ORIGINAL ARTICLE

THE EFFECT OF THE USE OF MULTIMEDIA TECHNOLOGY ON YEAR THREE STUDENT'S CHINESE VOCABULARY LEARNING

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Abstrak

The purpose of this paper is to investigate the effect of using multimedia technology on students' achievement towards learning Chinese Language vocabulary among Year 3 students in national school Malaysia. The design of this study is quasi-experimental. Quasi experiment consisted of control group and treatment group with pre-test and post-test. The sample of the study consisted of 69 standard 3 students in national schools from two difference schools in Kuala Lumpur. The control group consisted 32 pupils while the treatment group consisted of 37 pupils. Control group was taught in conventional method and the treatment group was taught by using multimedia technology. Pre-test and post-test have been tested for both groups. *Studies have found that* the use of multimedia can improve the achievement of vocabulary learning among the students. The t-test result also showed that there is statistical significant different among multimedia technology learning and conventional learning. The conclusion from the study showed that the use of multimedia technology have had increased the achievement of Chinese vocabulary learning. Research implications indicated that the use of multimedia technology can enhance the effect of learning the Chinese vocabulary.

Keywords: Multimedia Technology, Chinese Vocabulary, Standard Three Student

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Introduction

In second shift of Malaysia Education Blueprint 2013-2025 is to ensure every child is proficient in Bahasa Malaysia and English language and is encouraged to learn an additional language. The bilingual skills in this aspiration have shown the importance of second language teaching and learning in primary and secondary schools. Minister of Education of Malaysia encourages all students to learn another language as an additional language (Minister of Education, 2013)[1]. It has been provide another additional language course in selected primary and secondary schools. Most Malay, Indian, Sikh, Kadazan has choose Chinese as their additional language in nasional school.

Researcher states that multimedia material is widely accepted as a useful and effective tool in the field of second language acquisition. Researcher also noted that there have been many studies and researchers have studied the effectiveness of multimedia materials from several aspects including listening, speaking, reading and writing skills. (Williams,2013)[2] However, the effectiveness of multimedia materials in the second language aspect of second language vocabulary is still under-studied. *Students in nasional school facing problems in Chinese vocabulary a*cquisition. *By using technology multimedia, the vocabulary acquisition achievement can be increased. Therefore, the* aim of this research is to investigate the effect of using multimedia technology on students' achievement towards learning Chinese Language vocabulary including i) nouns ii) verbs and iii) adjectives among Year 3 students in national school Malaysia.

Methodology

This research used quasi-experimental. This study consisted of control group and treatment group with pre-test and post-test. The sample of the study consisted of 69 standard 3 students in national schools from two difference schools in Kuala Lumpur. The control group consisted 32 pupils while the treatment group consisted of 37 pupils. The control group and the treatment group learned vocabulary selected from the Year 3 Chinese textbook. The treatment group would be exposed to teaching through multimedia technology while the control group used conventional learning such as using reading cards, text-based exercises and activity books. Pre-test and post-test have been tested for both groups.

Literature Review

The literature review shows that there are several studies that have been conducted to identify the impact of technology use in language teaching. Among these studies by Bassma (2013)[3] in Iraq, Suwantarathip, (2015)[4] in Thailand, and Agca & Özdemir, (2013)[5] and Solak & Cakir, (2015)[6] in Turkey which have studied the use of technology in language vocabulary teaching English as a second language. While Kennedy, Thomas, Meyer, Alves, & Lloyd, (2014)[7] study in America is a study that uses the use of technology in teaching English vocabulary as a first language.

Researcher also found that using of technology in teaching also increase the interest and the motivation of student in Science learning (Kalaiselvi, 2019)[8].

The literature review shows that there are still few studies that focus on the use of multimedia technology in teaching Chinese vocabulary as a second language - teaching Chinese language to non-Chinese students. Findings from previous studies indicate that there is a similar study to Shao's (2012)[9] study that explores the use of multimedia technology in teaching Chinese vocabulary. However, in the study, Chinese is the first language taught to Chinese students or to native Chinese learners.

In addition, there are several research methods that have been used to study the use of multi-media technology in teaching and learning second language vocabulary. Agca & Özdemir, (2013)[5], Suwantarathip, (2015)[4] and Solak & Cakir, (2015)[6] have used a quasi-experimental method, while Bassma (2013)[3] has used the case study method. All of these studies used school students as survey respondents. The study of Kennedy, Thomas, Meyer, Alves, & Lloyd, (2014)[7] was more unique in that it used special needs students, namely Special Education students as the study respondents.

Various technologies have been used in recent studies including mobile phone technologies such as Suwantarathip, (2015)[4] using SMS and Agca & Özdemir, (2013)[5] using digital dictionaries. Among the studies that use advanced technology are Solak & Cakir, (2015)[6] studies that use Augmented Reality Technology and Kennedy, Thomas, Meyer, Alves, & Lloyd, (2014)[7] that use new software designed specifically for students with special needs Content Acquisition Podcasts (Caps).

