

The Effectiveness of Flashcards in Vocabulary Instruction for English as a Second Language Online Classes

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ABSTRACT

Vocabulary learning and teaching are crucial aspects of second language education. In Sri Lanka, various strategies have been employed to teach vocabulary to English as a Second Language (ESL) learners, with flashcards being one notable method. Flashcards are simple visual aids that help engage and motivate students in a classroom setting. This study aimed to evaluate the impact of flashcards on vocabulary learning for secondary-level ESL students during online classes. Fifty students from grades 6 and 7 at a central college in the Hambantota district participated in the six-week study. Data were collected through pre-tests and post-tests and analyzed using SPSS. The findings revealed that while wordlist strategies and flashcards were beneficial for vocabulary learning, flashcards proved to be the most effective method. Consequently, it is recommended that secondary-level teachers incorporate more vocabulary teaching sessions using flashcards during online classes.

Keywords: Teaching and learning, Vocabulary, Flashcards, Secondary level ESL learners

INTRODUCTION

Background of the research

Vocabulary learning is a vital component in any language learning. Cameron (2001) stated that vocabulary learning is central to learning language at the primary level to enrich learners' language. Gasma (2017) mentioned that learning English as a Second Language (ESL) or a Foreign Language (EFL) is not as easy as learning the first language. Therefore, in the ESL context, vocabulary learning plays a significant role. The lexical Approach by Lewis (1993) contains a taxonomy of lexical items: Content words (nouns, verbs, adjectives, adverbs), Polywords, Collocations, Institutionalized utterances and Sentence frames and heads, which shows what kind of vocabulary the learner should develop. This approach suggests that vocabulary learning is the comprehension of grammatical lexis. Therefore, according to Cameron (2001), vocabulary mastery should pay attention to pronunciation, meaning, spelling and the grammatical usage of specific words.

The statement of the research problem

Vocabulary plays a central role in learning ESL as learners rely heavily on vocabulary knowledge, and the lack of it is the main obstacle for ESL learners (Maharoor, 2016). Referring to the Sri Lankan ESL context, Maharoor (2016) further mentioned that most learners encounter challenges due to lacking vocabulary knowledge and feel frustrated by the enormous mass of English vocabulary. Hence, the necessity of using various strategies to teach vocabulary in the Sri Lankan context is indicative.

Enhancement of vocabulary learning strategies is one of the most crucial areas of research in English language learning. The use of flashcards is one such strategy to overcome the barriers to vocabulary learning.

Although there has been a considerable amount of research related to vocabulary learning for young learners and adult learners by using different vocabulary learning strategies, in the Sri Lankan context, the prevailing research studies on vocabulary teaching and learning (Maharoor, 2016; Senevirathna et al., 2016; Gardihewa,

2014; Jayaweera, 2013) mainly focus on the identifying the challenges in vocabulary learning, academic vocabulary learning etc. Only a few studies have been conducted on vocabulary learning strategies to overcome challenges in vocabulary learning. However, there are limited studies on using flashcards to teach vocabulary in Sri Lanka. Therefore, this study aims to investigate the effectiveness of using flashcards to teach vocabulary to overcome the challenges existing among Secondary level learners in the online ESL classroom.

The purpose of the study

Knowledge of vocabulary plays a significant role in almost all domains of language pedagogy. Considering all the above, this research aims to investigate whether there is an improvement in vocabulary learning after being taught by using flashcards and which is the most effective use of word lists and flashcards in the secondary-level ESL online class context in Sri Lanka.

Research questions and hypotheses

This study intends to provide an answer to the following research question.

- a) How does using wordlists and flashcards enhance the ESL students' knowledge of vocabulary at the secondary level in the online class context?

The following hypothesis is intended to be claimed in this research study.

- a) Flashcards are more effective than word lists for teaching vocabulary during online classes.

LITERATURE REVIEW

Defining Vocabulary

Vocabulary is a crucial element to master when learning any language. Wilkins (1972, as cited in Gasma, 2017) remarked that while grammar allows for limited communication, without vocabulary, communication is impossible. Therefore, vocabulary is fundamental for making language meaningful in spoken and written forms. Gasma (2017) also stated that students with a strong vocabulary can effectively communicate using the right words in the correct context. Hornby (1987, as cited in Suri, 2012) defined vocabulary as the total collection of words that constitute a language, including the rules for combining them. Essentially, vocabulary is a list of words with meanings. Lado (1964, as cited in Suri, 2012) described vocabulary as the lexicon of written language, known as words. Furthermore, Suri (2012) explained that vocabulary needs continuous growth and development for both native and non-native speakers once grammar and pronunciation are reasonably controlled. The quality of students' language skills, both receptive and productive, heavily depends on their vocabulary's quality and quantity. This highlights the importance of mastering vocabulary, which impacts speaking, reading, writing, and listening abilities.

