Trends in Articles Related to ICT Supported Language Learning in BJET: Content Analysis

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Abstract

Teaching a foreign language is a difficult process that actively involves multiple senses. Information and communication technology (ICT) has been widely integrated into education because its advantages have proved significant over the last decades. The aim of this study is to review the articles related to language learning and teaching supported by ICT tools published in British Journal of Education (BJET). Content analysis was used as the main research method to discover the research trend of language learning and teaching. Articles were chosen by searching specified keywords in BJET. It is hoped that the results of the study will be helpful for foreign or second language teachers and learners because they can be aware of useful ICT tools that support language learning.
Keywords: Foreign Language Learning, Technology Supported Learning

1. Introduction

Technology has become an integral part of our daily life; we use it whether we like it or not. Teaching methods have been influenced by technology, which requires teachers to use new information and communication technologies (ICT) on their teaching practice.

Nowadays teachers integrate technology to teach in different ways (Teo, 2009). That is, teachers integrate the advances in technology in education. New technological developments have affected teacher's responsibility as well. In 1990, personal computers were expensive, so not many people could not afford them. Today, there are at least one computer lab in most the schools. Furthermore, students can connect to the internet even by mobile phones. Computers, especially the internet provides an important source of information for any researcher. Therefore, teachers should not teach only the topic, but also how to reach sources of information via technology. Teachers are obliged to be technology literate. Indeed, they are responsible for assisting students to reach support resources.

Many studies confirmed that computer training helps to develop computer use by affecting computer related constructs. Furthermore, new curricula compel to integrate technology in teaching. Therefore, the demand which is that teachers are capable of using technology especially computer effectively is increasing.

CALL (Computer Assisted Language Learning) has become effective and more common in supporting the language learning process currently because the development of technology and variety of media have made ICT Tools an inevitable tool to support language learning.

Sang et al. (2009) stated that student teacher should be ready to integrate information and communication technology (ICT) into their future teaching and learning practice. Sang et al. (2009) aimed to examine the barriers preventing ICT use in the classroom. The focus of their study was teachers' thinking process. A questionnaire survey was used as an instrument. A total of 820 primary school teachers participated in the study. The results revealed that ICT integration significantly correlated with constructivist beliefs, computer attitude in education, ICT related polices, traditional beliefs, general computer attitudes, ICT related polices, supportive ICT use, administrative ICT use, and teaching and learning tools. This research confirmed that teachers' beliefs have a significant impact on using ICT or not in classes.

Foreign language education lends itself to the use of ICT in education because its content includes speaking, listening skills that can be supported by ICT technologies. That is, the teaching of foreign languages is a complex process that actively involves multiple senses. Yang and Chen (2007) assert that internet is a useful language source for students, and it provides an environment that enable the students to directly reach native speakers with whom they can speak English. Briefly, a student can study a foreign language easily via internet because it provides a more real environment for learning (Yang and Chen, 2007). Although some language teachers use technology in their teaching sessions, some of them do not use it. Previous research shows that the usage of technology depends on teacher perception against ICT. Moreover, how to use ICT is another side of the research area of language learning.

CALL is a form of computer-based learning methodology. In the early 1980s, Computer Assisted Language Learning (CALL) was widely used in schools in the UK, the rest of Europe, USA, and Canada. However, today's technological world has altered the way of teaching because of the different kind of media, mobile

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technologies, and the improvement of the Internet. These technologies have greatly influenced means of communication and social networking.

The use of technology devices, such as televisions, tape recorders and video recorders have been used as a tool for language teaching since 1960s. There were many obstacles in terms of technical skills at the beginning, and it took about a generation for the technical skills to develop, and much later the technical problems were eliminated. Although teachers face some barriers, they continue to use information and communications technology (ICT) in the classroom or develop supporting materials through ICT.

Martinez-Lage & Herren(1998) presented that there are some benefits of using technology in a language-learning classroom. Those are "better and more effective use of class time", "individualizing students learning", "shift from a teacher-centered classroom to a student-centered classroom" and "providing authentic, current and culturally rich materials to the students". Also, Maxwell (1998) also showed that technology can develop student motivation as well as enthusiasm for language learning.

As can be seen, previous research showed that ICT supported language learning can increase effective language learning. If teachers become aware of these opportunities of ICT tools related to language learning, they can use ICT tools in their teaching and learning practice. Therefore, this study aims to present the research trends the articles that are related to foreign and second language learning and teaching by using ICT tools in the British Journal of Education Technology between years 2009-2013.

2. Methodology

Content analysis is a technique that enables researchers to study human behavior in an indirect way, through an analysis of their communications (Frankel & Wallen, 2006, p. 92). Content analysis research method was chosen as research design, because it is suitable method for presenting trend analysis about specified topic. Moreover, it involves specialized procedures that can handle large amount of data.

