The Effect of Pictorial Flashcards on the Sight Word Recognition in Kindergartens

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Abstract

It was a quasi-experimental study because the study involved in training participants in two classes each containing about 5 to 6 years old pre-primary students. To this end, fifty students participated in the study who were studying at Misagh School in Tabriz. In order to make sure of their homogeneity, the researcher administered a pre-test. Based on the results, 40 students were selected as the participants of the study. The two intact classes (twenty students in each class) were then randomly assigned into two experimental groups, each receiving one type of sight word learning strategy. So, 30 words were given to the students as a pre-test. To see the effect of pictorial flashcard on sight word recognition, the necessary instruction was given. At the end of the last session of the treatment, a post-test was given to each group and then their mean scores were compared through Independent Sample T-test. The analysis of the results revealed significant difference in the efficiency of picture + text flashcard strategy compared to the text only strategy in the post-test. Findings of the present study are useful for EFL teachers, learners, language institutes, schools, and universities.

Keywords: Sight Word Recognition, Pictorial Flashcards, Kindergartens.

1. Introduction

English language training is based on continuity and if there were no continuity, content as quickly and easily fits in child's mind' will be erased from his mind. So just having summer training is not enough, students should also learn foreign language in schools and it's better to start from early stages like junior level. Of course the kids by seeing and experiencing as well as repeating and practicing have learned better and forgot later than usual. But it is not

happen in our schools and education does not move in this direction so our students after learning English for seven years not only are not able to speak but also they have problem in reading and writing.

Learning to read is a complex and often difficult task for children. The reading process consists of learning to decode words and learning to read words by sight. Learning to read by sight is learning to recognize words and read them quickly without decoding. Retrieving and reading words quickly with meaning enables a person to read fluently.

Before children can begin to read they need to understand the relationships between a symbol and a combination of symbols and the sound, or sounds, they represent. The ability to sound out or decode words is an important step in reading. When children correctly sound out a word, they are able to map it to their listening and speaking vocabulary. With a lot of practice, children begin to recognize many words automatically. The more words children recognize the easier it is for them to read. There will, however, always be unfamiliar words children must sound out. For this reason, decoding or sounding out words remains an important skill.

The understanding of sound/symbol relationships is complicated by the fact that some of the sounds in English are represented by more than one symbol or combination of symbols. For example the /f/ sound can be represented by the single consonant f as in fat, the consonant combination of *ph* as in *phone*, or *gh* as in *laugh*. There are many exceptions, especially when it comes to vowel sounds. For example the long *e* sound can be represented by *e* as in *me*, *ee* as in *bee*, *ei* as in *receive*, *ie* as in *believe*, *ea* as in *leaf*, and the e-consonant-silent e pattern as in Pete. Furthermore, some letters represent more than one sound, for example, the *c* in *car* and *circus* and *ea* in *dead, bead, and steak*. These exceptions faced by beginning and struggling readers make learning to read all the more challenging. However, it is important to point out that 84% of the words in English have regular and consistent spelling patterns, and only 3% are highly irregular.

There are strategies readers can use to read unfamiliar words. One of these strategies is Sight Word Recognition. Many learners think in pictures. Whether we realize it or not, we often visualize what we are attempting to learn to help solidify the information in our memories. Think about the last time you needed to get somewhere you hadn't been before. Even if you used written directions instead of a pictorial map, you probably had a number of

visual markers such as unusual sights or signs to help you learn how to get there. Presenting children with illustrations of sight words along with their print versions helps them make important connections between the object and the word. Flashcards or posters with a colorful picture and the word written under it are excellent sight word teaching tools. In addition, teachers or parents can have children draw their own pictures of each word on the same page to help them link the print with the visual.

Traditional flash card methods of teaching have been widely accepted over the years and are supported throughout the teaching community as an effective technique that facilitates student learning. In this method a sight word is written on a flashcard; the teacher flashes the word to the children; and the children should automatically read the word on the card. This procedure is done over and over resulting in a flashcard method. Repetition employing the flash card method is effective (Casey, S. D. 2008) in enabling student's recognition of sight words.

