressions of the new features of the course, namely: the new course design using the blended learning model of instruction, the new course structure using the flipped classroom format, and the new online learning environment using the e-learning platform.

3. Results and discussion

The results of the paper-based questionnaire which was distributed towards the end of the term are presented in the following tables. These tables show that the students who took part in the survey have different attitudes regarding the concepts as well as the features of blended learning and flipped learning. Before analyzing these attitudes, it is worth mentioning here that as far as Questions 4, 5, 6, and 7 in Table 2 are concerned, the participants in the survey were

allowed to select from the list of choices provided in each of these questions all the choices that are applicable to them. The same thing applies to Questions 11 and 12 in Table 3.

Table 1. Students' overall impression of blended learning

No.	Questions	Answers	Percentages
1	Before taking this course, I thought Blended Learning was….	I have not heard about it before	31.66%
		Using online sources and submitting assignments online	33.35%
		Submitting assignments online	11.66%
		Using online sources	15%
		Another (Specify please): - Face-to-face in-class meetings and virtual meetings - Using an e-learning platform for knowing grades and number of absences	8.33%
2	Since taking this course, I have realized Blended Learning is...	A new way of learning enabling students to be independent and active participants in the learning process.	50%
		Making use of both face-to-face meetings and online tools	30%
		Doing and submitting many assignments	8.34%
		Another (Specify please): - A tiresome way to learn	11.66%

In Table 1, the analysis of Question 1 indicates that blended learning is somehow popular with the students, as only almost 32% of them stated that they have not heard about it before. The most likely explanation of their prior knowledge of blended learning is that they heard about it from other students who were taking other blended learning courses in the same semester with other instructors in other departments in the Faculty. Conversely, 68% of the students had different ideas about what blended learning could be like, as almost 33.5% of them believed before taking the course that blended learning is basically about using online sources and submitting assignments online, whereas 34.5% of them presumed that blended learning only involves "Submitting assignments online," "Using online sources," "Face-to-face in-class meetings and virtual meetings," or "Using an e-learning platform for knowing grades and number of absences."

These percentages highlight the importance of giving orientation to students at the beginning of the semester to make them acquainted with what blended learning is and what its potential benefits to them are and eliminate any misunderstandings that any of those students who are already familiar with blended learning might have.

Table 1 (Question 2) also outlines students' perceptions of blended learning after taking the course, with half of them agreeing that this model of instruction is a new learning method encouraging independent and active learning. Conversely, 30% of the students realized that this

method of learning is basically making use of both face-to-face meetings and online tools. In addition, almost 20% of the students believe that blended learning is a tiresome way to learn, requiring them to do and submit many assignments.

Table 2a. Students' evaluation of blended learning experience

No.	Questions	Answers	Percentages
3	How did you like the Blended Learning model of instruction?	Liked it	50%
		Did not like it	20%
		Not sure	30%
4	What I really enjoyed about Blended Learning is...	Opportunity to practice what I learn and get feedback on every assignment I do (theory and practice combination)	73.33%
		Having one day off	36.66%
		Supplementary materials (extra readings, videos, etc.) are useful	43.33%
		Learning from a variety of sources: searching the Internet, watching videos, reading online articles; not only using textbooks	56.66%
		Integrating technology for learning purposes	23.33%
		Another (Specify please): - Broadened student's knowledge boundaries - A channel for communication between the student and his peers on one hand as well as the student and the instructor on the other	8.33%
5	What I found challenging about Blended Learning is...	Too many assignments and activities	76.66%
		Course nature does not fit the Blended Learning model of instruction (more face-to-face meeting time is needed)	28.33%
		Taking part in online discussions	10%
		The new rating system (30% of course work is allocated to activities carried out inside and outside the classroom)	11.66%
		Having to learn independently at a distance	26.66%
		Learning from a variety of sources is demanding	33.33%
		Another (Specify please):	0%
6	What did you like about using E-learning (the online learning platform)?	User-friendly interface	20%
		logical course structure	25%
		Access to a wide variety of learning materials	33.33%
		Easy access to learning materials (everything is available at all times in one place)	66.66%
		Collaborative learning possibility (through discussions)	15%
		Another (Specify please): - I liked receiving immediate feedback on my work	8.33%

Table 2b. Students' evaluation of blended learning experience

		Collaborative learning possibility (through discussions)	15%
		Another (Specify please): - I liked receiving immediate feedback on my work	8.33%
7	What challenges have you faced related to technology or access to E-learning?	The interface is not easy to use; I did not get used to it quickly	21.66%
		Too many activities and assignments to do and submit	58.33%
		Having to read articles and/or watch videos before coming to class	26.66%
		Having to take part in online discussions	13.33%
		The E-learning sometimes crashes (Cannot access, upload, or download course materials all the time)	38.33%
		Working on the computer is tiring when compared to usual classroom work	41.66%
		Another (Specify please): - A mobile application is needed; missing the assignment due to lack of push notification	10%

8	What kind of activities did you enjoy the most? Grade your preferences from 1 (lowest) to 4 (highest).	online assignments	3	48.34%	2	15%	4	15%	2	8.33%	4	8.33%	4	5%
		searching the Internet	2		3		1		4		1		1	
		online discussions	1		1		3		1		3		2	
		presentations	4		4		2		3		2		3	
9	Are there any other activities that you like to add to the above list? If yes, specify them.	- I enjoyed the course. All the activities were perfect. - No.													100%

As Tables 2a and 2b demonstrate, half of the students were in favor of blended learning. The other half was divided between those who are not sure whether they liked it or not (30%) and those who had a negative attitude towards it (20%).

As regards students' reasons for their positive attitudes towards the format of blended learning used in the course, almost 74% viewed blended learning as an opportunity to practice what they learn and get feedback on every assignment they do; where more than half of the students (56.66%) mentioned they liked learning from a variety of sources, including searching the Internet and watching online videos. Almost 44% of the students believed that using

supplementary materials (extra readings, videos, etc.) are useful and 23.3% of them liked the idea of integrating technology for learning purposes. Some students were in favour of the idea of having a day off from university with a percentage of 36.6%, while 8.33% of them noted that blended learning helped them broaden their knowledge boundaries and communicate more with their peers as well as with their instructor.

When asked about what they found challenging about blended learning, almost 77% of the students noted that this model of instruction involves doing too many assignments and activities, 33.3% of them believed that learning from a variety of sources is demanding, 28.3% of them assumed that the course nature does not fit the blended learning model of instruction (i.e. more face-to-face meeting time is needed), and 10% of them did not enjoy taking part in online discussions. Furthermore, 11.6% and 26.6% of the students, respectively, agreed that allocating 30% of course work to activities carried out inside and outside the classroom rather than the 20% previously allocated, and having to learn independently at a distance are among the challenges they encountered in the blended learning course they took.

In Table 2, Questions 6 and 7 outline students' positive and negative attitudes, respectively, towards using an online learning platform in the course. In Question 6, most of the students with a percentage of 66.6% indicated that using an e-learning platform enabled easy access to learning materials as everything is available at all times in one place, whereas 33.3% of them approved of using an e-learning platform for being able to access a wide variety of learning materials. Also, the students indicated that Moodle, the e-learning platform used in the course, has a user-friendly interface with a percentage of 20%, displayed the material in a logical order with a percentage of 25%, enabled collaborative learning through online discussions with a percentage of 15%, and allowed students to receive immediate feedback on their work with a percentage of 8.3%.

In Question 7, the shortcomings of the platform indicated by the students with the percentages of 10%, 38.3%, and 26.6%, respectively were missing the assignment due to lack of push notification through a mobile phone application, not being able to access, upload, or download course materials all the time as the platform sometimes crashes, and having to read articles and/or watch videos before coming to class. Additionally, the results show that the students did not approve of the idea of doing and submitting too many assignments and activities with a percentage of 58.3%, which is the highest percentage among the other shortcomings, while it is shown in the results that the idea of using a computer program to write assignments is tiring prevailed with a percentage of 41.6 among the students.

On the other hand, Table 2 shows some inconsistency in students' responses. For example, more than half of the students (56.66%) mentioned they liked learning from a variety of sources, including searching the Internet and watching online videos, but only 23.33% of them were supporters of integrating technology for learning purposes, despite the well-known love of those young students for using technology in general. This conflicting attitude of students is justified by the high percentage of them believing that blended learning requires doing too many assignments and activities (76.66% in Question 5, and 58.33% in Question 7).

Another significant finding in Table 2 that shows inconsistency in students' responses is that 15% of the students liked the idea of using a virtual learning environment to learn collaboratively through discussions (Question 6) - possibly due to its novelty to them - while 13.3% of them did not like having to take part in online discussions (Question 7).

Similarly, 20% of the students indicated that Moodle is a user-friendly interface (Question 6), while 21.66% of them believed that the interface is not easy to use and getting used to it takes time (Question 7). This inconsistency is justified by the fact that some students, as they notified the researcher, have used Moodle before in other courses and it was not easy to use at the beginning but now they know better how to use it.

Another example showing irregularity in students' answers is that 33.33% believed that learning from a variety of sources is demanding (Question 5), while the same percentage of students liked using a virtual learning platform for being able to access a wide variety of learning materials (Question 6). These instances, together with the experience of the researcher who conducted this study, demonstrate that students like learning through visual (videos) and textual (readings) contents. However the instructor has to balance the different types of learning materials; so that students will not be overwhelmed with too many activities and assignments to do.

When asked about their preferences for the types of tasks and activities they were assigned (Question 8), 48.34% of the partakers preferred the suggested activities in the following order: presentations, online assignments, searching the Internet, and online discussions. This choice of order is understood since the nature of the course in which the partakers were enrolled required them to give presentations regularly which necessitate doing pertinent online assignments and searching the Internet to prepare for these presentations. Yet, taking part in online discussions was not much preferred most likely due to its novelty and the considered amount of time and effort it needs. Generally speaking, these types of assignments were the most satisfying for students and the most appropriate for the course in question given that no other activities were suggested by the participants (Question 9).

Table 3. Students' evaluation of using the flipped learning model

No.	Questions	Answers	Percentages
10	How did you like the flipped classroom strategy?	Liked it	70%
		Did not like it	13.34%
		Not sure	16.66%
11	What did you like about it?	Being in full control of my learning (I am able to re-watch videos, read assigned articles at my own pace, write down questions and discuss them in class)	48.33%
		Class time is used to master skills through collaborative discussions and applying what I learned rather than only receiving knowledge from the teacher	38.33%
		Coming well-prepared for class discussion	3.166%
		Ability to catch up quickly if I miss a class as course content is accessible at all times online	41.66%
		Another (Specify please):	0%
12	What didn't you like about it?	I did not have access to the Internet all the time	21.66%
		I needed to spend a long time in front of a computer watching videos, reading articles, doing and uploading online assignments.	75%
		Another (Specify please): - Videos are sometimes long - Constant fear that the assignment was not uploaded and shared with the instructor on e-learning	4.99%

Even though the strategy of flipped classroom learning which emphasizes the idea of self-study and limits the role of the teacher and the supervisor of the learning process to a mentor is somewhat new to students, almost 70% of them expressed their general acceptance of it as shown in Table 3, Question 10.

