ADVANCES IN GLOBAL EDUCATION AND RESEARCH

GLOCER '21

VOLUME 4

Editors:

Dr. Waynne B. James

Dr. Cihan Cobanoglu

Dr. Muhittin Cavusoglu



Published by Scholar Commons, 2017

Co-Editors

Dr. Waynne James**,** University of South Florida, USA
Dr. Cihan Cobanoglu, University of South Florida, USA
Dr. Muhittin Cavusoglu, Northern Arizona University, USA

ADVANCES IN GLOBAL EDUCATION AND RESEARCH: VOLUME 4

ISBN 978-1-955833-04-2

Authors are fully responsible for corrections of any typographical, copyrighted materials, technical and content errors.

https://digitalcommons.usf.edu/m3publishing/vol3/iss2021/24
DOI: https://www.doi.org/10.5038/9781955833042

Co-Editors

Dr. Waynne James, University of South Florida, USA
Dr. Cihan Cobanoglu, University of South Florida, USA
Dr. Muhittin Cavusoglu, Northern Arizona University, USA

ISBN 978-1-955833-04-2

© USF M3 Publishing 2021

This work is subject to copyright. All rights are reserved by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed. The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use. The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, express or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This imprint is published by USF M3 Publishing, LLC
The registered company address is University of South Florida, 8350 N Tamiami Tr, Sarasota, FL 34243 USA.

Assistant Editor

Dr. Alia Hadid, University of Rhode Island, USA

Editor Assistants

Zahra Alrushdy**,** Bahcesehir University, Turkey
Gokhan Sener, Necmettin Erbakan University, Turkey
Abraham Terrah, University of South Florida, USA

****Authors are fully responsible for corrections of any typographical, copyrighted materials, technical and content errors.***

https://digitalcommons.usf.edu/m3publishing/vol3/iss2021/24
DOI: https://www.doi.org/10.5038/9781955833042

Comparing Three Different Vocabulary Teaching Techniques for Retention

Nermin Punar-Özçelik[1] and Levent Uzun[2]

[1]Faculty of Education
Tarsus University, Turkey

[2]Faculty of Education
Bursa Uludag University, Turkey

Abstract

In relation to all languages, communication is the key concept, so vocabulary and grammar are the basis of communication. There have been conducted some studies considering the effect of different techniques on vocabulary retention. However, these studies are mostly limited not to integrate skill-based activities to language teaching techniques for effective vocabulary retention. Based on this gap, the present study aimed to discover the differences among three vocabulary learning and teaching techniques integrated with skill-based activities (reading only, pictured reading with writing, and video watching with speaking) for vocabulary retention. Pre-experimental research was carried out, and the treatment based on two children's books lasted 10 weeks in total. The results of the data analysis showed there was a significant difference between reading with pictures combined with a writing activity and the other two techniques in terms of vocabulary retention. The target vocabulary from pictured reading and writing was retained more than the other two techniques, and the least effective one was found as video watching. The detailed results were discussed.

Keywords: vocabulary, retention, reading, multimedia, writing

Recommended Citation: Punar-Ozcelik, N., & Uzun, L. (2021). Comparing three different vocabulary teaching techniques for retention. In W. B. James, C. Cobanoglu, & M. Cavusoglu (Eds.), *Advances in global education and research* (Vol. 4, pp. 1–10). USF M3 Publishing. https://www.doi.org/10.5038/9781955833042

Introduction

John A. Piece (as cited in quoteland.com), claimed that "Communication is not only the essence of being human but also a vital property of life". This quotation sums up the significance of communication among human beings.