For this research study, one of the journal which has high impact factors in the field of educational technology, namely British Journal of Educational Technology (BJET) was selected. BJET is a one of the primary source for academics and professionals in learning technology, because of the high impact factor, BJET was chosen as research sources.

While chosen articles, a process was flowed. All of the volumes and issues of the journal were scanned systematically and limited with the keyword "language learning and technology", "foreign language learning and ICT", "second language learning and technology and "language learning and ICT" in the part of abstract and keyword in between years 2009-2014. 31 articles were found and their data were extracted by content analysis.

The aim of this study is to review the articles related to language learning and teaching supported by ICT tools published between the years 2009-2014 in British Journal of Education (BJET). Articles topic are related to second and foreign language learning that used ICT as an aid tool or learning environment.

1.1.Data Analysis

After a detailed document analysis, the articles are carefully investigated and categorized according to the criteria specified below. Then these large amount of data were analyzed, classified according to already determined themes. Also, they were presented by tables and figures because it make easy understanding for readers.

Main research question of the study is to answer what is the trend in articles related to ICT supported language learning in published in BJET between the years 2009-2013. To answer this research question, ten sub question was specified to discover trend of language learning in BJET.

Current study tried to find answer the following ten sub questions:
a. How many articles were published according to years?
b. How many articles were published according to countries?
c. How many articles were published according to their research topics?
d. Which ICT tools are used as an aid in foreign language and second language learning?
e. What skills are supported by using ICT tool in as an aid in foreign language and second language learning?
f. How many articles were published according to their research methodology?
g. How many articles were published according to their target populations?
h. How many articles were published according to their sampling methods?
i. How many articles were published according to their sample sizes?
j. How many articles were published according to their instruments?

3. Results

In this section all of the results extracted from content analysis in order to try to answer research question that was mentioned.

a) Published articles according to the years.

When the articles reviewed according to published years, it was seen that 2013 was highest number of article that was related to ICT supported language learning was published in BJET with a frequency of 10 out of 31 articles (32.26 %). In addition, 2012 was second highest number of article that was related to language learning by supported ICT was published in BJET with a frequency of 8 out of 31 articles (24.24 %). 2011 was third highest number of article that was related to language learning by supported ICT was published in BJET with a frequency of 6 out of 31 articles (18.18 %). It was seen that highest of number articles were published in 2013 and least number of articles were published in 2009. Table 1 represents the frequency and percentage of the articles according to years.

Table 1

Frequency of Published Articles According to Years

Years	ƒ	%
2013	10	32,26
2012	8	24,24
2011	6	18,18
2010	5	15,15
2009	2	6,06

Frequency of published articles according to years can also be presented visually in Figure 1, below.
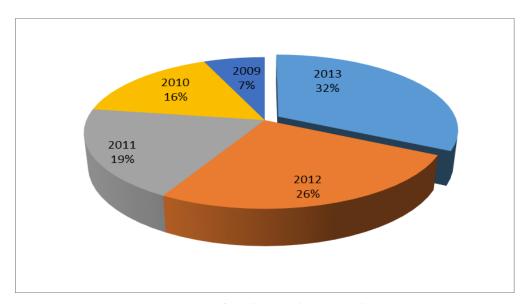

Figure 1. Frequency of published articles according to years.

b) Published articles towards the countries.

In order to comprehend of the data about articles and to answer how the articles distributed over the countries, it was organized and a frequency distribution table used to categorize it, because it makes data clearly understandable in a visual way. As Table 2 shows, most of the researches related to ICT supported language learning were conducted in "Taiwan" with a percentage of 51.61 %. This is followed by "China" and "Turkey" with a percentage 9.09 %. This percentages falls to 6.06% in "Japan", "America", "Iran" and Malaysia. Lastly, the smallest percentage (3.03 %) belongs to "Spain". It can be concluded that significant amount of research was conducted in Taiwan. Table 2. represents the frequency and percentage of the articles according to their countries.

Table 2

Frequency of Published Articles According to their Target Countries

Target Population	f	%
Taiwan	16	51,61
China	3	9,09
Turkey	3	9,09
Japan	2	6,06
America	2	6,06
Iran	2	6,06
Malaysia	2	6,06
Spain	1	3,03

Frequency of published articles according to their countries can also be presented visually in Figure 2, below.
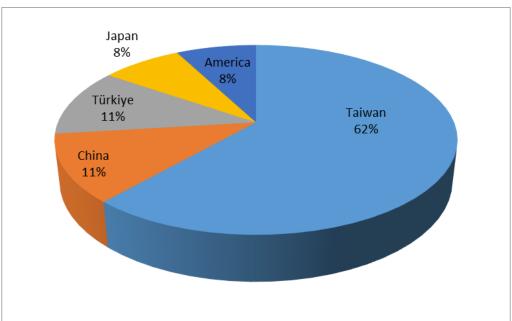

Figure 2. Frequency of published articles according to their countries.