Vocabulary Teaching and Learning in the ESL Context

Teaching vocabulary in the ESL context is challenging. Lewis (1993) introduced the "Lexical Approach" to improve vocabulary teaching by focusing on word combinations and their use. Cameron (2001) identified four key aspects of vocabulary learning: pronunciation, spelling, meaning, and grammatical usage. Tamimi and Rajabi (2018) researched Iranian ESL learners and found the most effective Vocabulary Learning Strategies (VLS) to be a) reciting, repeating, and listening to words and b) memorizing words. Effective Vocabulary Teaching Strategies include a) explanation, b) repetition, and c) dictation. Suyanto (2007) outlined four steps for teaching vocabulary: Introducing: The teacher introduces the vocabulary; modelling: The teacher provides examples of the new words; practising: Learners repeat and practice the words; and Applying: Learners use the words in a situation.

Despite its interest, vocabulary teaching in ESL faces many challenges. August, Carlo, et al. (2005) identified language deficits and limited instruction time as major issues. Berne and Blachowicz (2008) noted that many

teachers lack confidence and knowledge in best practices for vocabulary teaching. Choudaraju (2017) emphasized the need for increased focus on vocabulary instruction due to historically minimal emphasis.

Research (Innaci & Sam, 2017; Ramezanali, 2017) shows that ESL students often lack sufficient vocabulary to express themselves in various situations. Exposure to new vocabulary is not enough; students must retain these words for future use. Meara (1980) and Oxford (1990) highlighted vocabulary retention as a significant weakness and challenge for L2 learners. Innaci and Sam (2017) stressed the importance of vocabulary acquisition, retention, and integrating retention-based strategies into curricula. Therefore, diverse teaching strategies are essential for effective vocabulary teaching in the ESL context.

Defining flashcards

According to the online Oxford dictionary, a flashcard contains a small amount of information held up for pupils to see to aid learning. According to Baleghizadeh and Ashoori (2011), a flash card is a piece of cardboard with a word, a sentence, or a simple picture. According to Wong et al. (2021), a flashcard is a simple image on a piece of paper or card that is a visual reference during the teaching process. In other words, flashcards are visual teaching material that can assist teachers in effectively teaching vocabulary.

Integrating flashcards to teach vocabulary in the ESL context

Experimental studies with EFL learners show that students who used flashcards to learn vocabulary retained more language and were more engaged in the learning process due to its simplicity. They had a better grasp of vocabulary than those who did not use flashcards. One method is using a dictionary to find new words and learn their definitions, but it takes time. Flashcards offer a quicker alternative, providing visual cues that aid in learning new words and refreshing the memory of previously learned terms. They are portable and convenient for studying during spare moments and can be organized to form meaningful word groups (Chen & Chan, 2019; Li & Tong, 2019; Yuksel et al., 2020).

In a study by Azabdaftari and Mozaheb (2012), the impact of flashcards on Iranian EFL vocabulary learning was examined. The results showed that students using M-Learning technology learned more vocabulary than flashcards. A multiple-choice posttest indicated a significant performance advantage for the experimental group over the control group. However, the study's experimental conditions could not fully explain this difference, as there was limited information on the material or structure of the spaced repetition system and no pretest to compare initial L2 English proficiency levels between groups. It was assumed there were no significant initial differences.

Moreover, Syaifudin (2017) conducted a study to explore whether flashcards could enhance students' speaking abilities by aiding in vocabulary learning. In this action research, 20 participants with speaking difficulties used vocabulary cards. The study found that flashcards effectively improved vocabulary and students' speaking skills. The use of flashcards increased interaction with vocabulary, which contributed to better verbal proficiency. In addition, Razaq (2022) carried out a study to assess how students could enhance their vocabulary across different word classes. The results showed significant improvement in vocabulary performance on post-tests. The study concluded that using flashcards effectively enhanced students' vocabulary acquisition.