This positive attitude was demonstrated by the responses of the students to Question 11 (Table 3). They indicated that flipped learning helped them to be in full control of their learning and study at their own pace (48.33%), to catch up quickly if they miss a class (41.66%), to exploit class time to master skills through collaborative discussions and apply what they learned (38.33%), and to come well-prepared for class discussion (3.16%).

At the same time, the students were negative about such a concept with 75% of them expressing their dislike of the idea of spending a long time in front of a computer watching videos, reading articles, doing and uploading online assignments (see Table 3, Question 12).

Furthermore, 21.66% of the participants indicated that they do not have access to the Internet all the time, while 4.99% of them mentioned that the videos they were asked to watch were sometimes long and expressed a constant fear that they might not have properly uploaded and shared the assignment with the instructor on e-learning.

4. Findings and recommendations

The results of this study demonstrate that blended learning and flipped classroom strategies can be used as effective tools to move from the traditional educational systems to more recent educational models. Such models encourage the adoption of student-centered learning, which fosters students' analytical and critical thinking skills and encourages them to work interactively and acquire knowledge in a way that suits their interests and learning styles. Such a form of implementation allows the role of the teacher to shift from a source of information to a facilitator.

The study also gives an insight into the considerations that instructors intending to teach courses with blended learning and flipped classroom models should pay attention to.

The findings of this study indicate that blended learning balances the use of both traditional face-to-face instruction and modern technology to facilitate interactive collaboration, which is an important feature of the modern classroom. Additionally, this study reveals that blended learning offers a customized learning experience with a variety of activities and collaboration tools, online discussions, and student-tailored feedback. Furthermore, results show that effective blended learning requires keeping a balance between the material covered in the course and the number of tasks and activities assigned to students on the one hand, and learning objectives on the other. Moreover, the collected data show that the flipped classroom model helps reduce the infrastructure challenges associated with using modern technology in the classroom. Such a model enables students to watch videos and do the readings in preparation for class discussions in advance anytime, anywhere and not necessarily on campus.

As far as the integration of technology, particularly the use of an e-learning platform, in learning contexts is concerned, the results of the study demonstrate that successful use of technology for classroom learning necessitates carefully choosing the tasks and activities (visual and textual) that attract students and increase their willingness to learn. In addition, this study underscores the significance of overcoming any case of student computer illiteracy or

fear associated with the integration of new kinds of learning activities in the educational process. According to the study, this can be achieved by providing students with constant technical assistance through, for example, sharing course-tailored manuals about the new virtual learning environment or referring them to the IT department in the pertinent educational institution for technical support.

All in all, further research should be carried out and more data should be collected to make generalizations about students' perceptions with regards to blended learning and flipped classroom design. The investigation should also examine the types of activities and assignments that promote greater student engagement and improve their experience with blended learning and flipped classroom models, as well as the types of technical and logistic difficulties that both teachers and students face in blended and flipped learning.

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AN EXPERIMENTAL STUDY OF SUBTITLED ONLINE VIDEO SUPPORTING THAI STUDENTS LEARNING ENGLISH IT CONTENT

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Abstract

This research study investigated whether the innovation of online video media spoken in both Thai and English with appropriate subtitles improved English skills for new students in Business Computing at Suratthani Rajabhat University. Ninety two students were split equally between an experimental group using video online media for learning and a control group learning the same content face-to-face in the classroom. Evaluation was conducted through achievement and satisfaction tests. Trials of the instructional media by 33 students with a range of English skills helped to improve it. At the end of the learning period all students using the video online media passed the achievement test standard but only 54% of the control group passed. There was no significant difference between the pre-test scores of the two groups. The post-test scores showed that the experimental group had a significantly higher average score (23.39) than the control group (14.89) at the p level of 0.05. The achievement test results of the experimental group (listening = 3.98, reading =3.89, writing = 3.93, speaking = 3.91, discussion =3.91, presenting = 3.87) were significantly higher than the control group (listening = 2.94, reading =3.07, writing = 2.72, speaking = 1.93, discussion =2.20, presenting = 2.20) at the p level of 0.01 in every English skill. The students' satisfaction for the innovation rated out of 5 was at a high level overall (4.54), the students were satisfied with the innovation (4.67), the innovation was interesting (4.63), and the innovation was easy to understand (4.28).

Keywords: English skills; cloud computing; online learning; online video

1. Introduction

The Thailand Ministry of Education (2012) has been paying more attention to the development of English language ability among Thai youth by targeting young Thai people to communicate in English effectively as can be seen from the increase in the number of international courses in Thai intuitions from elementary level to university level in both public and private institutions. Wutwongsa (2015) reported that the International Institute for Management Development (IMD) World Competitive Yearbook 2011 found that Singapore has the highest level of English proficiency in ASEAN countries followed by Philippines and Malaysia, with Thailand below Indonesia. This is in line with the English Proficiency Index (Education First, 2018),

which has five levels: very high, high, moderate, low and very low. The results show that the proficiency of English in Thailand is very low, lower than Indonesia and Vietnam which have moderate proficiency.

All this is also in line with the TOEFL test results of the English proficiency test of graduates in ASEAN countries, which showed that Singapore and the Philippines were followed by Malaysia, Indonesia, Myanmar, Vietnam and Cambodia which all had average scores of more than 500 for English language skills. The Thai language proficiency score is lower than 500, which is the same level as Laos. This indicates that Thai graduates of the English language have problems in using English and shows the problem of using English skills is a priority.

In addition, the National Academic Testing Institute (2013) reported the results of the Ordinary National Educational Test (O-NET) where the average score on the use of English skills of final year high school students in Thailand in the academic year 2012 was 22.13. In the academic year 2013, although improving, was 25.35 which was still low. Therefore, the need for development of English language skills is vital.

A survey by the first author to improve the 2012 curriculum of Bachelor of Business Administration of Business Computer Department, Suratthani Rajabhat University found that one of the problems faced by first-time students entering the Business Computer Department was the lack of a foreign language, especially English. Moreover, the experiences of this author teaching first year students in the academic year 2015 in the Fundamentals of Computer Science and Technology Module found that 80% of students could not explain the meaning of technical terms, and the 20% of students who could pronounce the technical terms correctly did not understand the meaning.

In order to improve the English skills of these undergraduate students, the author has developed a series of instructional activities focusing on English language skills through using online video about the cloud computing topic. It aims to make learners familiar with the use of English skills in listening, speaking, reading, writing, presenting and discussing. This will give students more confidence in using English in computing to make graduates more acceptable to employers and increase English proficiency in computers and information technology in line with the policy for Thai youth to develop knowledge and ability to use English equally with other countries in the ASEAN region.

The research problem for this study was whether learning online using video and subtitles would help Thai students learn English IT content better than just learning face-to-face in the classroom. The approach adopted is original by presenting the content: first in spoken

Thai with English subtitles to help Thai students read the English words; and then presenting in spoken English with Thai subtitles to help Thai students listen to the English content; and then presenting in spoken English with English subtitles to help Thai students both listen to and read the English IT content without any supporting Thai speech or writing. The rationale for this approach was that such an English learning process from easy to difficult using video online could help university students with a low level of English skills learn English. This approach required the author to develop the online video media in a cloud computing instructional package with emphasis on English skills in listening, speaking, reading, writing, presenting, and discussion for use by new students in Business Computing at Suratthani Rajabhat University. Evaluation involved comparing the students' academic achievement scores before and after using the instructional package with the achievement scores of a control group learning the same content face-to-face in the classroom and measuring students' satisfaction level towards the video online instructional package. Further details of the research design are provided in section 3 below.

2. Literature review

No previous published research could be found adopting a similar research methodology to this study but there has been some research on the benefits of captioning and the use of video for language learning. There has been extensive research showing how subtitles can be helpful for reading and literacy development but usually with the subtitles in the same language (Zane Education, 2018).

The use of the terms 'captions' or 'subtitles' varies across countries and they are sometimes used interchangeably. However, when the written words are in the same language as the spoken words they are usually designed to assist people with hearing impairments by also describing non speech sounds whereas when in a different language to the spoken word they are usually designed to only assist non-native speakers who have no hearing impairments.

Al-Seghayer (2001) studied using graphics and multimedia in teaching a second language effectively by testing the knowledge of vocabulary meaning and reading skill. There were three forms of teaching to describe meaning: only text, text and picture, and text and video. The data was collected by interviewing and asking questions using a questionnaire with 30 participants. The results showed that text with video helped learners with their understanding about the topic more than learning from text with PowerPoint because the combination of multimedia, voice, and text helped learners to build a mental image and concentrate more than only text and picture

Shimogori, Ikeda, and Tsuboi (2010) studied how automatically generated captions help learners to communicate in English with non-native speakers. The results showed captions facilitated understanding English listening skills, and especially helped improve the ability in listening skills for half of the learners in the class to reach an intermediate level, as well as had a positive effect on abilities in other English skills.

Guo (2013) studied several million video watching sessions on the edX platform and found the time spent watching went down as the videos got longer than 6 minutes. Comscore (Lella, 2014) found that the average watching time for online content video on the top 10 video platforms was around 4 minutes. Research has suggested, therefore, that approximately 4 minutes is a good length of video to keep viewers engaged, which is why 3-4 minutes was chosen for the length of the videos in this study.

Wiseman and Odell (2014) note that the challenge that using English as the Medium of Instruction presents to lecturers is "how to present their subject clearly and concisely in another language" and that students' perceptions of lecturers' English language proficiency relate to their perceptions of general competence. If it is harder for lecturers who are non-native speakers of English to provide clear and concise teaching through live face-to-face teaching in English than through pre-prepared online captioned videos, it might be expected that students would find the use of pre-prepared online captioned videos helpful.

Yabe (2015) investigated how much more university students in the US would be willing to pay for a captioned online class rather than for a non-captioned online class and found that international students would be willing to pay more than deaf and hard-of-hearing students or native speakers. These findings suggest that students greatly value the use of captions when learning in their non-native language.

Huang, Shadiev and Hwang (2016) split sixty Taiwanese university students into two groups. One group watched English lecture recordings with English captions and the other group watched them without captions. Then both groups were tested on the content and also surveyed about their cognitive load (i.e. mental effort) used. Captions improved students' performance and reduced cognitive load and were particularly beneficial for low EFL ability students. However, Huang et al. did not provide information about the length of the lectures in this journal article.