c) Research Topics

Results showed that researches on foreign and second language learning by using ICT tools have been conducted in various languages and variety language skills. Examining the articles according to their research topics, it was seen that frequency and percentage of the research topics can be divided into seven categories. Firstly, "Effects on Student Performance" was the most commonly studied research topic with a frequency of 10 out of 31 articles (32.26 %). "Perceptions about computers/technology" was the second most commonly studied research topic with a frequency of 7 out of 31 articles (22.58%). In addition, "Web-Based/Online Education" was the third most commonly studied research topic with a frequency of 4 out of 31 articles (12.90 %). Moreover, "Attitudes toward computers/technology" and "Benefits/Challenges" and "Mobile Learning" were the fourth most commonly studied research topic with a frequency of 3 out of 31 articles (9.68%). Lastly, "Comparison of traditional vs. online learning" was the fifth most commonly studied research topic with a frequency of 1 out of 31 articles (3.23 %). Table 3 presents the frequency and percentage of the articles according to their research topics.

Table 3

Frequency Published Articles According to their Research Topics

Research Topic	f	%
Effects on Student Performance	10	32,26
Perceptions about computers/technology	7	22,58
Web-Based/Online Education	4	12,90
Attitudes toward computers/technology	3	9,68
Benefits/Challenges	3	9,68
Mobile Learning	3	9,68
Comparison of traditional vs. online learning	1	3,23

Frequency of published articles according to research topics can also be seen visually in Figure 3. below.
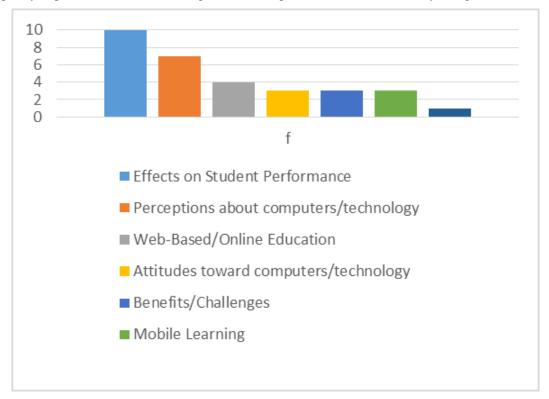

Figure 3. Frequency of Published Articles According to Research Topics

d) ICT Tools

ICT tools were categorized to show the most commonly used ICT tools in language learning. After the analysis of articles, ten different groups were formed. The most commonly used ICT tool was "Web 2.0". The second most common one was "Blended Learning Tool". Third comes the "Mobile Technology". "Video" is placed fourth. Other tools have the same frequency in articles. To conclude, there was a trend towards using Web 2.0 tools in foreign language learning. Table 4 shows the frequency published articles according to their usage frequency in articles.

Table 4

Frequency of Published Articles according to ICT Tools

Sampling Method	*f*
Web 2.0	8
Blended Learning Tools	5
Mobile Technology(SMS, Dictionary)	4
Video	2
Computer Simulation	1
Learning Robot	1
Virtual Environment	1
Game	1
Multimedia Presentation	1
Social Network	1

Frequency of published articles according to ICT tools can also be seen visually in Figure 4, below.
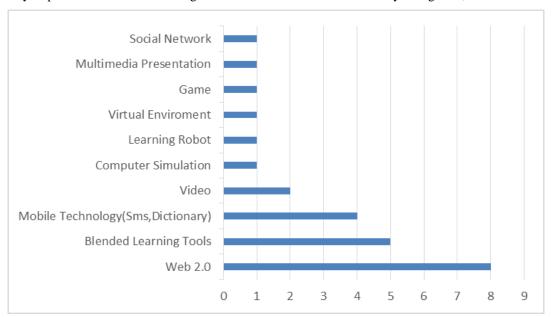

Figure 4. Frequency of Published Articles according to ICT Tools

    e)   Language Skills Supported by ICT tools

In order to comprehend of the data about language skills that supported ICT tools, it was organized and a frequency distribution table used to categorize it, because it makes data clearly understandable in a visual way. In the information from the frequency distribution, it was seen that most commonly supported language skill was "General English Skill" with a percentage of 38.71 %. This is followed by ICT supported language skill of "Vocabulary" and "Writing" with a percentage 19.35 %. "Speaking" was placed third with a percentage of 16.13 %. The language skills that are supported by ICT the least were "Reading" and "Listening" with a percentage of 3.23 %. In the summary of the results, it can be concluded that there was a trend on General English level and Writing and Vocabulary as a skill that supported by ICT Tools. Table 2. shows the frequency distribution and percentage of the articles according to their language skills that supported by ICT tools. Table 5 presents the frequency distribution and percentage of the articles according to language skills that supported by ICT.