Vocabulary Teaching-related Studies in Sri Lanka

Several studies on vocabulary learning in the ESL context of Sri Lanka have highlighted various challenges and strategies. Maharoof (2016) examined difficulties faced by ESL learners, finding that learners from Sammanthurai School Leavers (SSL) found vocabulary learning more challenging than those from Colombo School Learners (CSL). SSL students often used L1 (Sinhala) translations to aid word retention. Senevirathna et al. (2016) found that frequently used academic words differed across technical modules, suggesting a need for increased exposure to academic vocabulary. Gardihewa (2014) discovered that learners showed more interest in poetry-based materials but found it complex to understand in teacher- and learner-centred contexts.

Most research on vocabulary learning through varied strategies has focused on young and adult learners, leaving a gap at the secondary level virtual teaching context in Sri Lanka. Thus, the current study aims to investigate the effectiveness of using flashcards to teach vocabulary to secondary-level ESL learners virtually in Sri Lanka.

METHODOLOGY

Population and sample

The population was comprised of grade 6 and 7 students from a famous central college in the Hambantota district in Sri Lanka. The research has employed two classes from each grade. Each class consisted of forty-five students. Therefore, the researcher randomly selected twenty-five students from each class, and the total sample size for the present study was one hundred students.

Research design

This research is a quantitative study that uses an experimental design along with a pretest-posttest design to determine the effect of the usage of flashcards and wordlists in enhancing learners' vocabulary learning. The pretest was given before the experiments for four groups during the first week, and from the second week onwards, teaching sessions were conducted along with the treatments. During the last week, a posttest was administered to measure how much the students had improved after they had been exposed to the tasks. Both the pretest and posttest were administered using the Google form.

Data collection and data analysis

As mentioned above, the quantitative data were collected using a pretest and posttest and analyzed using Statistical Package for Social Science (SPSS).

DATA ANALYSIS AND DISCUSSION

The main of this study was to investigate whether there is an improvement in vocabulary learning after being taught by using wordlists and flashcards for secondary level ESL learners during online classes. The study's research question is "How does the usage of wordlists and flashcards enhance the ESL students' knowledge in vocabulary at the secondary level online class context?" To provide an answer to this question the data obtained from both grades' control group and experimental group test paper marks were analyzed using paired sample T-Test separately.

Table 4.1: Pretest vs Posttest

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	ContGrade6_pretest	42.96	25	14.707	2.941
	ContGrade6_posttest	59.56	25	11.222	2.244
Pair 2	ExperiGroup6_pretest	46.48	25	13.289	2.658
	ExperiGroup6_posttest	77.24	25	10.309	2.062
Pair 3	ContGrade7_pretest	46.60	25	13.976	2.795
	ContGrade7_posttest	66.60	25	11.836	2.367

Pair 4	ExperiGrade7_pretest	45.76	25	12.242	2.448
	ExperiGrade7_posttest	73.40	25	10.408	2.082

By the analysis of the pretest and posttest marks of the grade 6 control group as in Table 4.1 and Table 4.2. It was found that there was a statistically significant improvement in their performance in the post-test scores. A similar finding for the grade 7 control group is shown in Table 4.1. The analysis related to the experimental groups in grades 6 and 7 revealed that there was a statistically significant improvement in the learners' performance in the post-test. Therefore, as an overall finding, it is found that in both grades, word lists and flashcards could enhance vocabulary learning during online classes for secondary-level ESL learners.

Table 4.2: Pretest vs Posttest Significance

Paired Samples Test		Paired Differences						
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			
					Lower	Upper	df	Sig. (2-tailed)
Pair 1	ContGrade6_pretest - ContGrade6_posttest	-16.600	13.559	2.712	-22.197	-11.003	-6.122	.000
Pair 2	ExperiGroup6_pretest-ExperiGroup6_posttest	-30.760	7.327	1.465	-33.785	-27.735	-20.990	.000
Pair 3	ContGrade7_pretest - ContGrade7_posttest	-20.000	17.263	3.453	-27.126	-12.874	-5.793	.000
Pair 4	ExperiGrade7_pretest-ExperiGrade7_posttest	-27.640	10.618	2.124	-32.023	-23.257	-13.016	.000

This result indicates that both wordlist and flashcard strategies can improve vocabulary learning, which is in line with many of the previous research studies. The study by Sitompul (2013) found that using word lists and flashcards could help students learn vocabulary as strategies to teach vocabulary. Nevertheless, he found that flashcards were the most effective method among them.

The hypothesis of the present study, "The use of flashcards is more effective than using wordlists in teaching vocabulary during online classes", intends to examine the most effective method of teaching vocabulary between the use of word lists and flashcards in online secondary-level classes. An independent sample T-Test was used to claim this hypothesis.