The key factors of communication are grammar and vocabulary. Without one another, it cannot be mentioned about successful communication. To be able to establish effective and clear communication, one needs to have good grammar and, at the same time, a great amount of vocabulary knowledge (Alqahtani, 2015; Erlandsson & Wallgreen, 2017; Schmitt, 2000). To illustrate the importance of vocabulary, it could be thought that an Italian language learner wants to buy something in a small shop in Italy. This learner knows how to ask something grammatically, but he does not know the Italian meaning of the thing he wants. In this situation, Folse (2004) claims that even if a person knows grammar perfectly, he or she cannot convey the exact meaning to the receiver without the necessary vocabulary. Having a good amount of vocabulary enables

Published by Scholar Commons, 2017

learners to express themselves clearly. Based on this reason, lots of research studies on vocabulary teaching and learning techniques have been conducted since it is really important for language learners to know how to gain vocabulary (Baturay, Yıldırım, & Daloğlu, 2009; Shi, 2017; Wijayanti, 2010; Zhang & Graham, 2019; Teng, 2019; Li & Tong, 2019).

All learners are different in terms of their learning strategies, social and educational background, motivation level, ages, and intention to learn something. Hence, it is important for teachers to choose the right and the best method based on these differences to establish effective learning conditions. There are also different ways to teach vocabulary. One of them is reading, which is a traditional way of teaching vocabulary. Different kinds of reading enable learners to gain a different type of vocabulary. In the light of reading, the context has a prominent place to gain vocabulary knowledge, since the words alone are not easily acquired; the contextual reading leads to better vocabulary learning as the words together make an utterance more meaningful (Kherzlou, Ellis & Sadeghi, 2017). The other way is to have multimedia in class. Multimedia can be used as only pictures or can be used as video, including pictures, motions, sounds, etc. at the same time. Both of these are effective techniques to teach vocabulary (Hai-peng & Li-jing, 2007; Shi, 2017). Therefore, many variables need to be considered while assisting language learners in the incremental improvement of their vocabulary knowledge.

Literature Review and Theoretical Background

Language learning is a type of phenomenon which might be investigated within a framework of the fields of philosophy, psychology, linguistics, and education (Suggate, et.al. 2013). Correspondingly, it might be claimed that a bigger part of language learners have difficulty in vocabulary learning processes due to these complex structures of language learning. Due to the limited vocabulary, the meaning of an utterance cannot be conveyed clearly so it impedes effective communication. In light of this reason, it is highly important to know how to learn and retain vocabulary. For many years, researchers have conducted several research studies to elucidate the vocabulary learning process, and they have come up with several theories and hypotheses. According to Krashen (1988), learners need to be exposed to a high amount of comprehensible input to be able to gain better vocabulary knowledge, based on his Input Hypothesis. Krashen (1988) posits that the main input sources for language learning are listening and reading, which is receptive knowledge defined by Nation (as cited in Erlandsson & Wallgreen, 2017), and these are significant for language learners to acquire writing and speaking skills, which are productive knowledge. In common with Krashen's hypothesis, Swain (2000) suggests a hypothesis called Output Hypothesis claiming that learners need to produce language in order to internalize it, which means the use of productive knowledge (output) enables learners to learn better. By means of these hypotheses, reading and listening have been used as input sources, and writing and speaking have been used as output sources in the present study, and they have been integrated with each other.

Besides, lots of research studies have been conducted on the vocabulary learning and teaching techniques to find a certain answer for the question of which the best method for vocabulary learning and teaching is, and they have failed at answering it, since even if the most desirable technique, theoretically, has been found, it may be the least effective one in application due to the existence of linguistic factors and individual differences such as age, language aptitude, motivation, etc. (Richards, 1976).

https://digitalcommons.usf.edu/m3publishing/vol3/iss2021/24
DOI: https://www.doi.org/10.5038/9781955833042

The related studies have focused on different aspects of vocabulary learning and teaching. Vocabulary learning has been separated into two as intentional learning and incidental learning, which is related to reading as the former one is intensive reading, the latter one is extensive reading. The studies conducted by Li (2013) and Ahmadi (2017) showed that incidental vocabulary learning has significant effects on vocabulary learning, while intentional learning has more positive effects on vocabulary retention.