So the purpose of this study is to find the effect of pictorial flashcards on sight word recognition to come up with the most effective way of teaching method in Iranian classrooms.

1.1. Research Questions and Hypotheses

The motivation beyond the present research study is to answer the following research questions and test the relevant hypotheses respectively:

1. Is there a significant difference between the post-test scores of the students who were taught by the picture + text flashcard learning method and the students taught by the text only flashcard learning method?

H_1: There is significant difference between the post-test scores of the students who were taught by the picture + text flashcard learning method and the students taught by the text only flashcard learning method.

2. Methodology

2.1. Participants

The study took place in two intact classrooms at Misagh School in Tabriz, Iran. Fifty pre-primary students participated in the study. All of them were boys with an average age of 5 to

6 years old. Hence, gender and proficiency level were regarded as control variables. Prior to the experiment, the researcher administered a pre-test, of determining the homogeneity of the groups. The researcher set +1 SD above the mean score as the criterion for selecting his sample. That is, the average scores of students on the pre-test was used for homogenizing the selected participants. Based on this criterion, twenty students in each class (totally 40 students) were selected as the participants of the study. These two intact classes were then randomly assigned into one experimental group and one control group, each receiving one type of sight word learning strategy. The participants attended 10 morning (a.m.) sessions of the preschool. For learners, the native language was Azari and learns English as a foreign language. For all the participants, Farsi was the second language; hence, all the participants were bilingual with the same second language; that is Farsi. The medium of instruction in this study was English and Farsi.

Further, students were screened for the following entry level skills: a) visual ability to see photographs and text on the flashcards b) identity matching of photographs c) identity word matching d) could not read any primer level sight words e) imitating the teacher's verbal models f) responding correctly to "what is this?" when shown flashcard g) intellectual functioning was in the moderate range of intelligence. This study was elicited from a sample of beginning-level learner of English as a foreign language. Participants did not receive special education services or supplementary reading instruction while they participated in the study.

2.2. Procedure

For choosing and homogenizing 40 participants for the experiment, the pre-test was given to 50 pre-primary Iranian EFL students. Their scores in this test was used for homogenizing them. That is, students whose scores were above the standard deviation and were familiar with sight word, were omitted. The instruction for two groups was conducted in 10 sessions during 5 weeks. All two groups were presented with 3 words in each 45 minute session, that is, 30 words in total by the same researcher. The words which were thought in session 1 were revised at the beginning of session 2; the same procedure was applied in the next sessions. During the study, an initial screening was conducted to identify an initial set of stimulus item for inclusion in the study. In class A, alphabetic words and corresponded picture were needed for inclusion in the study and in class B, only alphabetic words were presented. By selecting 30 words randomly from Dolch sight word list, the researcher designed both pre-test and

post-test containing a 30-item drag and drop test (see Appendix A & B). The learner were asked to choose the appropriate sight words for 30 pictures within 45 minutes. The scores were calculated by summing up the correct answers.

All instructional and probe sessions took place in classroom. The classroom was located in a Misagh school in a large school district in Tabriz, Iran. Sessions were held on Sundays and Tuesdays, each lasted for 45 minutes. The research was obliged to use intact groups of participants in the research study. Two intact classes of EFL learners were eventually included in this study. They were 25 participants in the first intact class and 25 participants in the second intact class. At the time the experiments were carried out, they have enrolled in an obligatory general English course. But in order to conduct this research, 40 students were selected from that two intact classes each containing 20 students. Two points should be noted (1) no student took the tests (pre- and post-test) twice. And (2) all groups were taught by the researcher herself. The procedures used in flashcard teaching are as follows:

3.4.1 Text Only

The researcher who was in the role of teacher, prepared the printed alphabetic words in order to see its effect on the recognition of sight word. This part was one of the essential parts and was presented by the class B in order to see, whether students could read the word without its picture.