Table 4.3: Grade 6

Group Statistics					
	group	N	Mean	Std. Deviation	Std. Error Mean
marks	control	25	59.56	11.222	2.244
	experimental	25	77.24	10.309	2.062

Table 4.4: Grade 7

Group Statistics					
	group	N	Mean	Std. Deviation	Std. Error Mean
marks	control	25	66.60	11.836	2.367
	experimental	25	73.40	10.408	2.082

According to Table 4.3 and Table 4.4, the mean values of the grade 6 control group and experimental group are respectively 59.56 and 77.24, while the grade 7 control group and experimental group are 66.6 and 73.4. This indicates an increase in the mean values of the learners' performance in the experimental group than in the control group in both grades. Hence, it can be concluded that using flashcards is more effective in vocabulary learning than using word lists in online ESL classes.

To see whether there is a statistically significant difference between the posttest marks obtained from wordlist and flashcard based teaching, the hypothesis can be stated as below;

H0: No statistically significant difference exists between the wordlist posttest marks and flashcards posttest marks in grade 6 and grade 7.

H1: A statistically significant difference exists between the wordlist posttest marks and flashcards posttest marks in grade 6 and grade 7.

If the sig > 0.05, means H0 is accepted

If the sig < 0.05, means H0 is rejected

Table 4.5: Grade 6 vs Grade 7

Independent Samples Test									
	Levene's Test for Equality of Variances		t-test for Equality of Means		t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	

										Upper
marks	Equal variances assumed	.151	.700	-5.801	48	.000	-17.680	3.048	-23.808	-11.552
	Equal variances not assumed			-5.801	47.659	.000	-17.680	3.048	-23.809	-11.551

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
marks	Equal variances assumed	.025	.876	-2.157	48	.036	-6.800	3.152	-13.138	-.462
	Equal variances not assumed			-2.157	47.229	.036	-6.800	3.152	-13.141	-.459

As shown in Table 4.5, the statistically significant difference in the marks of the flashcards and wordlists in grade 6 is 0.7, and in grade 7, it is 0.876. Hence, $\text{sig} > 0.05$, H_0 is accepted. Thus, it is found that though there is an increase in the posttest marks of the flashcards, the incensement is not statistically significant in both grades.

This finding confirms previous research findings. For instance, the study by Supriatin and Rizkilillah (2018) found that students' difficulties in vocabulary comprehension can be effectively improved by using flashcards. Moreover, Indarwati's (2014) study elaborated on the positive effect of using flashcards on vocabulary learning as it supports the varied multiple intelligences suggested by Howard Gardner. He further claimed that using flashcards can motivate learners to learn through visuals and facilitates kinesthetic learners through various activities.

CONCLUSION

Implications of the study

The present study's results indicate that wordlists and flashcards can be used as a teaching strategy to teach vocabulary during online classes for secondary-level ESL learners. However, flashcards are the most effective method. These findings from the present study have implications for using word lists and flashcards in the ESL classroom. Firstly, the study's overall findings indicate the necessity of using wordlists and flashcards as

alternative methods of vocabulary teaching in the language classroom, as both can be used to improve students' vocabulary learning and motivate learners to learn in an interesting online classroom context. Moreover, teachers should be able to manage their time when using those methods as the materials for teaching vocabulary. Dealing with technology is time-consuming when the learners are not familiar with it.

Limitations and Recommendations for Future Research Studies

In future studies, it would be effective to incorporate more wordlists and flashcards and extend the duration of data collection. Furthermore, further research can be conducted to examine the differences between the learners' performance when using those strategies in the physical and online classroom contexts. The present study analyzed only quantitative data, and there is a necessity for qualitative data analysis of the ESL learners' perception regarding the use of word lists and flashcards in teaching vocabulary at the secondary level. Moreover, the sample size in future studies should be increased to gain generalisable findings. Also, more vocabulary items need to be tested in future studies.

Conclusion

Based on the research and its findings, it can be concluded that the use of both wordlists and flashcards is effective in the enhancement of vocabulary learning during online classes for the secondary level. However, flashcards are the most effective method for the secondary level. Therefore, this study suggests the necessity of more effective teacher training and awareness of selecting appropriate materials for learners to teach vocabulary in the ESL context, especially for online classes in Sri Lanka. Furthermore, finding ways to eliminate the limitations of this study could provide directions for future studies related to this field. In conclusion, although the study has several limitations, it is expected that the results of the present study will make teachers aware of the value and effectiveness of using wordlists and flashcards as a strategy for online classes to overcome the challenges that both teachers and learners encounter in vocabulary learning in ESL context of Sri Lanka.

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