Another significant thing in the present study is the use of input enhancement, proposed by Sherwood Smith (1993), which means to make target words more salient in the texts to get learners' attention to them. Conducted studies on the effect of input enhancement on vocabulary learning have shown that it leads to better vocabulary learning and retention (Behzadian, 2016; Duy, & Peters, 2020; Mayen, 2013; Mashhadi & Jamalifar, 2015; Oyama, 2020; Rashtchi & Aghili, 2014).

The present study is also significant in terms of input sources, since they have been supported with the use of multimedia. Multimedia is any kind of contextualized learning materials, such as TV programs, videos, illustrations, music, pictures, etc. (Hasebrook, 1997). All these kinds of multimedia might be used in the classroom and with the help of multimedia, learners might be exposed to a better learning environment, since if the learners are presented with verbal (the use of texts) and visual (the use of media) information concurrently, the cognitive load will be reduced, resulting in better learning. This is a theory called "Dual Coding Theory" offered by Paivio (1971), and he explains that there are two separate systems for the process of verbal and nonverbal information, and if the input is conveyed to learners in two ways, these systems promote each other and make the retention better (Paivio, 1986). Several research studies have carried out in terms of different kinds of multimedia implementation to vocabulary learning processes and related studies showed the effectiveness of multimedia on vocabulary learning (Ataş, 2019; Akbulut, 2007; Baturay, Yıldırım, & Daloğlu, 2009; Bozavlı, 2017; Eitel & Scheiter, 2015; Lai & Lin, 2020; Somjai & Soontornwipast, 2020; Turk & Ercetin, 2014; Wang & Lee, 2021).

Referring to these theories and studies, the present study aims to find out which investigated technique will have more contribution to the vocabulary retention of English language learners by comparing three skill-based integrated vocabulary teaching techniques; reading (RO), reading with pictures combined with writing activity (RPW), and video watching combined with speaking activity (VWS). Based on this aim, the following research questions guided the study:

- Is there any difference between RO and RPW in terms of vocabulary retention?
- Is there any difference between RO and VWS in terms of vocabulary retention?
- Is there any difference between RPW and VWS in terms of vocabulary retention?
- Among RO, RPW, and VWS, which one has more contribution to vocabulary retention?

Methods

In this section, research design, participants, materials, data collection tools, procedures and analysis will be discussed.

Published by Scholar Commons, 2017

Research Design

By comparing three different vocabulary teaching and learning techniques (see Appendix 1 for the description of the used techniques), this study attempts to find out the most effective technique among the investigated ones for vocabulary retention of English language learners. Based on this, the present study was carried out by a pre-experimental one-group pretest-posttest research design to be able to see the improvement of the group depending on the treatment (Creswell, 2014) that was assisted with a delayed post-test to reveal the retention levels. The three techniques compared in the study were reading only, reading with pictures combined with a writing activity about pictures, and video watching with acting-out.

Participants

Twenty students studying in a private school participated in this study. All of the students were in sixth grade and they were chosen by the school administration based on their parents' expectations about language learning. The language level of the participants was reported as A2 (Common European Framework) by the head of the English Department of the school, based on their prior proficiency test scores.

Materials

For treatment materials, two children's books were used; Alice's Adventures in Wonderland by Lewis Caroll and The Little Prince by A.S. Exupery. The reason for choosing these two books was the appropriateness of them to adapt to the different techniques used in this study. These two books were A2 level and their both pictured and short video animation versions were available. The books were separated into three equal parts to be used for three different techniques investigated in this study. The division was made based on the lexical coverage and the length of the chapters. The number of pages dealt with in a lesson was between 12 and 15. The first parts of the books were used as only reading material. The second parts of the books were used as pictured reading material and the related pictures were added to the story. The last parts of the books were used as video material. The related parts of the stories were found as the animated story from YouTube and the students watched them to understand what happened at the ends of the stories. The sequence of the techniques applied here was reading only first, then pictured reading followed with video watching. The reason for this sequence was based on the motivation of the learners. To be able to make learners more motivated for the following treatment lessons, they were said that they would be engaged with pictures and videos in the following weeks. By doing so, the learners were a bit more eager to participate in the lessons and see the next parts of the stories.