Table 5

Frequency and Percentage of the Articles According to Skills that Supported by ICT Tools

Instrument	f	%
General	12	38,71
Writing	6	19,35
Vocabulary	6	19,35
Speaking	5	16,13
Reading	1	3,23
Listening	1	3,23

Frequency and Percentage of the Articles According to Skills that Supported by ICT Tools
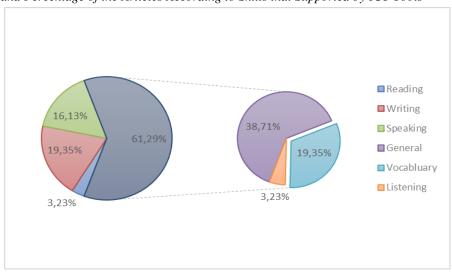

Figure 5. Frequency and Percentage of the Articles According to Skills that Supported by ICT Tools

f)   Research Methodologies

When the articles examined according to their research methodologies, it was found out that mixed research methodologies were most commonly used among language learning studies in BJET with a frequency of 14 out of 31 articles (45.16 %). In addition, "Quantitative" was the second most commonly used research methodology with a frequency of 10 out of 31 articles (32.26 %). Moreover, "Qualitative Research" was the third most commonly used research methodology with a frequency of 7 out of 31 articles (22.58 %). Table 6 represents the frequency distribution and percentage of the articles according to their research methodologies.

Table 6

Frequency of Published Articles According to Research Design

Research Methodology	f	%
Mixed-Methods	14	45,16
Quantitative	10	32,26
Qualitative	7	22,58

Frequency of published articles according to their research methodologies can also be seen visually in Figure 6, below.
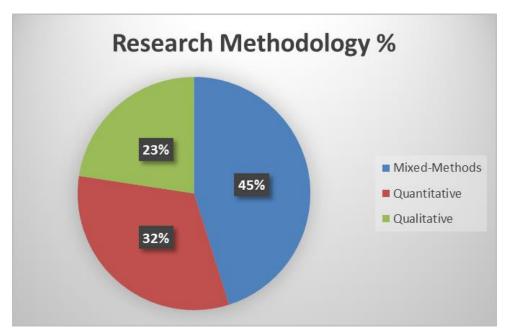
Figure 6. Frequency of Published Articles According to Research Methodologies

g) Target Populations

The articles were reviewed and categorized to describe the studied target population. After the articles were reviewed, five different groups were formed. Most of the studies' target population were "Undergraduate / College Students" with a percentage of 73%. This is followed by "Graduate Students" and "Teachers" with a percentage of 9%". Elementary School Students" was placed third with a percentage of 6%. Least studied target population were ""High School Students" with a percentage of 3%. To sum up, there was a trend on conducting research with "Undergraduate / College Students" as a target sample. Table 7 shows the frequency published articles according to target sample.

Table 7

Frequency of Published Articles According to Target Sample

Target Population	f	%
Undergraduate / College Students	24	72,73
Graduate Students	3	9,09
Teachers	3	9,09
Elementary School Students	2	6,06
High School Students	1	3,03

Frequency of published articles according to their target population can also be seen visually in Figure 7, below.
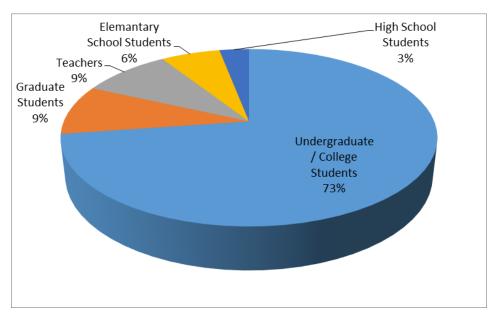
Figure 7. Published Articles According to Target Sample

h)   Sampling Methods

In order to comprehend of the data about sampling methods, it was organized and a frequency table used to categorize it, so that it can be interpreted easily in a visual way. As it seen from Table 8, most common used sampling method was "Convenience Sampling" with a percentage of 87.10 %. This is followed "Purposive Sampling" with a percentage of 9.68 %. In accordance with above results, it can be concluded that there was a trend on choosing sample with "Convenience Sampling" as a sampling method. Table 8 shows the frequency of published articles according to Sampling Methods.

Table 8

Frequency of Published Articles According to Sampling Methods

Target Population	f	%
Convenience Sampling	27	87,10
Purposive Sampling	3	9,68

Percentage of sampling methods used in the articles can also be seen visually in Figure 8, below.
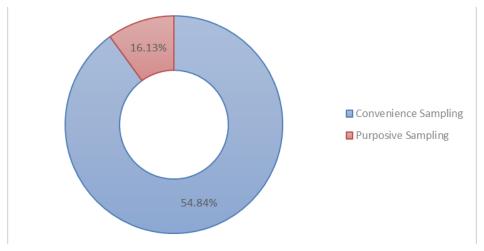

Figure 8. Published Articles According to Sampling Methods

i)   Sample Sizes

Sample size is another consideration while the reviewing the articles. Content analysis showed the most used sample size in the articles. The sample sizes were categorized into five interval those are 1 - 100; 101 - 200; 201 - 300; 301 - 400; and 401 - > intervals. Table 9 presented that 20 article sample sizes were in 1 - 100 range. 3 articles were in the 101-200 range interval. Current study showed that there was a trend about using sample size the range between 1-100. Table 9 shows the frequency published articles according to sample size.