Bal-Gezegin (2014) studied the effect of using video and PowerPoint in article writing by 28 students in France. The participants were divided into two groups. The first group watched a video clip with a French voice and subtitles. The second group listened to a teacher who read the text in French and showed four PowerPoint slides. The results found that the first

group wrote an article significantly better than the second group at p = 0.05 level because the video connects language with meaning more than the PowerPoint media.

Teaching by getting students to watch online videos outside the class time is known as 'flipped learning'. Wald (2011) showed how using captioned videos in a flipped learning classroom allowed students to go at their own pace and watch the recording as many times as they needed. Bishop (2013) surveyed research about the flipped classroom, emphasising that the key point of this form of teaching and learning is that teaching and learning activities take place both inside and outside the classroom. There was also an evaluation of the methodology in teaching and learning of each activity. The results showed that students were more satisfied while learning in a classroom than while watching a video. However, students preferred learning using activities more than just listening to a lecture. Moreover, the flipped learning classroom increased students' learning performance by 21% compared to a traditional classroom. However, this study was at an early stage and needed more research, especially on classroom activities.

3. The study

3.1. Research purpose, materials and procedure

This research study aimed at comparing the learning achievement of two groups of learners: the experimental group who used online video and the control group who were taught face-to-face in the classroom. These two groups used the same content but a different teaching approach using different types of teaching media. The experimental group accessed an online video recording of a PowerPoint presentation in the classroom while the control group had the same PowerPoint presentation offered by the teacher face-to-face in class. The online materials were captioned whereas a transcript was provided for the Face-to-Face teaching group. The author, who is a native Thai speaker who also speaks British English fluently was the teacher for both the online recordings and face-to-face teaching in both Thai and English. The English was checked by the second author who is a native UK English speaker. The videos were produced using PowerPoint with the audio recorded using the MacBook Air's own microphone and so would be easy for any teacher to also create using standard computer equipment. Both groups were asked to do a pre-test before the experiment and a post-test after the experiment. The pre-test and post-test questions were designed by the teacher who is the author/researcher and checked by the native English speaking second author.

The achievement measurements were focused on the English skills of listening, speaking, reading, writing, presentation and discussion before and after using the instructional

package developed by the authors/researchers. The achievement of the experimental and control groups were compared by scores from the pre-test and the post-test, as well as performance scores of presentation capabilities and the discussion capabilities in English.

Three presentations of the same material using different formats were used to help students learn both written and spoken English through listening and reading. Both groups had the same order of presentations:

1) Thai slides, Thai speech, and English subtitles (experimental group: see example in Figure 1) or transcript (control group) to help understand the subject and concepts in Thai and English by reading English and by learning the meaning of the English subtitles or transcript. The online video is available at https://www.youtube.com/watch?v=QHBVTnqhQ-U

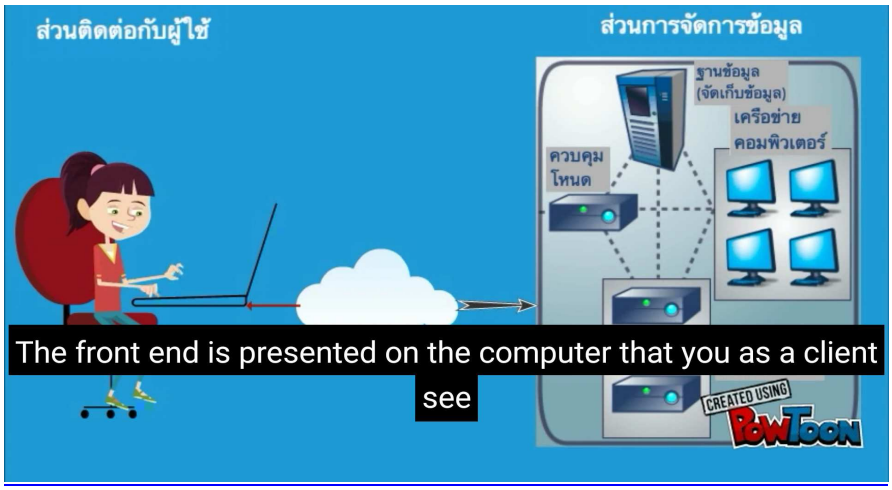


Figure 1. Example of Thai slideshow with English subtitles for the experimental group

2) English slides, English speech, and Thai subtitles (experimental group: see example in Figure 2) or transcript (control group) to help listening to English (and therefore also later help with speaking English) by learning the meaning and pronunciation of spoken English and reading English (and therefore also later help with writing English) through written English slides. The online video is available at https://www.youtube.com/watch?v=bUyU4aBrZxM&t=22s.

Figure 2. Example of English slideshow with Thai subtitles for the experimental group

3) English slides, English speech and English subtitles (experimental group: see example in Figure 3) or transcript (control group: see example in Figure 4) to help practice listening in English (and therefore also later help with speaking English) and learning the meaning and pronunciation of spoken English and reading English (and therefore also later help with writing English) through written English slides and subtitles without the support of any spoken or written Thai. Starting with English speech and English subtitles (online) or transcript (classroom) would have been too difficult for the students to learn new technical vocabulary. The online video is available at: https://www.youtube.com/watch?v=CMrxzj8x3zo.

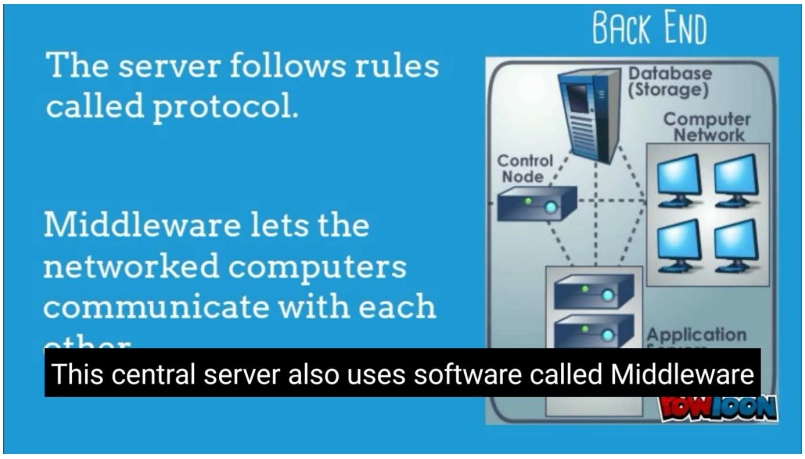
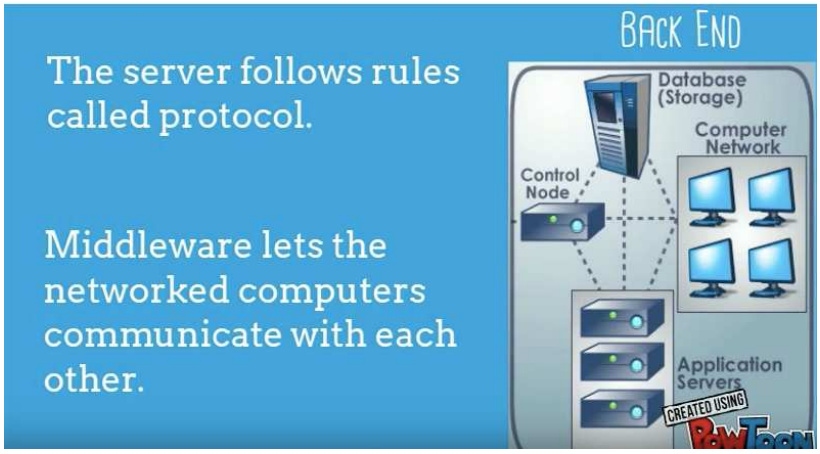


Figure 3. Example of English slideshow with English subtitles for the experimental group



0:00 Hello my name is Kewalin and I'm so excited to be your teacher this year.
0:07 For the first episode, I would like to talk about cloud computing.
0:14 Applications, Files, Videos, Music, and you are constantly faced with a problem finding space on your hard drive for all your digital stuff.
0:26 With cloud computing all your stuff can be stored on the World Wide Web

Figure 4. Example of English slideshow with English transcript for the control group

The content that was presented concerned the meaning of cloud computing; cloud computing architecture; process of cloud computing; advantages and disadvantages of cloud computing. Both groups of students were free to access their respective teaching materials also at home after class. The main difference was that the experimental group was able to listen to the teacher again as they could access the online recording but the control group could not listen again to the teacher as they had no recording.

For the student presentations the control group produced English slides, spoke English and produced a transcript in English while the experimental group created an online video with English slides and spoke English with English subtitles. The differences between the groups was therefore the creation of an online video of their slide presentation with subtitles by the experimental group and the presentation of PowerPoint slides in the classroom with a transcript by the control group.

For the student discussion the control group was asked questions and they wrote down their answers/discussions on the board in the classroom while the experimental group discussed questions on Facebook by typing answers/discussions. For both groups, the teacher used the same questions written in English.

The population were 514 undergraduate students in the Business Computer Department, Faculty of Management Sciences, Suratthani Rajabhat University. The samples were two groups of 46 undergraduate 1st-year students in the Business Computer Department who enrolled in the Fundamentals of Computer and Information Technology in Semester 1, 2016.

The two groups had similar average scores in the English Test when they entered the university. The experimental group had an average score of 70.64 and the control group had an average score of 68.10. A third group of 46 students having an average score of English of 68.10 was used to pilot and improve the materials and tests. All three groups were taught by the first author.

Tests for desired behavioural goals were developed for knowledge and understanding of cloud computing; knowledge and understanding about writing English sentences; ability in English pronunciation; advantages and disadvantages of applying a cloud computing service; presenting skill in English; and discussion skill in English. The focus of Part 1 test was on testing knowledge, memorizing, and understanding of cloud computing using reading skills. Part 2 tested writing skill in English sentences in the cloud computing topic, measured by checking their knowledge and understanding. Part 3 tested students' abilities in English pronunciation about the cloud computing topic, measured by their pronunciation in order to test their listening (in video or class) and speaking skills. Part 4 tested students' abilities in reading, understand meaning, and implementation. Part 5 tested the ability through producing video online media to present and answer questions. Part 6 tested the ability in discussion using speaking skills, listening skills, and discussion skills.

Three experts in English, computing, and measurement and achievement who had five years' experience in the fields evaluated the Item Object Congruence (IOC) presentation criteria skills in English using the following ratings: +1 = sure that it is related, 0 = not sure that it is related, and -1 = sure that it is not related.