The target vocabularies in the printed stories, pictured stories and texts in videos are enhanced (bold and underlined) based on input enhancement techniques.

Data Collection Tools

For data collection, a pre and a post-test were used. Both tests were the same and they only included the target words chosen from the books used as research material. There were 75 target words, 38 of them were selected from the first book and 37 of them were selected from the second book. There were 75 multiple choice questions with three options, and all of the options in the tests were the target words from the books used as research material in this study. All the questions were

https://digitalcommons.usf.edu/m3publishing/vol3/iss2021/24
DOI: https://www.doi.org/10.5038/9781955833042

prepared by the researchers and presented in a sentence-based context in the tests. The pre-test was conducted to find out the level of learners and to determine which words they know or they do not know. There was no significant difference among techniques at the beginning of the treatment based on the pre-test results. The post-test was conducted 13 weeks after the treatment so as to identify their retention.

Procedure

As the first step of this research, the books were chosen based on their appropriateness to the techniques to be used in the present study. Then, the materials were prepared in accordance with the techniques. The students were assigned by the school administration and the parents of the participants were informed about the treatment process. The treatment lessons were conducted on Wednesdays after scheduled classes of the students. The treatment process lasted 10 weeks in total. Before the treatment process, the students were administered a pre-test. Next week after the pre-test, the treatment process started. In the first two weeks, the reading process was conducted. The participants read their printed stories. The next two weeks, they read their printed with pictures stories, and the last week, they watched the rest of the stories as an animation.

Table 1. Treatment Process

Weeks	Techniques	Book, Chapters	Duration
0	Pre-test		40 min.
1	RO	(Alice in Wonderland, 1)	35 min.
2	RO	(Alice in Wonderland, 2-3)	35 min.
3	RPW	(Alice in Wonderland, 4)	35 min.
4	RPW	(Alice in Wonderland, 5)	35 min.
5	VWS	(Alice in Wonderland, 6-7)	35 min.
6	RO	(the Little Prince, 1-2-3-4-5)	35 min.
7	RO	(the Little Prince, 6-7-8-9)	35 min.
8	RPW	(the Little Prince, 10-11-12)	35 min.
9	RPW	(the Little Prince, 13-14-15)	35 min.
10	VWS	(the Little Prince, 16--27)	35 min.
23	Post-test		40 min.

Data Analysis

The results of the tests were analyzed in SPSS 20. Frequency statistics and descriptive statistics were carried out to determine the frequencies of the answers and the test means. Normality tests were conducted to check the differences between pre and post-test, and the result showed the data distributed normally (p=,367). Paired samples and independent samples t-tests were conducted to find out the differences between the pre-test and post-test. Finally, to identify which technique has more contribution to vocabulary retention of the students, one-way ANOVA was conducted.

Results

To be able to find an answer to research question one, firstly, there was a need to check the pre-test results. According to the statistics of the pre-test comparison of reading and pictured reading with writing, there was no significant difference between the techniques [p=,086 > 0,05]. The related results were shown in Table 2.

Published by Scholar Commons, 2017

Table 2. Pre-Test Differences About the Comparison of RO and RPW

Techniques	*N*	*M*	*SD*	*P Value*
RO	29	10	3,61	,086
PRW	26	11,84	4,20	

As a second step of the first research question, independent samples t-test analysis was conducted between RO and PRW in terms of vocabulary retention. The results showed that there was a significant difference between the techniques at the end of the treatment. Mean score of PRW [M=16,42] was higher than RO mean scores [M=15,13], with p=,034 [P>0,05]. The detailed results were shown in Table 3.

Table 3. Independent Samples T-Test Between RO and RPW in Terms of Vocabulary Retention Within 13 Weeks

Techniques	*N*	*M*	*SD*	*P Value*
RO	29	15,13	2,26	,034*
PRW	26	16,42	2,10	

Note. P < 05*

For the second research question which was about the difference between RO and VWS in terms of vocabulary retention, pre-test results showed that there was no difference between RO and VWS techniques at the beginning of the process. The results were demonstrated in Table 4.