In the second class, text only were used to teach new alphabetic words (see Appendix D). It means pictorial flashcard strategy was conducted for class A including 20 participants But class B did not receive any picture based treatment. In other words, in each session, the researcher gave the learners 3 text only flashcards of the new sight words and asked them to figure out the meaning according to the definition and examples given. For example:

Target word: Apple

Apple is a kind of fruit. It is red.

Finally, correct guesses were confirmed by the teacher in order to prevent student's confusion but if they guess incorrectly, teacher repeated it one again.

For practicing the newly learned flashcard the students were required to read the printed word again and again and answer the related games following this type of learning. The aim of this type was to use visual ability in order to guess the alphabetic word.

3.4.2 Picture + Text

Picture + text flashcard instruction consisted of presenting participants with the Dolch sight word flashcard one at a time while being read by the researcher to the participants. The researcher said, "This word is _____." While reading a word, students could see the picture of that word on flashcards too. Because they didn't learn phonics so these words cannot be decoded by regular phonics rule and thus these orthographically complex words must be read by sight.

In class A, text+ picture flashcards were taught for learners to understand and learn new alphabetic words. Each flashcard contained a picture of the target word that introduced a new alphabetic word (see Appendix C). In each session, according to the alphabetic order, the researcher showed 3 picture + text flashcards to the learners and asked them to guess the meaning of sight word written under the picture.

2.3. Design of the Study

The study involved a pre-test post-test as well as a comparison-group one. It was a quasi-experimental study because the study involved in training participants in two classes each containing about 5 to 6 years old pre-primary students. Thus, there were one independent variables named flashcard as well as one dependent variable named sight word reading. The researcher wanted to find out the impact of picture + text pre-test and post-test, as independent variables on sight word recognition, as dependent variable.

3. Results

3.1. Result of Normality Test for the Pre-test and Post-test Scores

Kolmogorov-Smirnov test was carried out on the results of the Dolch sight word test, to check the normality of the data before running the parametric test of Independent-Sample t-test. The results of this test are shown in Table 4.1.

Table 4.1

Tests of Normality for the Post-test Scores in both groups

	Groups	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Post-test	Class A	.160	20	.196	.956	20	.471
	Class B	.137	20	.200[*]	.967	20	.694

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

c. Pre-test is constant when Groups = Class A. It has been omitted.

d. Pre-test is constant when Groups = Class B. It has been omitted.

As Table 4.1 displays, the *p*-value for the post-test scores in the both class A and class B groups are more than the set alpha level ($\alpha = .05$), which indicates that the distributions of scores in the post-test are normal. Therefore, the parametric test of Independent-Sample t-test can be used for the statistical testing in the study.

3.2. Result of Descriptive Statistics for Pre-test

The main purpose of utilizing pre-test as a standard test was to determine the homogeneity of the participants. Table 4.2 presents the Descriptive Statistics on this test. Regarding the results, the mean of the scores for 40 participants came out to be .00 and the standard deviation came out to be .00. So, the participants whose scores fell one standard deviation above the mean (i.e., above the .00 out of 30) were not participated in the study.

Table 4.2

Basic Descriptive Statistics for the Pre-test Scores in the Both Groups

	N	Minimum	Maximum	Sum	Mean		Std. Deviation	Variance
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic
Pre-test	40	.00	.00	.00	.00	.00	.00	.00
Valid N (listwise)	40							

3.3. Testing the Research Question

The main aim of the study was to test the null hypothesis that: There is no significant difference between the post-test scores of the students who were taught by the picture + text flashcard learning method and the students taught by the text only flashcard learning method. To this end, an Independent-Sample t-test was run on the sight word recognition of both groups in the post-test, which was another version of Dolch sight word test. The result of descriptive statistics are shown in Table 4.3.