Table 9

Frequency Published Articles according to Sample Sizes

Category	f
1 - 100	20
101 - 200	3
201 - 300	1
301 - 400	1
400 - >	1

Published articles according to sample size can also be seen visually in Figure 9, below.
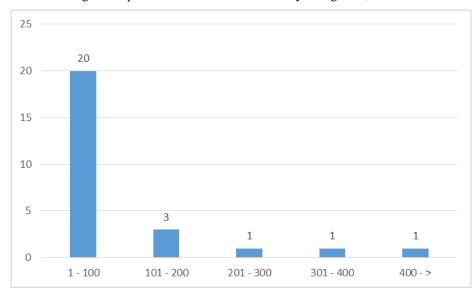

Figure 9. Published Articles According to Sample Size

j)   Instruments

Four categories were formed after articles were reviewed. Most frequent used instruments were "Questionnaires" with a percentage of 58.54 %. Additionally, "Interview Schedules" were the second most used instruments with a percentage of 19.51% in the articles. Also, "Interview Schedules" were the third most used instruments with a percentage of 19.51% in the articles. Additionally, "Performance Test" were the fourth most used instruments with a percentage of 17.07% in the articles. "Others" category also were that least used category with a percentage of 4.88 %. Results show that there was a common trend on "Questionnaires" as a use of research instrument. Table 10 presents the frequency distribution and percentage of the articles according to instruments.

Table 10

Frequency of Distribution and Percentage of the Articles According to Instruments

Instrument	ƒ	%
Questionnaires	24	58,54
Interview Schedules	8	19,51
Performance Test	7	17,07
Others	2	4,88

Published articles according to instruments can also be seen visually in Figure 10, below.
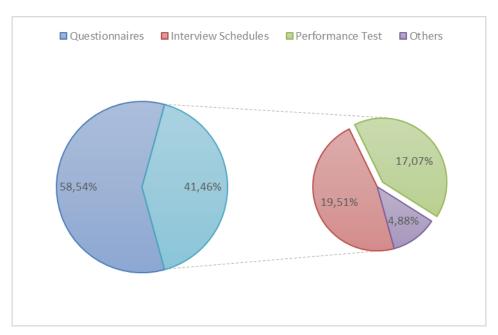

Figure 10. Published Articles According to Instruments

4. Discussion

The aim of this study is to review the articles related to ICT supported language learning and teaching in British Journal of Education (BJET). CALL (Computer Assisted Language Learning) have become effective and more common techniques to support the language learning process nowadays, because ICT tools opportunities have been developed. The result of the present study were explained according to criteria that formed previously.

a. Published articles according to the years

The results showed that there was an exponential increase the number of articles published related language learning supported by ICT tools in the BJET years to year. For example, after specified search, although, there was just 2 articles in the 2009, after four years there was 10 articles in the 2013. The reason for this result can be the increasing opportunity of ICT tools. Blurton (1999) stated that ICT and internet using has spread day by day in educational environments .Results of this study agree with Blurton (1999) assertion. Also technology can be more reachable in 2013 than 2009.

b. Published articles according to the countries.

The results indicated that Taiwan was remarkable number of articles that are related to language learning in BJET. As it was seen result of the study, Taiwan was the most of the research that was related to language learning supported by ICT was conducted with a frequency of 16 out of 31 articles (51 %). Remaining part of research was conducted distribution towards seven countries. It was seen that Taiwan was the most prominent country related to language learning research in BJET. When we look at the Taiwan education system, learning English as a second language is essential in Taiwan and students have to start their first English lesson in the third grade in elementary school. Because of this, language learning and teaching research can be conducted large number amount.

c. Research Topics

The results indicated that, however, various subjects were researched related to language learning, Effects on Student Performance was most commonly researched topic. Perceptions about computers/technology were another common topics that was researched. Moreover, Web-Based/Online Education was another common topics that was researched. It is seen that there was a trend on research topic related to Effects on Student Performance. Whether ICT tools make learning effective or not is very crucial questions, therefore articles' research topic accordance with this questions. They tried to answer this question.

d. ICT Tools

After the article was analyzed, the ICT Tools were classified ten different groups. There was a trend on using Web 2.0 such as blog and Wiki and Blended Learning Tools such as Moodle etc. The reason for this is that web 2.0 tools and blended learning tools can be proper for language learning. Also, current study showed that mobile technology and blended learning was used as an ICT tool in language learning. Because of the improvement of the ICT tools, education is no longer limited to the classroom environment (Nagar, 2010, p. 329). As Lin and Hsieh (2001) asserted that and e-learning has become an increasingly popular educational paradigm because of rapid development and universal use of the Internet.