The correspondences between the tests and the behavioural objectives based on the average scores of the three experts are displayed in Table 2, showing that the tests were generally considered good apart from the discussion. The experts suggested that the discussion method for the control group should be changed from speaking in class to writing on the blackboard to more closely match the experimental group typing a discussion in the Facebook social media program. The researcher agreed and adjusted it accordingly. All experts agreed that the test was consistent with the lesson and the test was consistent with the objectives. Only two experts were not sure whether the number of exercises in each lesson was appropriate. Only one expert disagreed that the forms of test were appropriate for the lesson, while two experts were not sure if the questions were of relevance to the content.

Table 1. The relationship between the tests, desired behavioural goals and the content and skills used

Tests	**Desired behavioural goals**	**Skills used**
Part 1 Test knowledge, memorizing, understanding of Cloud Computing	Measure knowledge, memorizing, understanding of the meaning computing term	Reading skill
Part 2 Test knowledge, understanding about writing English sentences in Cloud Computing topic	Measure knowledge, understanding about writing English sentences	Writing skill
Part 3 Test ability in English pronunciation about Cloud Computing topic	Measure ability in English pronunciation	Listening and speaking skills
Part 4 Test knowledge, elements, and process of Cloud Computing, advantages and disadvantages of applying Could Computing Service	Measure ability in reading, understand meaning and implementation	Reading skill, understanding, and implementation
Part 5 Test presenting skill in English about Cloud Computing	Measure ability in producing video online media to present and answer questions	Speaking skill, presenting skill, listening skill, and answering questions
Part 6 Test discussion skill in English about Cloud Computing	Measure ability in discussion	Speaking skill, listening skill, and discussion skill

Table 2. The findings of correspondence between the test and the behavioural objective from experts

Evaluation Criteria	**Average scores of learning activities**					
	Listening	**Speaking**	**Reading**	**Writing**	**Presenting**	**Discussion**
Pre-test and Post-test	**IOC**	**IOC**	**IOC**	**IOC**	**IOC**	**IOC**
1. The test is consistent with the lesson.	1	1	1	1	1	1
2. The test is consistent with the objectives.	1	1	1	1	1	1
3. The number of exercises in each lesson is appropriate.	1	1	1	0	1	0
4. The forms of test are appropriate for the lesson.	1	1	1	1	1	-1
5. The questions are of relevance to content.	1	1	0	0	1	1

The development process of the instructional package via online video media in cloud computing (see Figure 5) involved trials of the instructional package by:

- three learners who have low, medium, high scores of English test learning following the instructional package via online video media process by the observation, control, and suggestion of the instructor (Low = 0-2, medium = 3, high = 4-5);
- a small group of 10 participants with 3 people who have a high level, 4 people who have a medium level and 3 people who have a low level of using English;
- a large group of 30 participants with 10 people who have a high level, 10 people a medium level and 10 people who have a low level of using English.

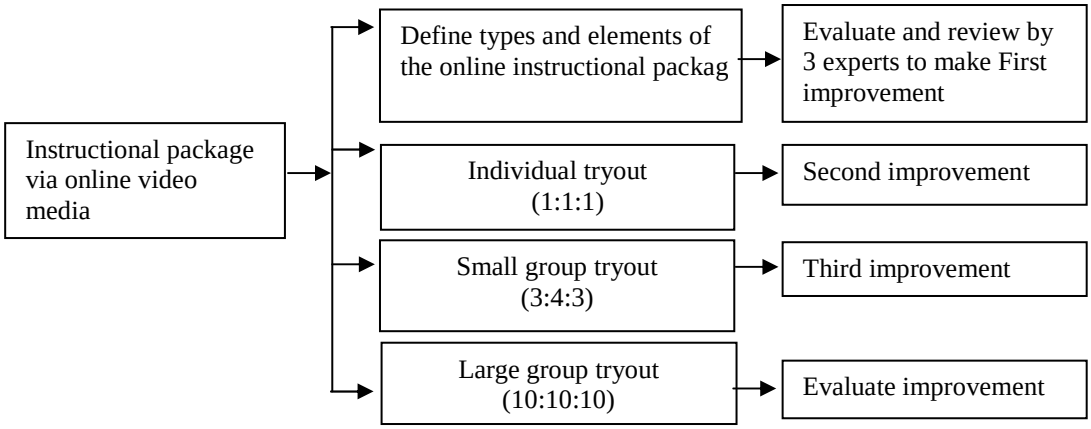


Figure 5. The development process of the instructional package

The findings from the three participants' trials of learning from online video media showed that the researcher should change the long sentences in the explanation to be shorter, and change the form of the writing test from writing full sentences to rearranging sentences. The findings from the small group of 10 participants' trials of learning from online video media showed that the researcher should change the long sentences for listening to be shorter, and remove ambiguous questions from the test. The findings from the large group of 30 participants' trials of learning from online video media showed further improvement was not necessary.

The pre-test and post-test were used in evaluating students' efficiency in learning by answering the same 20 questions, which were divided into four parts: meaning of vocabulary items, rearranging or writing sentences, pronunciation and reading comprehension. The questions in each part were developed using 15 questions per part and tried out with 30 participants who were not in the sample groups in order to select the appropriate questions that were not too difficult or easy for students. The best 5 questions from each part were selected to become 20 questions in total. If the learners selected the right answer, they got 1 mark, if not, they got 0 marks.

Part 5 was about the presentation ability, where learners created a video online and then presented it online by uploading to YouTube. There were four criteria used by the experts in their presentation ability judgements, where a score 7-8 means good, 4-6 means medium, and 1-3 means need to improve (see Table 3). A score over 4 means they passed the presentation criteria.

Table 3. Presentation scoring criteria

Scores / criteria	4	3	2	1
Video online material	- match objective well - correct spelling - related content and consistency - appropriate pictures or symbols that make presentation interesting and help understanding - good looking presentation	- mostly match objective - misspelling 1-2 places - most content related and consistent - mostly appropriate pictures or symbols and help understand presentation - good presentation	- somewhat match objective - misspelling 3 -4 places - some content related and consistent - some relevant picture and symbol help understand presentation - some interesting part of presentation	- less related to objective - misspelling more than 4 places - less relevance in content - no picture or symbol helps describe presentation - video online is not interesting
Presentation	- pronounce correct stress in words or sentences - correct intonation - pronounce consonants correctly - present all correct, smoothly and interesting	- pronounce mostly correct stress in words or sentences - mostly correct intonation - pronounce most consonants correctly - present 1-2 places wrong , stop 1-2 times to think but still interesting presentation	- pronounce some correct stress in words or sentences - some correct intonation - pronounce some consonants correctly - present 3-4 places wrong , stop 3-4 times to think, and some interesting presentation	- pronounce less correct stress in words or sentences - less correct intonation - pronounce few consonants correctly - present more than 4 places wrong, stop more than 4 times to think, and not interesting presentation

As regards the discussion scoring criteria (Table 4), the score of 7-8 means good, 4-6 means medium, and 1-3 means needs to improve. The score over 4 means they passed the discussion criteria. Three experts who had at least 5 years' experience in Computer Science who knew English very well were asked to evaluate the presentations and discussions following the criteria.

Table 4. Discussion scoring criteria

score / Criteria	4	3	2	1
Discussion	- discuss to the point and correctly - use correct English grammar	- most of discussion to the point and correct - mostly using correct English grammar only a few mistakes	- some of discussion to the point and only some are correct - some use correct English grammar, 3-4 places have grammar mistakes	- less discussion and mostly not relevant to the topic and correct - more than 4 places have mistakes using English
Answering questions	- answer questions directly and correctly - use correct English grammar	- answer most questions directly and correctly - use mostly correct English grammar only 1-2 places wrong	- answer some questions directly and correctly - use some correct English grammar; 3-4 places wrong	- answer few questions directly and correctly or say only a word - use less correct English grammar over 4 places wrong

4. Results

Scores within groups and between groups and satisfaction ratings were analysed.

4.1. The results within the experimental group

The results of a Paired Sample t-test for the experimental group of 46 participants showed that the average scores ($\overline{X}$ = 23.50) after learning with the online video media about cloud computing was higher than the pre-test score ($\overline{X}$ = 4.52) at the 0.05 level of significance (see Table 5). The coefficient of variation score of pre-test and post-test scores of the online video group was 7.62, which is low. It means the learning material has a very high efficiency. 100 % of the learners passed the post-test criteria, which that was set at a score of 15 out of 30 (see Table 6).

Table 5. Paired Sample t-test for the experiment group between pre-test and post-test score

N	**Average score ($\overline{X}$)**		**D**	**D^2**	**t-test**
	Pre-test	**Post-test**			
46	4.52	23.39	868	16626	54.6019*

Table 6. Coefficient variation score of pre-test and post-test average scores of experiment group

N	Total score	Pre-test score			Post-test score		
		$\overline{X}$	S.D.	CV	$\overline{X}$	SD	CV
46	30	4.52	2.09	43.42	23.39	1.78	7.62

4.2. The results within the control group

The results of the Paired Sample t-test for the control group of 46 participants showed that the average scores ($\overline{X}$ = 4.48) after learning with the online video media about cloud computing were higher than the pre-test score ($\overline{X}$ = 14.89) at the 0.05 level of significance (see Table 7). The coefficient of variation score of pre-test and post-test scores of the video online group was 15.78, which is high. It means the learning material should be improved. There were 54% of the learners who did not pass the post-test criteria that was set at a score of 15 out of 30 (see Table 8).

Table 7. Paired Sample t-test for the control group between pre-test and post-test score

N	Average score ($\overline{X}$)		D	D^2	t-test
46	Pre-test	Post-test			
	4.48	14.89	479	5283	27.5765*

Table 8. Coefficient of variation score of pre-test and post-test average scores of control group

N	Total score	Pre-test			Post-test		
		$\overline{X}$	SD	CV	$\overline{X}$	SD	CV
46	30	4.48	1.64	36.69	14.89	2.35	15.78

4.3. Comparison of the results between the experimental and control groups

The comparison between the two groups using the two-tailed independent t-test showed there was no significant difference in the pre-test scores of the two groups, as can be seen in Table 9.

Table 9. Independent Sample t-test between the experimental and control group for pre-test score

Test	N	$\overline{X}$	SD	t	Sig.
Experiment group	46	4.52	1.96	.115	.909
Control group	46	4.48	1.64		

The post-test score of the experimental group ($\overline{X}$ = 23.39) was higher than the control group ($\overline{X}$ = 14.89) at the 0.001 level of significance (Table 10).

Table 10. Independent Sample t-test between the experimental and control group for post-test score

Test	**N**	$\overline{X}$	**SD**	**t**	**Sig.**
Experimental group	46	23.39	1.78	19.55	<0.001
Control group	46	14.89	2.35		

4.4. The Independent Sample t-test between two groups of post-test score for listening skill

The comparison of the two groups for listening skill using the independent t-test showed that the experimental group ($\overline{X}$ = 3.98) had a significantly higher post-test score than the control group ($\overline{X}$ = 2.93), as shown in Table 11.