Table 4. Pre-Test Differences About the Comparison of RO and VWS

Techniques	*N*	*M*	*SD*	*P Value*
RO	29	10	3,61	,931
VWS	20	10,1	4,44	

According to independent samples t-test results, no significant difference could be seen between RO and VWS. The related results were shown in Table 5.

Table 5. Independent Samples T-Test Between RO and VWS in Terms of Vocabulary Retention Within 13 weeks

Techniques	*N*	*M*	*SD*	*P Value*
RO	29	15,13	2,26	,378
VWS	20	14,55	2,28	

For answer of the third research question asking whether any difference between PRW and VWS in terms of vocabulary retention, pre-test results showed that there was no significant difference between PRW and VWS. Detailed results were shown in Table 6.

Table 6. Pre-Test Differences About the Comparison of RPW and VWS

Techniques	*N*	*M*	*SD*	*P Value*
PRW	26	11,84	4,20	,180
VWS	20	10,1	4,44	

Independent samples t-test results showed that there was a difference between PRW and VWS in terms of vocabulary retention. When the p-value was checked, the difference was found at a significant level, as it was smaller than 0,05 [p=,006] as presented in Table 7.

https://digitalcommons.usf.edu/m3publishing/vol3/iss2021/24
DOI: https://www.doi.org/10.5038/9781955833042

Table 7. Independent Samples T-Test Between PRW and VWS in Terms of Vocabulary Retention Within 13 weeks

Techniques	*N*	*M*	*SD*	*P Value*
PRW	26	16,42	2,10	,006*
VWS	20	14,55	2,28	

Note. P < 05*

To be able to mention the most effective technique among these three skill-based integrated techniques, finally, the descriptives of the post-test were analyzed. The results showed that the highest score was allocated for PRW, followed by RO and VWS which had the lowest score. In order to find out whether these differences were significant or not, ANOVA test was conducted, and obtained ANOVA results showed that the differences between the techniques were at an important level, as the significant value was smaller than 0,05 [p=,015]. In order to make this difference meaningful and to find the technique which had the most contribution to vocabulary retention, multiple comparisons for ANOVA were conducted, and the results showed that the most significant difference among techniques was between PRW and VWS [p=,022<0,05]. The detailed results were demonstrated in Table 8.

Table 8. Multiple Comparisons for ANOVA on Vocabulary Retention Within 13 Weeks

(I) Technique	(J) Technique	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
RO	RPW	-1,28515	,59780	,106	-2,7794	,2091
	VWS	,58793	,64335	,660	-1,0202	2,1960
RPW	RO	1,28515	,59780	,106	-,2091	2,7794
	VWS	1,87308*	,65833	,022*	,2275	3,5186
VWS	RO	-,58793	,64335	,660	-2,1960	1,0202
	RPW	-1,87308*	,65833	,022*	-3,5186	-,2275

Note. P < 05*

Discussion, Conclusion, and Suggestions

Since vocabulary is probably the most decisive factor of successful communication, the present study aimed to find out the most effective technique among the three skill-based integrated techniques investigated in this study for vocabulary retention. The three techniques compared in the study were reading only, reading with pictures combined with a writing activity about pictures, and video watching with acting-out. All the vocabulary was handled in context, having two different children's books. The books were separated into three parts for each technique, and the pre-experimental one-group pretest-posttest with delayed post-test research design was carried out.