e. Language Skills Supported by ICT tools

The findings present that it was seen that most commonly supported language skill was "General English Skill" with a percentage of 38.71 %. Current study showed that some of the research article that are used ICT tool as an aid or learning environment, they did not point specific English skill ,their aims is to increase general English skill. , Another most commonly ICT supported language skill was "Vocabulary" and "Writing" with a percentage 19.35 %. As Ma and Kelly (2006) pointed that learning vocabulary is one of the most popular subjects in Computer-Assisted Language Learning (CALL) programs. In addition, another most commonly supported language skill was "Speaking" with a percentage of 16.13 %. Most of the article's aim is to develop specified language skill by using ICT supported learning environment.

f. Research Methodologies

The findings present that mixed research methodologies were used much more than others design. Quantitative are second most used research design. There was a trend on using mixed research design because just quantitative or just qualitative research design cannot explain research question. Therefore, to answer research questions, powerful side of quantitative and qualitative methodologies were used to answer research question in the articles. As Driscoll (1995) presented that educational studies should be open to different research methods because of nature of the instructional systems, this study accordance with the Driscoll because different research design was used.

g. Target Populations

The results showed that Undergraduate / College Students was the most studied target population in the studies that were related to language learning and teaching. Also, another most preferred target population was graduate student and teachers. Third, the most preferred target population were Elementary School Students. It was seen that Undergraduate / College Students was most commonly preferred target population. The reason for this may be from a desire of college students to learn English. They can be willingly participant for research studies.

h. Sampling Methods

The findings presented that convenience sampling was the most preferred sampling method. Generally, it is used for the subjects that are convenient accessibility to the researcher. Another most commonly used sampling method was purposive sampling. It can be concluded that there was a trend on choosing sample with "Convenience Sampling" as a sampling method because of the easy access of sample.

i. Sample Sizes

Current study revealed that most of the studies' sample sizes were in 1 – 100 range. It was seen that articles that were examined prefer to study on large sample size. 3 articles were in the 101-200 range interval. Current study showed that there was a trend about using sample size range between 1-100. Most of them are mixed design research, therefore they have two part of study qualitative and quantitative part. Sample size can be seen as proper for this kind of studies.

j. Instruments

Distribution of instruments extracted from content analysis showed that four categories were formed. Accordingly, most commonly used instrument was "Questionnaires" with a percentage of 58.54 %. Additionally, "Interview Schedules" were the second most used instruments with a percentage of 19.51% in the articles. Results show that there was a common trend on "Questionnaires" as a use of research instrument. Questionnaires

is used as an instrument in the most of the researches. Interview is generally used for quantitative and mixed design studies.

5. Conclusion

The review of the 31 articles indicate that most of the articles selected the undergraduate / college students as a target population and used convenience sampling method. With respect to research topics, "*Effects on Student Performance*" was the most studied research subject topic in the article related to ICT supported foreign and second language learning and teaching. *"Perceptions about computers/technology"* is another frequently researched subject in articles. They were generally experimental study. Most of the articles have investigated the perceptions of the participants towards used ICT Tool. The analysis of data clearly prove that published number of articles which is related to ICT supported language learning increase by year to year in the BJET. The most of the research was conducted in Taiwan, because learning English can be seen as an important and they start to learn 3 grade in elementary school. Most of the articles used Web 2.0 tools as a supplementary tool in language teaching. Mobile learning also have been used as a language teaching tool especially vocabulary. In addition, most of the studies' purpose is to develop general English language skill because English is seen as common language in the world. Also some articles' research topic is related to develop speaking and listening skills of learners. Providing an authentic learning environment, learners can have chance to talk native speakers by using opportunities of ICT tools.

Briefly, this study tried to show research trends related to ICT supported language learning and teaching in BJET. This research can be extended by adding different journals and keywords. It is hoped that the results of the study will be helpful for foreign or second language teachers and learners because they can be aware of useful ICT tools that support language learning. Teachers and learners can be encouraged to use this kind of tools to enhance their language learning or teaching.

References

Blurton, C. (1999). New Directions of ICT-Use in Education. Paris: UNESCO Online: Retrieved from http://www.unesco.org/education/educprog/lwf/dl/edict.pdf.

Chiu, Y.-h. (2012). Can film dubbing projects facilitate EFL learners' acquisition of English pronunciation?, *British Journal of Educational Technology*, 43(1): E24-E27.

Chen, R. (2009). Investigating models for pre-service teachers' use of technology to support student-centered learning. *Computers & Education, 55*, 32–42.

Driscoll, M. (1995). Paradigms for research in instructional systems. In Gary J. Anglin (Ed.). *Instructional technology: Past, present, and future* (2nd ed., pp. 322-329). Englewood, CO: Libraries Unlimited.