Table 11. Independent Sample t-test between two groups for listening skill

Test	**N**	$\overline{X}$	**SD**	**t**	**Sig.**
Experiment group	46	3.98	.65	7.345	<0.001
Control group	46	2.94	.71		

4.5. The Independent Sample t-test between two groups of post-test score for speaking skill

The comparison of two groups for speaking skill using independent t-test shows that the experimental group ($\overline{X}$ = 3.91) had a significantly higher post-test score than the control group ($\overline{X}$ = 1.93), as shown in Table 12.

Table 12. Independent Sample t-test between two groups for speaking skill

Test	**N**	$\overline{X}$	**SD**	**t**	**Sig.**
Experiment group	46	3.91	.66084	14.514	<0.001
Control group	46	1.93	.64643		

4.6. The Independent Sample t-test between two groups of post-test score for reading skill

The comparison of two groups for reading skill using independent t-test showed that the experimental group ($\overline{X}$ = 3.89) had a significantly higher post-test score than the control group ($\overline{X}$ = 3.07), as shown in Table 13.

Table 13. Independent Sample t-test between two groups for reading skill

Test	**N**	$\overline{X}$	**SD**	**t**	**Sig.**
Experiment group	46	3.89	.67	5.998	.000**
Control group	46	3.07	.65		

4.7. The Independent Sample t-test between two groups of post-test score for writing skill

The comparison of two groups for writing skill using Independent Sample t-test showed that the experimental group ($\overline{X}$ = 3.93) had a significantly higher post-test score than the control group ($\overline{X}$ = 2.72), as shown in Table 14.

Table 14. Independent Sample t-test between two groups for writing skill

Test	**N**	$\overline{X}$	**SD**	**t**	**Sig.**
Experiment group	46	3.93	.44	10.835	<0.001
Control group	46	2.72	.62		

4.8 The Independent Sample t-test between two groups of post-test score for presentation skill

The comparison of two groups for writing skill using Independent Sample t-test showed that the experimental group ($\overline{X}$ = 3.87) had a significantly higher post-test score than the control group ($\overline{X}$ = 2.20), as shown in Table 15.

Table 15. Independent Sample t-test between two groups for presentation skill

Test	**N**	$\overline{X}$	**SD**	**t**	**Sig.**
Experiment group	46	3.87	.50	16.071	<0.001
Control group	46	2.20	.50		

4.9. The Independent Sample t-test between two groups of post-test score for discussion skill

The comparison of two groups for writing skill using Independent Sample t-test showed that the experiment group ($\overline{X}$ = 3.91) had a higher score of post-test than control group ($\overline{X}$ = 2.20), as shown in Table 16.

Table 16. Independent Sample t-test between two groups for discussion skill

Test	**N**	$\overline{X}$	**S.D.**	**t**	**Sig.**
Experiment group	46	3.91	.63	15.068	.000**
Control group	46	2.20	.45		

Both groups of learners have problems in listening when they did not understand the vocabulary. It is therefore difficult for them to listen to foreigners in English. The students are not confident where they should put stress in words or sentences and also have speaking problems as they know very little vocabulary. They have less chance to speak English, which is

why they lack confidence in speaking English. They do not understand or remember English structures and misspell words, have less experience in presenting in English and do not know which words or linking words should be used. Even if they understand the question, they may not be able to answer because of lack of vocabulary so cannot discuss well.

The satisfaction of learners for video online was measured using 5 levels of Likert Scale. The average satisfaction score was 4.54. The highest score was for the learners satisfied about the video online ($\overline{X}$ = 4.67). The second highest score was for the video online is interesting ($\overline{X}$ = 4.63). The lowest score was for the content in video online is easy to understand ($\overline{X}$ = 4.28), as shown in Table 17.

Table 17. Satisfaction of learners for video online

Questions	$\overline{X}$	**SD**
1. The content in video online is easy to understand.	4.28	0.69
2. The content is cover the knowledge of bachelor degree level.	4.37	0.64
3. The video online is interesting.	4.63	0.49
4. The video online can help learners in learning independently.	4.38	0.38
5. The video online can develop English skills of learners.	4.52	0.51
6. The video online is suitable for learners' ages.	4.50	0.55
7. The learners satisfy about the video online.	4.67	0.47
Average scores	4.54	0.53

Figures 6 and 7 show examples of English presentation and English subtitle of a participant from the control group.

Figure 6. Cover picture of a participant's work

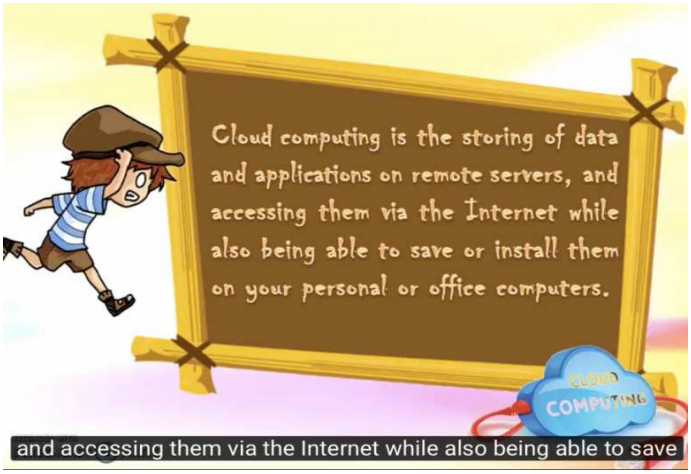


Figure 7. Participant's work describing meaning of Cloud Computing

Figure 8 shows an extract from the experimental group participants' discussion using Facebook. The instructor posted three questions on her Facebook wall, and participants in the experiment group typed answers and discussed with their peers. Three experts who had at least 5-year experience in Computer science evaluated the discussion on the wall and gave marks following the criteria.

Figure 8. Participants' online discussion anonymised

YouTube viewing figures showed that

1) the video with speech in Thai with English subtitle had 2,629 views;
2) the video with speech in English with subtitles in Thai had 227 views;
3) the video with speech in English with subtitles in English had 88 views.

The order of student views from most to least was Thai speech and English subtitle; English speech and Thai subtitle; and English speech and English subtitle.

5. Discussion and conclusions

The pre-test scores of the two groups were very similar, which suggests the two groups have a similar potential in learning English. The post-test scores of the experimental group were higher than the control group at the 0.001 level of significance, therefore answering the research question by showing that learning online using video and subtitles helped Thai students learn English IT content better than just learning face-to-face with similar content. The average satisfaction score at 4.54 was high for learning through video online. This also suggests that perhaps English could be learnt by Thai students through teachers providing similar online video materials with subtitles for the content of other subjects as well as IT.

Proving beyond any doubt the cause and effect of an education technology intervention involving teachers and students is difficult because of many possible variables. This study controlled many of these variables as the two groups of students had similar abilities and the same content and slides and the same teacher was used for the face-to-face teaching and the video online teaching. It was observed that learners listened to the online video many times so that they could practice speaking. Therefore the opportunity to listen again could be one of the reasons for the better learning by the experimental group compared to the control group.

The listening and speaking scores were very similar within groups, which supports Gilakjani and Ahmadi's (2011) findings that a good skill of listening can result in a good skill of speaking. Based on the results, it can be concluded that students found they didn't realise how important the English consonant sound was in speaking or communication because the Thai language has no consonant sound. The Thai language also has no different sound for a plural or a singular word. Therefore, most students missed out the consonant sound because they never pronounce it in Thai. They are not used to it and feel shy if they have to try and pronounce it. The consonant sounds that students missed out included in the word "computers" where they missed out the "s" sound, and "homework" or "take" where they missed out the "k" sound at the end and "rest" where they missed "t" sound at the end. Moreover, when students

did not understand the words, it led to broken conversation as they did not understand the questions.

Speaking problems were caused by lack of vocabulary so learners could not communicate well, and also lacked a chance to practice speaking English. This speaking problem is related to the finding of Kosashunhanan (2016) that the engineers in Japanese companies spoke English only in the meetings. They lacked practicing English and their pronunciation also hindered communication. The lack of vocabulary was in both technical terms about cloud computing and general English words leading to failure in communication. The results for "Meaning of vocabulary" (X = 3.81) had a similar score to listening and speaking. When the researcher asked further questions to students about their problems, she found that if students knew the meaning of the words, they can guess the pronunciation of those words and also guess the meaning of the sentence. For example, if the question asked about the students' opinions, they can only answer or say "Yes" or "No" without saying the full sentence like "yes, I agree with you" or "No, I did not agree with you". The students also mentioned that they have very little opportunities in their daily lives to speak English, and the lack of practice leads to lack of fluency in speaking English.

Reading problems occurred from failure to understand the meaning of words, grammar, and parts of speech resulting in failing to comprehend what they were reading. This is in line with the work of Bond and Tinker (1957), who stated that readers should understand meaning of vocabulary, phrases, and sentences to understand the whole story. The learners did not understand the structure of sentences, and lacked vocabulary so they found it difficult to write a sentence. They prefer learning how to write from rearranging the sentences rather than writing from scratch which relates to the finding of Arapoff (1967) that writing is the most difficult skill as it requires listening, thinking and speaking. Thai and English have a different structure in word order in the sentence, which is one reason why Thai students get confused in word order in English writing or speaking. Another problem is that in the Thai language there is no equivalent to the "s" at the end of a plural noun.

A good writing skill is to be able to set a goal and write in order. Thus, as claimed by William (1993), reading and writing are related and in order to read to understand it is important to know the good steps of writing. During presentations problems may arise when learners do not know how to pronounce words or stress words in sentences, which relates to the finding of Yordming (2017) that students have no confidence in pronouncing words. Moreover, most Thai English teachers often do not give a good example of pronouncing English words or sentences so students cannot learn the proper English pronunciation, which corroborates the

findings of Samae and Karavi (2015) that Thai students stress words or sentences in a wrong position. The experiment proved that students cannot write correct sentences, do not often understand the structure of the sentences, lack vocabulary, and do not know when they should use the words. For example, instead of "turn on computer" the Thai students wrote or said "open computer". The results also found that most students found writing as the hardest of all English skills. This was because they did not know the meaning of words or when they should use them and were not sure about the position of words when the sentence was getting long. This is related to Arapoff's (1967) claim that writing is a difficult skill which needs knowledge from listening, thinking and speaking skills and William's (1993) findings that reading and writing skills are related as to understand reading you need to understand the structure of writing sentences.

When the learners did not understand questions, they could not respond well. The discussion part of the experiment involved writing responses which is a writing skill that is a real problem for learners and therefore their discussion was quite short.