Regarding the first research question, data analysis showed a significant difference between reading only and reading with pictures combined with a writing activity. The students retained more vocabulary when they received the target vocabulary in a text combined with pictures and writing activities. The results of this data were in line with the studies, of Baralaei and Najmabadi (2015), Chun and Plass (1996), Hai-peng and Li-Jing (2007) and Yoshii and Flaitz (2002) in terms of using pictures with texts to teach vocabulary. All of them reported that if pictures were included within the texts, it would enable learners to gain and retain more vocabulary. The reason for it is about the Dual-Coding Theory by Paivio (1986). According to this theory, if the learners are exposed to the verbal and visual representations of the related information at the same time, it will enable them to learn better, stimulating both mental parts of the brain. Additionally, the other

Published by Scholar Commons, 2017

reason for this result might be the effect of writing activity. In the present study, students formed their own sentences by looking at the pictures dealt with within the context. It also enabled them to use their creativity to be able to produce something and it brought about better learning.

The second research question was about the difference between reading and video watching combined with a speaking activity, and the results showed no significant difference. The results contradicted with Lauc, Matic, and Mikelic's (2006) study, which claimed that the use of media in a language environment had more effective results than other traditional techniques. However, in this study, the learners gained the almost same amount of vocabulary. In line with the present study, Aidinlou and Moradinejad (2016) posited that authentic video materials could enable learners to gain and retain less vocabulary by making the students distracted during the video watching process.

The third research question investigated the difference between reading with pictures combined with writing activity and video watching combined with speaking activity. The related results showed a significant difference between the techniques. Based on this result, it might be said that when the text was assisted with pictures and writing activity, learners could gain and retain more vocabulary. Even if the videos were one of the effective techniques to learn vocabulary, the present study showed that pictures were more effective in terms of vocabulary retention. Videos could intrinsically contain more distractors, such as the length, the voice, or the quality, etc.

The last research question was aimed to find out the most effective technique in terms of vocabulary retention, and the ANOVA results showed that the most effective technique was reading with pictures combined with a writing activity, followed by reading only and the least effective one was video watching combined with a speaking activity.

Based on these results, the following could be suggested:

- Target vocabulary should be handled in a context.
- There should be pictures in texts related to target vocabulary.
- There should be more writing own sentences activities based on target vocabulary.
- Videos should be used only for motivation, not to teach target vocabulary.

Limitations and Further Research

Rather like many studies, the present study has some limitations. Firstly, the results cannot be generalized because of the limited number of participants. However, the findings reveal useful hints related to what and how techniques can be applied for vocabulary acquisition. Secondly, the motivation level of the learners was really low during the treatment because of their tiredness after school. Nevertheless, the learning act itself is usually a burden for many students, and this limitation should be reaccepted in educational environments. Thirdly, the duration of the pre and post-tests was limited and it led learners to become nervous about completing the test in time. Therefore, the allocated time for the tests can be reconsidered in the following studies, which in fact might become another factor to investigate. Allowing students as much time as they need in the tests might lead to different results.

https://digitalcommons.usf.edu/m3publishing/vol3/iss2021/24
DOI: https://www.doi.org/10.5038/9781955833042

To sum, for further research, the number of participants might be increased to able to generalize the results. The duration and timing of the treatment might be organized according to learners' availability. Additionally, the three techniques that were investigated in the present study might be tried with different students of different proficiency levels.

References

Ahmadi, S. R. (2017). The impact of incidental and intentional L2 vocabulary learning on depths and breadth dimensions of vocabulary knowledge. *Would Journal of English Language, 7*(1), 50-60.

Aidinlou, N. A., & Moradinejad, A. (2016). Short-term and long-term retention of vocabulary through authentic subtitled videos. *Advances in Language and Literary Studies, 7*(5), 14-22.

Akbulut, Y. (2007). Effects of multimedia annotations on incidental vocabulary learning and reading comprehension of advanced learners of English as a foreign language. *Instr Sci*, 499-517.

Alqahtani, M. (2015). The importance of vocabulary in language learning and how to be taught. *International Journal of Teaching and Education*.

Ataş, U. (2019). The effects of using games and visual aids in learning foreign language vocabulary. *International Association of Research in Foreign Language Education and Applied Linguistics-ELT Research Journal, 8*(1), 2-21.

Baralaei, S., & Najmabadi, A. (2015). The effect of using images on vocabulary learning on EFL learners. *International Journal of Research on English Language Teaching Studies, 3*(2), 17-19.