Fraenkel, J.R., Wallen, N.E. (2009). How to Design and Evaluate Research in Education. *New York, NY: McGraw-Hill Companies, Inc.*

Hayati, A., et al. *(2013).* Using Short Message Service (SMS) to teach English idioms to EFL students, *British Journal of Educational Technology 44(1): 66-81.*

Lin, M.-H., et al. (2011). The unrealistic claims for the effects of classroom blogging on English as a second language, students' writing performance, *British Journal of Educational Technology ,*42(6): E148-E151.

Kılıçkaya, F. and J. Krajka (2012). Can the use of web-based comic strip creation tool facilitate EFL learners' grammar and sentence writing?, *British Journal of Educational Technology ,*43(6): E161-E165.

Ma, Q. & Kelly, P. (2006). Computer assisted vocabulary learning: Design and evaluation, *Computer Assisted Language Learning*, 19(1), 15 – 45.

Maxwell, D. (1998). Technology and foreign language learning. A report to the Charles E. Culpeper

Martínez-Lage, A., & Herren, D. (1998). Challenges and opportunities: Curriculum pressures in the technological present. In J. Harper, M. Lively, & M. Williams (Eds.), The coming of age of the profession: Issues and emerging ideas for the teaching of foreign languages (pp. 141-167). Boston: Heinle & Heinle Publishers.

Nagar, S. (2010). Comparison of Major Advantages and Shortcomings of Distance Education. *International Journal of Educational Administration, 2(2), 329-333.*

Sang, G., Valcke, M., Braak, J., & Tondeur , J. (2010). Student teachers' thinking processes and ICT integration: Predictors of prospective teaching behaviors with educational technology. *Computers & Education, 54,* 103–112.

Teo, T. (2008). Pre-service teachers' attitudes towards computer use: A Singapore survey. *Australasian Journal of Educational Technology, 24(4)*, 413-424.

Appendix A

References of Analyzed Articles

Cavus, N., & Ibrahim, D. (2009). m-Learning: An experiment in using SMS to support learning new English language words. *British Journal of Educational Technology, 40*(1), 78-91. doi: 10.1111/j.1467-8535.2007.00801.x

Chen, C.-M., & Lee, T.-H. (2011). Emotion recognition and communication for reducing second-language speaking anxiety in a web-based one-to-one synchronous learning environment. *British Journal of Educational Technology, 42*(3), 417-440. doi: 10.1111/j.1467-8535.2009.01035.x

Chiu, Y.-h. (2012). Can film dubbing projects facilitate EFL learners' acquisition of English pronunciation? *British Journal of Educational Technology, 43*(1), E24-E27. doi: 10.1111/j.1467-8535.2011.01252.x

Chiu, Y.-H. (2013). Computer-assisted second language vocabulary instruction: A meta-analysis. *British Journal of Educational Technology, 44*(2), E52-E56. doi: 10.1111/j.1467-8535.2012.01342.x

Fernández Álvarez, M., & García Laborda, J. (2011). Teachers' interest in a computer EFL university entrance examination. *British Journal of Educational Technology, 42*(6), E136-E140. doi: 10.1111/j.1467-8535.2011.01218.x

Hao, Y., Hong, J.-C., Jong, J.-T., Hwang, M.-Y., Su, C.-Y., & Yang, J.-S. (2010). Non-native Chinese language learners' attitudes towards online vision-based motion games. *British Journal of Educational Technology, 41*(6), 1043-1053. doi: 10.1111/j.1467-8535.2009.01050.x

Hayati, A., Jalilifar, A., & Mashhadi, A. (2013). Using Short Message Service (SMS) to teach English idioms to EFL students. *British Journal of Educational Technology, 44*(1), 66-81. doi: 10.1111/j.1467-8535.2011.01260.x

Hayati, A., & Mohmedi, F. (2011). The effect of films with and without subtitles on listening comprehension of EFL learners. *British Journal of Educational Technology, 42*(1), 181-192. doi: 10.1111/j.1467-8535.2009.01004.x

Huang, A. F. M., Yang, S. J. H., & Liaw, S.-S. (2012). A study of user's acceptance on situational mashups in situational language teaching. *British Journal of Educational Technology, 43*(1), 52-61. doi: 10.1111/j.1467-8535.2010.01152.x

Huang, C.-K., & Lin, C.-Y. (2011). Enhancing classroom interactivity and engagement: CFL Learners' perceptions of the application of Web 2.0 technology. *British Journal of Educational Technology, 42*(6), E141-E144. doi: 10.1111/j.1467-8535.2011.01219.x

Huang, H.-T. D., & Hung, S.-T. A. (2010). Implementing electronic speaking portfolios: perceptions of EFL students. *British Journal of Educational Technology, 41*(5), E84-E88. doi: 10.1111/j.1467-8535.2009.00996.x

Huang, H.-T. D., & Hung, S.-T. A. (2013). Exploring the utility of a video-based online EFL discussion forum. *British Journal of Educational Technology, 44*(3), E90-E94. doi: 10.1111/j.1467-8535.2012.01373.x