Since the average score for learners' overall satisfactions for video online was at a high level, it shows that learners think positively about online video. Students used online video in their spare time at home to review the lesson. They prefer watching online videos to reading from books, which is related to Wangkahad's (2013) finding that the benefit of online media is that learners can learn anywhere, any time when there are connected to the Internet. Moreover, Hsiu-Feng, Shu-Hui, Shu-Chu, and Shyh-Chyi (2013) found that the satisfaction of learning from online video was caused by fewer limitations and its sociall connection with enthusiasm in learning.

Future controlled studies varying the learning process variables would be required to prove that the English learning process used in this study from easy to difficult (Thai slide, Thai speech and English subtitle; English slide, English speech, Thai subtitle; English slide, English speech, and English subtitle) helps students at the university having a low level of English skills understand language better than requiring them to learn only through English at first.

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A SURVEY OF EFL TEACHERS' DIGITAL LITERACY: A REPORT FROM A JAPANESE UNIVERSITY

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Abstract

Despite calls for contemporary English teachers to have strong digital literacy skills, there is a reported lack of digital training in English teacher education programs (Hubbard, 2008; Kessler, 2006). However, in this environment where higher-level digital skills and knowledge are criteria for prospective English teacher applicants, which digital literacies do contemporary EFL teachers possess? How confident are they using technology to augment their English lessons? How can the digital literacies of in-service EFL teachers be developed? This study aimed to survey the digital literacies of 42 English teachers employed at a private Japanese University. The questionnaire (adapted from Son, Robb & Charismiadji, 2011) considers ownership and accessibility to computers, ability to perform tasks electronically, personal and professional use of computers, CALL training, and interest in CALL. In short, this study found that teachers in this English program were very confident using digital technology to support their teaching both inside and outside their classrooms. In addition, respondents recognised the importance of developing their digital literacies and they were actively pursuing advanced skills.

Keywords: Teacher digital literacy; ICT training; university EFL

1. Introduction

In recognition of the rapid advancements in digital technologies and their implications for language learning and teaching, individual teachers and university language programs are obligated to continuously upgrade their knowledge and skills base (Dashtestani, 2014). However, are language teachers or program leaders prepared to oversee such progression? There is a reported scarcity of Computer-Assisted Language Learning (CALL) and Information and Communications Ttechnology (ICT) instruction in professional language teacher education programs (Hubbard, 2008; Kessler, 2007). To this point, it is interesting to note that language teachers who are strong in these two areas are in fact highly sought after (Hubbard, 2007; Stockwell, 2009). As was argued by Son et al. (2011) and Dashtestani (2014), gauging teachers' digital literacy and competency needs to be carried out in the local teaching context to reflect internal factors such as access to technology, connectivity, and the presence of CALL in the

language teaching curriculum. Mirroring an evaluation of Indonesian English teachers' digital literacies carried out by Son et al. (2011), this study focuses on a group of English teachers at a private Japanese university (N=42) who come from a diverse range of educational and cultural backgrounds.

2. Digital literacy and language teachers

2.1. Digital literacy

While traditional literacy has been defined as the ability to read and write, establishing a clear and precise definition of digital literacy is a moving target. Digital literacy is susceptible to rapid developments in technology and societal trends in online communication. The United States Department of Education (1996) defined digital literacy as having computer skills and the ability to use computers and other technology to improve learning, productivity, and performance. Barrette (2001), along with Corbel and Gruba (2004), posited that digital literacy contains two core components: (1) being able to control basic computer operations; and (2) using one's understanding of computers for problem-solving and critical thinking. More recently, Son et al. (2011) defined the concept as "the ability to use computers at an adequate level for creation, communication and collaboration in a literate society" (p. 27), while Dudeney, Hockly and Pegrum (2014) identified digital literacy as being able to make use of technologies at one's disposal and understanding the social practices that surround the use of new media.

Learning how to use digital technology has also become a crucial step in developing literacy in the twenty-first century (Godwin-Jones, 2000). Digital literacies are now recognized alongside traditional literacies (e.g., reading and writing) as essential competencies that language learners need to function effectively in the society (Healey et al., 2008). Indeed, teachers are being encouraged to consider how they can effectively prepare students to exercise and develop digital literacies because it can lead to better job prospects, increased interaction in society, support more autonomous language learning, and provide wider entertainment options (Corbel & Gruba, 2004; Healey et al., 2008). Corbel and Gruba (2004) argued that computer skills are just as important as language skills in order to prosper in the twenty-first century and language students need computer skills to:

- communicate effectively in society;
- interact with family and friends;
- function effectively in the workplace;
- learn new ideas and for fun and pleasure.

It is the researchers' assumption and view that if students should have these skills, it is important to ensure that our teachers are both capable of demonstrating these skills themselves and confident to teach them if required.

Despite an abundance of reports illustrating how increased digital literacies can augment the quality of teaching and learning, there are international reports of contemporary language teachers having low levels of digital literacies. In a survey of Iranian English teachers, Dashtestani (2014) reported that Iranian teachers did not have a sufficient level of digital literacy for language teaching and the implementation of CALL. This led the author to recommend that a certain level of computer literacy be required for employment as an English teacher. At a Japanese university, Milliner and Cote (2018) looked specifically at English teachers' implementation and use of a course management system (CMS). They found that the teachers' depth of application was limited or unsophisticated. A survey of Indonesian English teachers by Son et al. (2011) also found they lacked a number of core digital competencies. Moreover, the aforementioned dearth of opportunities to learn how to use technology for language teaching (Hubbard, 2008; Kessler, 2006) foreshadows a potential shortage of teachers who can effectively use technology, or CALL, in the language classroom.

2.2. CALL training for language teachers

Back in 2006, Kessler noted that the value of CALL training for language teachers was being discussed from as early as the 1970s. He cited the need to use software for research purposes, the use of electronic mediums to communicate and collaborate with peers, and the rising influence of content management systems (CMS) in contemporary academic environments as important arguments for including CALL training in language teacher programs.

Despite appeals that language teacher-training programs should include CALL education, surveys of both graduate programs and graduate students suggest that CALL is not being addressed in these programs (Hubbard, 2008; Kessler, 2006). In fact, in a review of 50 North American TESOL graduate program websites, Kessler (2006) found that fewer than ten actually cited CALL as part of their curriculum. Further, most graduates did not take any courses which involved teaching with technology, most were not required to take a course focusing on CALL, and almost all respondents believed that they would have benefitted from more instruction concerning technology-assisted instruction. Interestingly, Kessler (2006) determined that over 90% of the graduates resorted to taking courses outside their degree program to learn more about teaching with technology. In his words, "language teachers have found the wherewithal to become 'self-trained' in CALL" (p. 31). As for developing the skills

of in-service language teachers, Kessler's focus group participants called for: (1) course leaders to create conditions for teachers to engage in more autonomous, self-directed learning relating to CALL, and (2) CALL projects to involve a broad cross-section of faculty as the most successful approaches for introducing technology-assisted instruction to teachers.

2.3. Investigations of teachers' digital literacy

There have been a number of investigations into the digital literacy levels of language teachers. As was noted above, this paper mirrors an earlier study by Son et al. (2011) that reviewed the skills of Indonesian English teachers who taught English at a range of education levels. Son et al.'s study concluded that teachers' frequency of using computer applications in the classroom was very limited even though their self-evaluation of computer skills and attitudes towards CALL was very high. The study also proved that teachers' knowledge of databases, concordance software, and computer mediated communication tools was very narrow. Apart from the fact that respondents in their study were enrolled in a short CALL training program (and therefore already interested in CALL), one of the biggest limitations of the study was that it surveyed teachers from elementary school through university. This resulted in a wide spectrum of responses concerning computer training, how computers are being used in the classroom, and the resources available to teachers for implementing CALL. A common concern among the survey respondents, however, was that access to the Internet and facilities most influenced their ability to use computers in the classroom.

Turning our focus specifically onto the digital literacy of language teachers in the Japanese university context, the authors of this current study struggled to locate literature which fit these criteria. The articles reviewed primarily discussed teacher training for CALL or Internet literacy. Stockwell (2009) reported on four part-time English teachers who were trained to educate themselves in CALL. The study found that for successful self-directed learning in CALL, it takes time for teachers to develop an understanding of the technology and to decide which tools will best serve students' learning needs. Citing teachers' admissions of somewhat prohibitive access to CALL teaching resources, Stockwell (2009) posited that building strong communities of support is crucial and engagement within these groups can be empowering as it exposes teachers to the possibilities of CALL in their context.

In 2013, Bracher compared the results of two surveys of 50 native English-speaking instructors teaching at the university level throughout Japan. The surveys (conducted in 2008 and 2012) investigated how teachers used the Internet in their English classes. Overall, 70% of the respondents reported using Internet-based activities in their English classes. Comparing the

2008 results against the 2012 data, Bracher found a one-third decline in teachers' use of Internet-based activities. Bracher also controlled for age and could not accept the hypothesis that younger teachers were more likely to use Internet-based activities than their senior counterparts. The study also enumerated the activities that were most commonly used by teachers. These were (in descending order) Internet browsing, e-mail, blogging, online dictionaries, online quizzes, cloze tests, and podcasts. Common complaints addressing why it was difficult to implement CALL or Internet-based activities at their respective institutions included a lack of modern and flexible computer rooms, and the provision of CALL training for foreign faculty.

While each of these studies represent useful resources in evaluating teachers' digital literacy and the application of CALL in a local context, none report on a multicultural group of teachers employed in an English program at a single Japanese university. Moreover, none observe the conditions that are present in contemporary foreign language programs (i.e. a mix of local and foreign staff, full-time and part-time teachers, teachers with varied levels of interest and experience using CALL or ICTs in the classroom, and both teachers and students having first-rate access to the Internet and digital devices).

3. The study

3.1. Research objective

This study set out to survey the teachers in our university English language program and examine their digital literacies. This inquiry represents the first step in a longer-term project which aims to integrate CALL more widely and effectively into our curriculum.

3.2. Participants

The current study was undertaken in the Center for English as a lingua franca (CELF) at a private university in Tokyo, Japan. The Center is responsible for managing and implementing campus-wide English courses and the program is taught by an international mix of 51 teachers (fulltime and part-time), serving approximately 2300 students. All teachers and students in the CELF have access to the Blackboard CMS (for a detailed look at its use in the English program, see Milliner and Cote, 2016). All classrooms have high-speed Internet access (Wi-Fi) and are equipped with full audio-visual capabilities. Teachers are free to bring their own devices, however, if required, the Center has an extensive inventory of digital and technical hardware, including Bluetooth speakers, iPads and PCs. Out of the 51 teachers in this program, 42 responded to the survey. The respondents consisted of 18 females and 24 males who ranged

widely in age (Table 1). Regarding positions, 29 (69%) are employed as part-time teachers and 13 (31%) are full-time as assistant, associate, or professor. To meet hiring requirements in the CELF, applicants must have a Master's degree or higher in applied linguistics, TEFL or TESOL, teaching experience at the tertiary level, and be an expert user of English. Approximately 60% of the sample have over ten years' language teaching experience and 19% have between six and ten years.