Table 4.3

Results of the Descriptive Statistics for the Post-test Scores in the Both Groups

	Groups	N	Mean	Std. Deviation	Std. Error Mean
Post-test	Class A	20	22.0500	4.59376	1.02720
	Class B	20	12.1500	4.51051	1.00858

Table 4.3 shows the mean and standard deviation of the class A (M = 22.05, SD = 4.59) and class B (M = 12.15, SD = 4.51). In order to determine whether there was significant mean difference, the result of the Independent-Sample t-test is presented in Table 4.4.

Table 4.4

Results of Independent Samples Test for the Post-test Scores of Class A and Class B

	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Post-test Equal variances assumed	.007	.932	6.877	38	.000	9.90000	1.43957	6.98574	12.81426
Equal variances not assumed			6.877	37.987	.000	9.90000	1.43957	6.98571	12.81429

The results in Table 4.4 reflects the equality of variances (p = .932 > α = .05) for the post-test scores of both groups. Therefore, the first raw is reported for the mean differences. As it is shown, there was a significant difference, t (38) = 6.87, p = .00 < α = .05, between the mean scores of the class A and class B, indicating better performance of the class A (M = 22.05, SD = 4.59) compared to the class B (M = 12.15, SD = 4.51). Further, the Null hypothesis is rejected.

4. Discussion

As stated in the first chapter, the present study was an attempt to investigate flashcard vocabulary learning strategy in relation to the recognition of sight word ability of Iranian pre-primary EFL learners. This study was designed to compare two instructional conditions used to teach sight word recognition skills to pre-primary students in Misagh School. The study measured changes in the participant's ability to match pictures to corresponding text. In the picture only condition, pictures were always presented separately. Therefore, one outstanding variable that ought to be checked at the beginning was the homogeneity of the two intact class of the study. To this end, results showed the homogeneity of two classes at the beginning of the study.

According to the results of the study related to the first hypothesis, the researcher concludes that there was a significant difference between the post-test scores of the students in the experimental group taught by the picture + text flashcard learning method and the students in the control groups taught on the picture only flashcard learning method. Furthermore, it revealed that the post-test mean scores of class A (22.05) was significantly higher than that of students in class B (12.15) and indicate better performance of the class A compared to the class B. on the other hand, this means that picture + text flashcard vocabulary learning method is better in recognizing sight word compared to picture only flashcard vocabulary learning method.

When considering the results of the first hypothesis, it can be said that it is consistent with a number of studies in the related literature. For example, Falk, Band and McLaughlin (2003) investigated the effects of reading racetracks and flashcards on sight word vocabulary of three third grade students with a specific learning disability. The results indicated that reading racetracks and flashcards are and remain effective in increasing children's sight word vocabulary. The participant improved his correct and decreased his errors for sight words when reading racetracks and flashcards were both employed.

Likewise, Falk, Band, & McLaughlin, (2003) and Kaufman, McLaughlin, Derby, & Waco, (2011) found that flashcards were indeed a good method of teaching Dolch sights words when used in conjunction with an intrinsic tool such as racetracks. Meadan, Stoner, & Parette, (2008) used games with flashcards to increase acquisition of words. This asserts that traditional flashcards alone are not sufficient in teaching Dolch sight words. In additional

research, Jseph, & Nist (2006) and Schmidgall, & Joseph (2007) contribute the knowledge that words are learned best when all words used in a flashcard method are all unknown and are not interspersed with known words. Schmidgall, & Joseph (2007) also imply that flashcards when used with phonic analyses, when appropriate, can assist in word recognition.

In a similar type of research design, Sheehy (2005) completed a study comparing the teaching of sight words without pictures compared to a morphing technique with images for teaching sight words. The overall results showed that the morphed words approach was superior to the word alone in increasing students' sight vocabulary. Morphing takes the abstractness of the sight word and creates a concrete visual of the word. This makes sight words more meaningful and applicable in the participants' working vocabulary in spoken and written form. This study also tends to show that picture only flashcard methods practiced alone are not as beneficial.