Baturay, M., Yıldırım, S., & Daloğlu, A. (2009). Effects of web-based spaced repetition on vocabulary retention of foreign language learners. *Eğitim Araştırmaları Eurosian Journal of Educational Research,* 34, 17-36.

Behzadian, K. (2016). The effect of input enhancement and concordance-based activities on Iranian EFL learners' acquisition and retention of phrasal verbs. *Michigan Academician, 44*(1), 29-50.

Bozavli, E. (2017). Vocabulary teaching in foreign language via audiovisual method technique of listening and following writing scripts. *International Education Studies, 10*(5), 129-135.

Chun, D. M., & Plass, J. L. (1996). Effects of multimedia annotations on vocabulary acquisition. *The Modern Language Journal, 80*(2), 183-198.

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches.* United States of America: SAGE Publications, Inc.

Duy, V. V., & Peters, E. (2020). Learning vocabulary from reading-only, reading-while-listening, and reading with textual input enhancement: Insights from Vietnamese EFL learners. *RELC Journal*. 10.1177/0033688220911485

Eitel, A., & Scheiter, K. (2015). Picture or text first? Explaining sequence effects when learning with pictures and text. *Educational Psychology Review, 27*(1), 153-180.

Erlandsson, T., & Wallgren, S. G. (2017). Incidental vocabulary acquisition through reading. *Linkopings University, Department of Culture & Communication*.

Folse, K. S. (2004). *Vocabulary Myths.* Ann Arbor, MI: University of Michigan Press.

Hai-peng, H., & Li-jing, D. (2007). Vocabulary acquisition in multimedia environment. *US-China Foreign Language, 5*(8), 55-59.

Hasebrook, J. P. (1997). *The human factor in multimedia.* Frankfurt: Bank Academy & Universiy of Banking.

Kherzlou, S., Ellis, R., & Sadeghi, K. (2017). Effects of computer-assisted glosses on EFL learners' vocabulary acquisition and reading comprehension in three learning conditions. *System*(65), 104-116.

Krashen, S. D. (1988). *Second Language Acquisition and Second Language Learning.* Prentice-Hall International.

Lai, S. C., & Lin, C. H., (2020). The effect of the use of multimedia technology on year three student's Chinese vocabulary learning. *Muallim Journal of Social Sciences and Humanities, 4*(2), 87-92. https://doi.org/10.33306/mjssh/65

Lauc, T., Matic, S., & Mikelic, N. (2006). Educational multimedia software for English language vocabulary. *Current Research in Information Sciences and Technologies.* Spain.

Li, J. T., & Tong, F. (2019). The effect of cognitive vocabulary learning approaches on Chinese learners' compound word attainment, retention, and learning motivation. *Language Teaching Research*, 1362168819829025.

Li, Q. (2013). Incidental and intentional vocabulary learning: A case study of meaning-given, meaning-inferred with MC, and pure meaning-inferred methods on the retention of L2 word meanings in a Chinese University. *Education Journal, 2*(4), 138-148.

Mashhadi, F., & Jamalifar, G. (2015). Second language vocabulary learning through visual and textual representation. *Procedia - Social and Behavioral Sciences, 192*, 298-307.