Almost all of the findings of the previous study indicate that the use of technology has a positive impact on vocabulary teaching and learning. The findings of Agca & Özdemir, (2013)[5], Suwantarathip, (2015)[4] and Solak & Cakir, (2015)[6] show that the use of technology has the potential to increase student mastery of English as a second language. In conclusion, the use of technology has the potential to increase student mastery of vocabulary even for students with special needs. All of these studies were carried out almost five years ago, so the implementation of this study can determine whether the same findings are still available after five years.

In addition, most studies on technology use have been conducted in teaching and learning English as a second language and less research on technology use has been conducted in teaching and learning Chinese as a second language. In fact, most of these studies are conducted overseas and in Malaysia there are few studies that examine the use of technology in teaching and learning especially in the subject of language. Therefore, this could serve as a justification for the importance of this study. Most of these studies use quasi-experimental research methods that show that they are capable of identifying the impact of technology use on vocabulary teaching and learning.

Finding

Below is the finding for this studies effect of using multimedia technology on students' achievement towards Chinese Language vocabulary learning.

Table 1
T-test analysis result for Chinese Vocabulary Test between Treatment Group and Control Group

Group	N	Mean	t value	P value
Control Group	32	6.31	-11.352	.000
Treatment Group	37	18.49		

p < 0.05

Table 1 showed an independent sample t-test analysis of the post-test between the control group and the treatment group. The results showed that the mean score for the control group was 6.31 while the mean score for the treatment group was 18.49. The Levene test also showed significant p values, so the variance was assumed to be the same between the control and treatment groups. The t test was statistically significant (67) = -11.352, p = 0.00). There was a significant difference in achievement scores between the control and treatment groups in the post-test. The mean score for the treatment group achievement test at 18.49, was higher than the mean control group score, which was 6.31 in the Chinese vocabulary. The above results indicate that treatment groups engaged in learning Chinese vocabulary learning using multimedia technology are more effective than conventional learning.

Discussion

Based on this discussion it can be concluded that effective use of technology in vocabulary teaching and learning. This study also added value to the study of the use of technology in the teaching of first language vocabulary because most of the exiting studies focus more on the second language or foreign language than the first language. In fact, there is less research on the use of technology in teaching and learning Chinese vocabulary in Malaysia and this study can fill the gap.

The findings of this study indicate that there is a significant difference in the achievement of scores between the control and treatment groups in the post-test. The mean score for the treatment group achievement test was higher than the mean of the control group score on Chinese vocabulary mastery. The results of this study prove that the use of technology is more effective in teaching vocabulary than the use of conventional methods. The findings of this study are similar

to those of other studies examining the effects of technology use in vocabulary teaching for first, second or foreign languages.

Among the studies on the impact of technology use in second language teaching, English are Bassma (2013)[3], Suwantarathip, (2015)[3] and Agca & Özdemir, (2013)[5] Solak & Cakir, (2015)[6]. In addition, Shao's (2012)[9] study is the study of Chinese as a second language. Whereas studies of the impact of technology use in first language vocabulary teaching are such as the English vocabulary study by Kennedy, Thomas, Meyer, Alves, & Lloyd, (2014)[7] on students with disabilities in America. The results of this study as well as the results of the studies listed prove that the use of technology can increase the proficiency of first and second language vocabulary.

This study was conducted in Malaysia while Bassma (2013)[3] in Iraq, Suwantarathip, (2015)[4] in Thailand, Agca & Özdemir, (2013)[5] and Solak & Cakir, (2015)[6] in Turkey and Kennedy et al., (2014)[7] in the USA. Therefore, it can also be proved that the effectiveness of the use of technology in vocabulary teaching is not influenced by the technological advances or sophistication of a developed or developing country. This is due to teachers' ability to use existing technology resources in their schools.

There are various technological tools and computer software that can be used in teaching and learning vocabulary. This study used LCD and power point software. Other studies using existing computer tools and software include the study of Bassma (2013)[3] that has used online learning websites, computer-assisted language learning programs, electronic dictionaries, email messaging programs, CD players, and video clips. There are also studies that use high-tech tools and built-in computer software, such as the Kennedy et al., (2014)[7] study that used Universal Design for Learning (UDL) to build a multimedia-based teaching tool called Content Acquisition Podcasts (CAPs) to deliver vocabulary instruction and training. Therefore, it can be concluded that both existing and self-built tools and software still benefit from vocabulary teaching and learning.

Conclusion

Based on this discussion it can be concluded that effective use of technology in vocabulary teaching and learning. This study also added value to the study of the use of technology in the teaching of first language vocabulary because most of the existing studies focus more on second language or foreign language than the first language. In fact, there is less research on the use of technology in teaching and learning Chinese vocabulary in Malaysia and this study can fill the gap. Based on this discussion it can be concluded that effective use of technology in vocabulary teaching and learning. This study also added value to the study of the use of technology in the teaching of first language vocabulary because most of the exiting studies focus more on the second language or foreign language than the first language. In fact, there is less research on the use of technology in teaching and learning Chinese vocabulary in Malaysia and this study can fill the gap.

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