Koorland & Fueyo (2002) conducted a study that focused on Dolch sight words and pictures. The focus of the study was teaching Dolch sight words with a fading procedure by using pupil-generated prompts. The participant's achievement of recognizing sight words combined with pupil-made pictures improved with each set of words; a high degree of retention was maintained within each set of words. The researchers suggested that the increase of sight-word recognition within this model could be because the participant was actively engaged in physical movements and employed more sensory avenues while drawing his or her own pictures. Furthermore, during the drawing process, the participant gave detailed attention to his drawings, which took the sight words from an abstract level to a concrete level: this process improved recognition of words.

Moreover, Mcaden, Stoner, and Parette (2008) investigated sight-word instruction combined with picture-supported techniques as compared to word-only methods in a Midwestern city. The outcome of the research seemed to demonstrate that the control group, were the only group learned faster and showed progress quicker. But in the final assessment, the experimental group read more Dolch sight words correctly. The intervention group showed their growth in the later part of the research rather than in the beginning. The control group seemed to move ahead enthusiastically but the intervention group retained more knowledge over a longer period of time. Careful analysis of why the control group learned words quicker but did not retain correct comprehension, demonstrating that the flashcard alone process increases speed, whereas picture-supported reading resulted in correct retention showing that

participants used the picture to mentally retrieve and comprehend the word. This study concluded that while flashcards can increase speed, flashcards together with pictures can increase both accuracy and speed.

Likewise, the intent of a study by Fossett and Mirenda (2006) was to examine the sight word reading in children with developmental disabilities in term of a comparison of paired associate and picture-to-text matching instruction. The results of the study showed that the picture-to-text matching condition was more effective than the paired associate condition for developing a small sight word vocabulary. Follow-up data for one participant showed that skills developed using the picture-to-text matching strategy were maintained 4 months after intervention.

Similarly, according to the research done by Meadan, Stoner, & Parette (2008) used preexisting pictures that correlated to words, while comparing a word only flashcard method to a picture supported flashcard method to learning words. The word only approach resulted in participants learning words quickly but not accurately. The picture supported method resulted in more words being read accurately.

In contrast, Scott and Ehri (1990) investigated sight word reading in pre-readers in term of logographic verses alphabetic access routes. The findings indicate the advantage of letter-sound routes over visual routes in reading words by sight. Word learning proceeds more rapidly. Words are read more accurately and consistently. This is because alphabetic access routes systematically target specific words and bypass other similar words in memory much more effectively than visual access routes.

In addition, the results are not in line with the findings of Rivera, Koorland & Fueyo (2002) used pictures that participants drew (kinesthetic and physical movements) and created on their own that matched the words within the interventions. This study also resembled the multisensory approach because there was also direct instruction with spelling words (auditory) and writing sentences (physical kinesthetic-tactile) using Dolch sight words in context, while creating pictures that define the Dolch sight words. Gast, Mechling, Thompson, (2008) also used pictures (visuals), sound (auditory), and movement and interactions (kinesthetic-tactile) with SMART board instruction to improve word recognition. Sheehy (2005) used computers to present a word and then morph the word into an image that defined the word. All of these studies had a resounded result that there was higher

achievement and acquisition of words when a picture accompanied a word in some form as with the multisensory approach.

Comparing two methods of flashcard learning is another important facture included in the current study. The researcher attempted to find out the role of pictorial flashcards on the recognition of sight words.

All in all, based on the findings, it can be suggested that the picture + text flashcard vocabulary learning can affect the recognition of sight words. Moreover sight word recognition can affect reading and picture + text flashcard vocabulary learning is a good strategy in teaching sight word. Moreover, as Ehri (2008) suggested, there are various ways of assessing sight word reading. One approach is to give students a sight word learning task in which they practice reading a set of unfamiliar words. This may need teachers' experience as well as their awareness of different techniques in order to employ sight word recognition. In this regard, as the results of this study reveals, picture + text flashcards are more effective in recognizing sight words, which is in agreement with the result of most studies in this area.

Acknowledgement:

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