Table 1. Summary of teacher's ages (N=42)

Age Group	**Number**	**Percentage %**
25-29	4	9%
30-39	13	31%
40-49	12	29%
50-59	11	26%
60 or older	2	5%

One very significant hiring "guideline" in the CELF is that applicants need not be native speakers of English, which has allowed the Center to welcome teachers from a wide variety of linguistic and cultural backgrounds. At the time of administering the survey, the 51 teachers employed to teach in the program came from a broad array of countries (see Table 2). As a questionnaire item asking them to note their nationality could potentially identify some teachers, the researchers reasoned to omit that question from the survey.

Table 2. Teachers' citizenship

Country	**Number**	**Percentage %**
The United States of America	12	24%
Japan	12	24%
The United Kingdom	5	10%
Canada	4	8%
Australia	3	6%
The Philippines	3	6%
Turkey	2	4%
Brazil	2	4%

South Korea	1	2%
China	1	2%
Singapore	1	2%
Macedonia	1	2%
Thailand	1	2%
The Republic of Ireland	1	2%
Germany	1	2%
Ukraine	1	2%

3.3. Data collection

All teachers were invited to complete the questionnaire during the Center's annual orientation meeting for teachers, held just before the start of the 2016 academic year. Following the meeting, all attendees were sent an email asking them to voluntarily complete a digital questionnaire. The researchers made it clear that the questionnaire was not for job qualification or performance evaluation purposes and all university criteria for ethical research and privacy policies were followed.

This survey instrument was adapted from a seminal questionnaire created by Son et al. (2011) to evaluate Indonesian English teachers' digital literacy. In particular, the survey was designed to check access to computers, assess their ability to complete computer-related tasks, question their personal and professional use of computers and enquire about their interests in CALL.

Before administering the survey, permission from the copyright holder, Jeong-Bae Son, was granted for use in this evaluation. Some items were modified to reflect the local teaching context, such as providing examples of applications and programs that teachers would be more familiar with (e.g. the instant messaging application, LINE). Moreover, additional items were added to the survey to reflect developments in computer technology, such as cloud computing and file sharing services. The survey was circulated electronically using SurveyMonkey.

4. Results

Given the stated purpose of this investigation and the quantity of the data collected, all responses received from the questionnaire are shared as they appeared in the original survey.

An in-depth analysis of all responses is beyond the scope of this report and only a brief synthesis of noteworthy responses appears in the Discussion section below.

4.1. Experience using computers in the English classroom

Despite many teachers having long teaching histories, a much smaller number had equally long experience using computers in their classrooms. As illustrated in Table 3, almost half of respondents (48%) selected 1-5 years when asked to evaluate their experience using computers in the classroom.

Table 3. ELF teachers' experience using computers in class

Years' experience	**Number**	**Percentage %**
1-5 years	20	48%
6-10 years	9	21%
11-15 years	8	19%
15-20	3	7%
Over 20 years	2	5%

4.2. Computer ownership

Ownership of digital devices is very high among respondents. As evidenced in Table 4, almost all teachers (95%) own a notebook PC. A very high percentage also own a Smartphone (86%), and 57% own a Tablet. Only two teachers noted that they own a smart device (e.g. Apple Watch).

Table 4. Digital device ownership (N=42)

Device	**Percentage %**
Desktop PC	33%
Notebook PC	95%
Tablet	57%
Smartphone	86%
Smart Device	5%

4.3. Computer skills

Regarding computer skills, Table 5 summarises responses to the question: *How did you learn to use a computer for teaching purposes?* Although teachers appear to have learned from a range of sources, informal approaches seem to be the most common. Teachers recognised learning by themselves (79%) and learning from colleagues (67%) as most typical. These findings corroborate with those observed by Hubbard and Levy (2006), Kessler (2006) and Son (2014), who posited that most language teachers are self-taught in using computers and implementing CALL. Formal training opportunities were, however, still influential for many teachers given that 20 respondents (48%) noted that formal education largely accounted for their CALL training for teaching purposes. These 20 respondents were between 25 and 39 years old and this may be explained by a recent increase of CALL modules in TEFL or TESOL programs.

Formal educational programs aside, the researchers were interested in establishing whether or not an age bias was at play in the respondent data. To answer that question, the responses were filtered according to age categories and the results were somewhat surprising. Regardless of age, how the respondents ranked their source of learning did not significantly differ. For instance, 70% of those who identified as age 50 or older selected “self-learning” as their primary source compared to 82% of those who identified as age 25-40. Similarly, 62% of respondents aged 50 or older selected “colleagues” as a primary learning source compared to 59% of respondents who identified themselves as between 25-40 years of age. These findings were also observed in the aforementioned Japan-based study by Bracher (2013), which compared older and younger teachers.

Table 5. How did you learn to use a computer for teaching purposes? (N=42)

Learning Source	**Percentage of respondents %**
Yourself	79%
Colleagues	67%
Teaching workshops or conferences	52%
Formal education (e.g. MA or unit in TEFL course)	48%
Books & journals	31%
Friends	31%
YouTube & other media	26%
Family	5%

4.4. Teacher's self-assessment of digital skills

On a scale of one to four, teachers were asked to rate their computer skills (Table 6). Generally speaking, they considered their computer literacy, Internet literacy, and typing skills as good to excellent.

Table 6. Teacher's self-assessment of digital skills (N=42)

	Poor (1)	**Adequate (2)**	**Good (3)**	**Excellent (4)**
Computer literacy	5%	31%	52%	12%
Internet literacy	2%	24%	45%	29%
Typing speed	2%	31%	43%	24%

4.5. Teachers' software experience and self-assessment of digital skills

When asked about experience using popular software applications (Table 7), most noted that they use the Internet (100%) and email (91%) daily. The other software applications that attracted either daily or '3-4 times per week' engagement were word processing (81%), social networking (81%), multimedia (57%), and text chatting (64%).

There were, however, some applications where over half of respondents reported either 'rarely' or 'never/I don't know'. These included graphics, website design, language software, concordance software, blogging, online discussion forums, and video conferencing. Each of these tools could be very beneficial for the language classroom, and represent areas where additional training could be provided.

The responses from female and male teachers along with fulltime and part-time teachers to this section were all compared, however, Spearman's Rho calculation for each variable revealed each had a very similar influence upon the overall average for the sample (r_s=0.92704 (females), r_s=0.97732 (males), r_s=0.94291 (full-time), r_s=0.95402 (part-time).

Table 7. Software applications and frequency of use

Program	**Almost everyday**	**3-4 times per week**	**1-2 times per week**	**1-2 times per month**	**Rarely**	**Never / I don't know**
Word processing	69%	12%	14%	2%	2%	0%

E-mail	91%	7%	0%	0%	0%	0%
Internet	100%	0%	0%	0%	0%	0%
Database	19%	7%	21%	19%	17%	7%
Spreadsheet	7%	7%	29%	24%	14%	12%
Graphics (e.g. Adobe Illustrator, Photoshop)	2%	0%	17%	14%	41%	19%
Website design	0%	0%	2%	5%	43%	38%
Multimedia (audio & video)	36%	21%	10%	14%	10%	2%
Social networking	29	12%	2%	2%	5%	5%
Language software (CD-ROM)	10%	5%	12%	14%	33%	14%
Concordance software	5%	0%	0%	10%	26%	48%
Blogging	7%	10%	5%	10%	36%	19%
Wiki	14%	10%	10%	12%	14%	24%
Online discussions or forums	10%	17%	5%	12%	29%	24%
Text chatting	43%	21%	12%	2%	10%	7%
Video conferencing	5%	10%	10%	12%	41%	17%
Computer games	0%	0%	12%	2%	41%	31%
Cloud computing	17%	7%	14%	14%	10%	33%

When asked to self-assess their proficiency in digital skills, many teachers judged themselves to be intermediate or advanced for a range of applications (Table 8). The following items received lower self-assessment ratings: online video conferencing, online discussions, spreadsheets, wikis, database management, blog applications, cloud computing, website design and computer games. As each of these applications could be applicable to the language classroom, it highlights the areas on which professional development activities could be focused.

Table 8. Self-assessment of digital skills

How would you rate your computer skills on the following?	**None (1)**	**Basic (2)**	**Intermediate (3)**	**Advanced (4)**
E-mail	0%	5%	17	23
Internet	0	7%	40%	48%

Word processing	0	7%	52%	40%
E-mail (mobile)	5%	10%	36%	50%
Presentation software	5%	14%	55%	24%
Web search engines	7%	10%	60%	24%
Downloading and installing programs	5%	29%	40%	26%
Social networking	10%	24%	40%	21%
Communications applications	10%	33%	31%	26%
Online chat	12%	31%	36%	21%
Internet security	10%	38%	40%	12%
Multimedia applications	17%	24%	48%	12%
Online video conferencing	19%	24%	48%	10%
Online discussions	19%	29%	36%	12%
Spreadsheet	17%	36%	38%	10%
Wiki	26%	33%	24%	14%
Database	19%	50%	24%	7%
Blog applications	29%	38%	21%	10%
Cloud computing	36%	31%	19%	14%
Website design	55%	33%	10%	0
Computer games	50%	31%	12%	7%

Responses to items asking about overall use of digital tools and use of digital tools to augment their teaching revealed that teachers are using digital tools frequently, and they are being used to support their teaching (Table 9). However, fewer than 70% of respondents indicated that they have a personal web page or that they use CD-ROMs to supplement their teaching. While CD-ROM technology may be considered somewhat dated according to today's technological standards, CD-ROMs are included in many textbooks used in the CELF program and extra support in this area may be needed.

Table 9. Computer-related access and usage questions

Question	**Yes%**	**No%**
1. Do you have a computer connected to the Internet at home?	100%	0%

2. Do you have an email account outside your smartphone or university account?	83%	17%
3. Do you use a webmail service?	98%	2%
4. Do you have a personal homepage?	24%	76%
5. Do you understand the basic functions of computer hardware components? (e.g. CPU and hard disk)	83%	17%
6. Do you use keyboard shortcuts?	74%	26%
7. Do you use a computer connected to the Internet at university?	83%	17%
8. Do you use a computer for teaching purposes?	83%	17%
9. Do you find it easy to learn something by reading it from a computer screen?	79%	21%
10. Do you use CD-ROMs to supplement your teaching?	69%	31%
11. Do you use websites to supplement your teaching?	86%	14%

Next, teachers were asked whether they could complete a variety of digital tasks (Table 10). Overall, they appeared to be very confident at completing the tasks presented. Those tasks which involved recording and editing sounds, creating a database and creating a web page earned the highest number of 'No' responses.