Published by Scholar Commons, 2017

Mayen, N. R. (2013). Effects of input enhancement and visual prompts in children's L2 acquisition of Spanish verbal morphology. *Estudios de Linguistica Inglesa Aplicada*(13), 83-111.
Oyama, R. (2020). The effects of affective input enhancement on second language development in Japanese university students. *The Journal of Asia TEFL, 17*(1), 1-17. http://dx.doi.org/10.18823/asiatefl.2020.17.1.1.1
Paivio, A. (1971). *Imagery and Verbal Processes.* New York: Holt, Rinehart & Winston.
Paivio, A. (1986). *Mental Representations.* New York: Oxford University Press.
Piece, J. A. (n.d.). http://www.quoteland.com/author/John-A-Piece-Quotes/7096/.
Rashtchi, M., & Aghili, H. (2014). Computerized input enhancement versus computer-assisted glosses: Do they affect vocabulary recall and retention? *Theory and Practice in Language Studies, 4*(8), 1665-1674.
Richards, J. C. (1976). *The Role of Vocabulary Teaching (Teacher of English to Speakers of Other Languages.* INC TESOL.
Schmidt, R. W. (2010). Attention, awareness, and individual differences in language learning. In W. M. Chan, S. Chi, J. Istanto, J. Nagami, W. Sew, T. Suthiwan, & I. Walker (Ed.), *Proceedings of CLaSIC 2010* (pp. 721-737). Singapore: National University of Singapore, Centre for Language Studies.
Sharwood S. M. (1993). Input enhancement in instructed SLA. *Studies in Second Language Acquisition, 15*, 165- 179.
Shi, W. (2017). Application of multimedia technology in vocabulary learning for engineering students. *iJET, 12*(1), 21-21.
Somjai, S., & Soontornwipast, K. (2020). The integration of implicit and explicit vocabulary instruction, project-based learning, multimedia, and experiential learning to improve Thai EFL senior high school students' vocabulary ability. *Arab World English Journal (AWEJ) Special Issue on CALL,* 6, 171-190. 10.24093/awej/call6.12
Suggate, S. P., Lenhard, W., Neudecker, E., & Schneider, W. (2013). Incidental vocabulary acquisition from stories: Second and fourth graders learn more from listening than reading. *First Language, 33*(6), 551-571.
Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. *Sociocultural theory and second language learning*, *97*, 114.
Teng, F. (2019). Retention of new words learned incidentally from reading: Word exposure frequency, L1 marginal glosses, and their combination. *Language Teaching Research*, 1362168819829026.
Turk, E., & Ercetin, G. (2014). Effects of interactive versus simultaneous display of multimedia glosses on L2 reading comprehension and incidental vocabulary learning. *Computer Assisted Language Learning, 27*(1), 1-25.
Wang, S., & Lee, C.I. (February 4, 2021). Multimedia gloss presentation: Learners' preference and the effects on EFL vocabulary learning and reading comprehension. *Frontiers in Psychology.* https://doi.org/10.3389/fpsyg.2020.602520
Wijayanti, A. E. (2010). *Improving vocabulary using multimedia (an action research at the second year of SDN 2 barenglor klaten).* Muhammadiyah University of Surakarta.
Yoshii, M., & Flaitz, J. (2002). Second language incidental vocabulary retention: The effect of text and picture annotation types. *CALICO Journal, 20*(1), 33-58.
Zhang, P., & Graham, S. (2019). Vocabulary learning through listening: Comparing L2 explanations, teacher codeswitching, contrastive focus-on-form and incidental learning. *Language Teaching Research*, 1362168819829022.

Appendix: The Techniques That Were Used in the Present Study

Name of the technique	Activities	Explanation of technique	Integrated part	The Rationale of Integration
Reading	-definition matching -fill-in-the-blanks	Reading is used as a traditional way of teaching. Students only read the written text of the books, and complete the matching and fill-in-the-blank activities.	---	No skills/techniques are integrated in reading, since reading is a traditional way of teaching.
Pictured Reading	-picture matching -sentence writing	Students read the written and pictured text of the books, and they match the pictures with target words. Additionally, they write their own sentences by looking at the pictures of the stories.	Writing	Pictures are more convenient to be used as a source of input for writing. Pictures enable learners to open their minds and be creative while making up their own sentences.
Video Watching	-act-out	Students watch the rest of the books as a short animated movie. They imitate the sentences in the video as speaking activity.	Speaking	Videos are more convenient for imitation. Students can hear the tone of the voices, and see the gestures/mimics of the speakers, so they can act-out.

https://digitalcommons.usf.edu/m3publishing/vol3/iss2021/24
DOI: https://www.doi.org/10.5038/9781955833042