Huang, R.-T., Jang, S.-J., Machtmes, K., & Deggs, D. (2012). Investigating the roles of perceived playfulness, resistance to change and self-management of learning in mobile English learning outcome. *British Journal of Educational Technology, 43*(6), 1004-1015. doi: 10.1111/j.1467-8535.2011.01239.x

Jia, J., & Chen, W. (2009). The further development of CSIEC project driven by application and evaluation in English education. *British Journal of Educational Technology, 40*(5), 901-918. doi: 10.1111/j.1467-8535.2008.00881.x

Jung, I., Kudo, M., & Choi, S.-K. (2012). Stress in Japanese learners engaged in online collaborative learning in English. *British Journal of Educational Technology, 43*(6), 1016-1029. doi: 10.1111/j.1467-8535.2011.01271.x

Kılıçkaya, F., & Krajka, J. (2012). Can the use of web-based comic strip creation tool facilitate EFL learners' grammar and sentence writing? *British Journal of Educational Technology, 43*(6), E161-E165. doi: 10.1111/j.1467-8535.2012.01298.x

Lai, Y.-h. (2010). Which do students prefer to evaluate their essays: Peers or computer program. *British Journal of Educational Technology, 41*(3), 432-454. doi: 10.1111/j.1467-8535.2009.00959.x

Lin, M.-H., Lin, C.-Y., & Hsu, P.-Y. (2011). The unrealistic claims for the effects of classroom blogging on English as a second language, students' writing performance. *British Journal of Educational Technology, 42*(6), E148-E151. doi: 10.1111/j.1467-8535.2011.01225.x

Liu, P.-H. E., & Tsai, M.-K. (2013). Using augmented-reality-based mobile learning material in EFL English composition: An exploratory case study. *British Journal of Educational Technology, 44*(1), E1-E4. doi: 10.1111/j.1467-8535.2012.01302.x

Reynolds, B. L. (2013). A Web-based EFL writing environment as a bridge between academic advisers and junior researchers: A pilot study. *British Journal of Educational Technology, 44*(3), E77-E80. doi: 10.1111/j.1467-8535.2012.01344.x

Reynolds, B. L., & Bai, Y. L. (2013). Does the freedom of reader choice affect second language incidental vocabulary acquisition? *British Journal of Educational Technology, 44*(2), E42-E44. doi: 10.1111/j.1467-8535.2012.01322.x

Samur, Y. (2012). Redundancy effect on retention of vocabulary words using multimedia presentation. *British Journal of Educational Technology, 43*(6), E166-E170. doi: 10.1111/j.1467-8535.2012.01320.x

Tayebinik, M., & Puteh, M. (2013). Does greater participation in online courses lead to passing grade? An EFL learning context. *British Journal of Educational Technology, 44*(6), E199-E202. doi: 10.1111/bjet.12095

Tayebinik, M., & Puteh, M. (2013). The role of ambiguity tolerance in participation in online EFL courses. *British Journal of Educational Technology, 44*(6), E207-E208. doi: 10.1111/bjet.12087

Tsuei, M. (2011). Development of a peer-assisted learning strategy in computer-supported collaborative learning environments for elementary school students. *British Journal of Educational Technology, 42*(2), 214-232. doi: 10.1111/j.1467-8535.2009.01006.x

Wang, S., & Heffernan, N. (2010). Ethical issues in Computer-Assisted Language Learning: Perceptions of teachers and learners. *British Journal of Educational Technology, 41*(5), 796-813. doi: 10.1111/j.1467-8535.2009.00983.x

Wang, Y. H., & Young, S. S. C. (2012). Exploring young and adult learners' perceptions of corrective feedback in ASR-based CALL system. *British Journal of Educational Technology, 43*(3), E77-E80. doi: 10.1111/j.1467-8535.2011.01275.x

Yang, Y.-T. C., Gamble, J., & Tang, S.-Y. S. (2012). Voice over instant messaging as a tool for enhancing the oral proficiency and motivation of English-as-a-foreign-language learners. *British Journal of Educational Technology, 43*(3), 448-464. doi: 10.1111/j.1467-8535.2011.01204.x

Yang, Y.-T. C., Gamble, J. H., Hung, Y.-W., & Lin, T.-Y. (2013). An online adaptive learning environment for critical-thinking-infused English literacy instruction. *British Journal of Educational Technology*, n/a-n/a. doi: 10.1111/bjet.12080

Young, S. S.-C., Wang, Y. H., & Jang, J.-S. R. (2010). Exploring perceptions of integrating tangible learning companions in learning English conversation. *British Journal of Educational Technology, 41*(5), E78-E83. doi: 10.1111/j.1467-8535.2009.00989.x

Zhang, H. (2013). Pedagogical challenges of spoken English learning in the Second Life virtual world: A case study. *British Journal of Educational Technology, 44*(2), 243-254. doi: 10.1111/j.1467-8535.2012.01312.x