Table 10. Computer related skills questions

Question	**Yes%**	**No%**
12. Can you properly turn on and shutdown a computer?	100%	0%
13. Can you start and exit a computer program?	100%	0%
14. Can you print a document using a printer?	100%	0%
15. Can you create a basic Microsoft Word document?	100%	0%
16. Can you send and receive attachments through email messages?	100%	0%
17. Can you search for information using a web search engine?	100%	0%
18. Can you move a file from a hard drive to a USB drive?	98%	2%
19. Can you download and save files from the web?	98%	2%
20. Can you change the font style and size in a document?	98%	2%
21. Can you change monitor brightness and contrast?	95%	5%
22. Can you minimise, maximise and move windows on the desktop?	95%	5%
23. Can you perform file management including deleting and renaming files, etc.?	95%	5%
24. Can you copy, cut and paste inside a document?	95%	5%

25. Can you create a simple presentation using PowerPoint?	95%	5%
26. Can you install a software program?	90%	10%
27. Can you write files onto a CD?	83%	17%
28. Can you resize a photograph?	83%	17%
29. Can you create a basic Excel spreadsheet?	83%	17%
30. Can you scan a disk or file for viruses?	81%	19%
31. Can you use a video conferencing tool on the web?	76%	24%
32. Can you record and edit sounds?	69%	31%
33. Can you create a simple database using Access or Excel?	62%	38%
34. Can you create a simple web page?	60%	40%

4.6. General computer knowledge quiz

Teachers then answered ten multiple-choice questions focusing on general computer knowledge (Table 11). Only two questions appeared difficult for the respondents, namely: 'How much information fits on a CD and DVD?' and 'What are WAV and AIFF files examples of?' As both of these questions relate to teachers' knowledge of sound or video files, the poor results in these items reflect the number of teachers who noted that they were unable to record and edit sounds in the self-assessment sections earlier in the questionnaire.

Table 11. Results of quiz (N=42)

Question	**Correct response %**	**I don't know %**
35. What is a folder?	93%	10%
36. How much information fits on a CD and a DVD?	33%	45%
37. What kind of program is used to edit a GIF file or a JPEG file?	81%	10%
38. What is the main brain of the computer?	83%	7%
39. What is the main function of a server in a networked environment?	81%	3%
40. What are WAV and AIFF files examples of?	60%	33%
41. Which of the following is not a search engine?	86%	0%
42. Which of the following is not an output device?	86%	2%
43. What is a URL?	90%	2%

4.7. Factors and attitudes influencing the use of computers in classrooms

When teachers were asked to select two factors that affect the use of computers in their classroom, limited time, a lack of computer skills, and insufficient facilities were the most common responses (Figure 1).

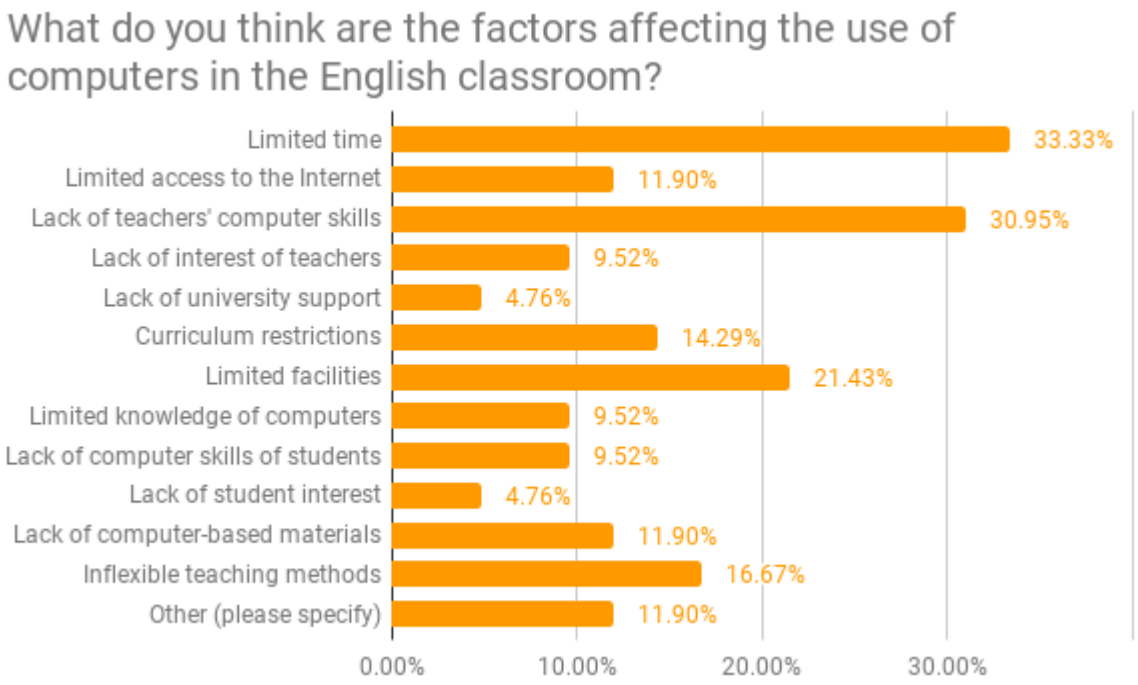

Figure 1. Factors affecting the use of computers in the English classroom

4.8. Teacher perceptions

The final section of the questionnaire solicited teachers' perceptions of computers and the use of technology for language teaching (Table 12). Overall, teachers appear to have very positive perceptions of using computers and using them in their classrooms. More than half of respondents strongly agreed with the statements: 'I'm willing to learn more about computers' (96%); 'I believe it is important for me to learn how to use computers' (98%); 'I would like to use computers in the classroom' (88%); 'I feel that my teaching could be improved by using computers' (81%); 'I think that computers can make foreign language learning more interesting' (90%); and 'I believe that training in computer-assisted language learning should be included in language teacher education' (90%). These positive perceptions show that this group of teachers is very willing to use computers in their classrooms. What is more, teachers appear to be motivated to improve their skills using technology in their language classroom because they see its potential for improving their teaching and enhancing student's learning.

Table 12. Teacher perceptions of computers

Answer Options	**Strongly Agree (1)**	**Agree (2)**	**Uncertain (3)**	**Disagree (4)**	**Strongly disagree (5)**
44. I enjoy using computers.	43%	45%	7%	2%	2%
45. I feel comfortable using computers.	45%	41%	7%	7%	0
46. I'm willing to learn more about computers.	55%	41%	5%	0	0
47. I think computers are difficult to use.	10%	10%	12%	48%	21%
48. I feel threatened when others talk about computers.	2%	5%	7%	52%	33%
49. I believe that it is important for me to learn how to use computers.	67%	31%	2%	0	0
50. I would like to use computers in the classroom.	67%	21%	10%	2%	0
51. I feel that my teaching could be improved by using computers.	52%	29%	17%	2%	0
52. I think that computers can make foreign language learning more interesting.	52%	38%	10%	0	0
53. I believe that training in computer-assisted language learning should be included in language teacher education.	57%	33%	7%	2%	0

5. Discussion

Overall, the results indicate that the teachers in this English program are confident using digital technology. The teachers recognize that digital technology can support and augment classroom practices and they are committed to improving their digital literacies.

Although some teachers may have been modest in self-evaluating their digital skills (i.e. they rarely chose "advanced" proficiency for each of the skills questioned), their responses to the 'Do you' and 'Can you' line of questions reveals that almost all teachers were able to complete each of the digital tasks presented later in the questionnaire. The 'Do you' and 'Can you' line of questions did, however, expose respondents' limited knowledge and confidence using sound recording and editing tools, website design, database, and spreadsheet management. Another issue to emerge was that some teachers are unfamiliar with using CD-ROMs, which may be influencing the work they do in this program as most of the textbook content and teacher support materials are provided in this format.

This study also had some limitations. Firstly, data was collected from a diverse group of

teachers in a Japanese university language program. While this diversity can be observed in EFL programs worldwide, it is very difficult to make generalizations about English teachers' in Japan or other EFL contexts. Secondly, since this study adopted a digital format for the survey and the teachers were invited to respond via email, it required some degree of digital literacy to respond to the questionnaire. As a result, some of the teachers who opted not to complete the survey may have done so because they lacked digital skills or were simply not interested in the topic.

Lastly, numerous questionnaire items asked teachers to self-assess their digital skills, and although the researchers emphasized that the questionnaire was not an evaluation of their qualifications, the university had recently hired many new teachers and their responses may have been influenced by a willingness to make a good impression. To some, this could suggest that their responses and self-assessment are not reliable. What is more, self-assessing digital skills is a subjective approach, and without an objective baseline or standard, concepts of what qualifies as "poor", "adequate", "good", and "excellent" vary widely from person to person. This measurement of digital literacy may have been better served by asking the teachers to complete a variety of digital tasks that they might reasonably be expected to perform during day-to-day teaching. For example, teachers could be asked to assess and manipulate a grade sheet; make a sound recording and upload it to the university's content management system or embed photos, hyperlinks and text in a CMS post. However, the researchers recognize that simply having the ability to use a certain tool does not imply that the teacher knows how to best integrate technology into language teaching.

6. Conclusion

The researchers in this study set out to measure the digital literacy levels of all teachers in their English language program. Areas of CALL and ICT that require more training and support were identified. Moreover, this study revealed the approaches teachers take to acquire new digital skills and knowledge. In addition, and of most benefit to the evolution of the curriculum, the researchers established the teachers' understanding of various digital tasks and the degree to which they can manipulate technology for teaching or learning purposes.

Language teachers in this sample have high digital proficiency levels and, recognizing the beneficial contribution to their profession, most are willing to further develop their understanding and control of digital practices. As noted before, this study was able to identify in the participants some weaknesses and areas requiring further development as follows: recording and editing sounds, designing websites, managing databases and creating

spreadsheets. The study also established areas where teachers simply have limited experience: online video conferencing, online discussions, CD-ROM use, spreadsheet creation, wikis, database management, blog applications, cloud computing, website design and computer games. Arguably, knowledge of these applications and ability to successfully operate them are relevant and applicable to contemporary language classrooms. This study revealed how the teachers have learned to develop their digital literacy to this point. Apart from formal training sessions and workshops, it appears that informal means and personal study may have served them best. With this observation in mind, the researchers need to consider how they can encourage teachers to explore CALL and ICT tools independently (e.g. Robb, 2006; Stockwell, 2009) and how supportive communities of practice can be established (e.g. Kessler & Plakans, 2008; Kolatis, Mahoney, Pomann & Hubbard, 2006).

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