# The Effects of Pictionary and Traditional Vocabulary Strategies on Student Performance in a 9th Grade ELA Classroom

Patrick Kariuki

And

Jordan Taylor

Milligan College

A Paper Presented at the Annual Conference of the Mid-South Educational Research Association,

Pensacola, Florida, November 7 – 9, 2018

**Abstract**

The purpose of this study was to examine the effects of Pictionary and traditional vocabulary strategies on student performance in a 9th grade English Language Arts classroom. The sample consisted of 30 ninth grade honor students who were randomly assigned to an experimental and control group. Data were collected using teacher made tests. The experimental group and control group was administered a pretest on a set of vocabulary words. After the pretest, the experimental group was taught vocabulary using Pictionary strategy while the control group was taught vocabulary using traditional methods. At the end of instruction, a posttest was administered. Data were analyzed using independent and paired t-test. The results indicated a significant difference between Pictionary and traditional vocabulary instruction ($t(28)=2.346$, $p=.026$, ES= 0.86). Similarly, there was a significant difference between students pretest and posttest when they were taught using the Pictionary strategy ( ($t(29)= -6.50$, $p= .001$, ES=1.53). The results suggest that Pictionary is an effective instruction strategy on student vocabulary.

*Keywords*: Pictionary, Traditional vocabulary instruction, Vocabulary strategies

## Review of the Literature

Reading is an imperative skill for all human beings to possess—reading is learning, while learning is the process of living. As reading is the fundamental foundation for the ability to function and thrive in a very progressive society, the ability to read requires a foundation within itself. Words are inclusive in American society and shape the very being within society. Words are in human being's world on a daily scale—constantly evolving in a very rapid pace. The ability to see words and understand them for what they are is an important necessity. Possessing an arsenal vocabulary is the cornerstone of that foundation for reading. The skill of great vocabulary instruction begins in the early grades and progresses through the secondary school level. There are major implications for students' vocabulary and the role of individual word meanings in student comprehension (Beck, McKeown, 2010). The trend continues that seats American students at the descending level of vocabulary performance. NAEP studied the rising

problem of vocabulary descent; they also performed a study that measured if fourth and eighth grade vocabulary scores have increased or decreased since 2009. Their study ranged from a pool of results stemmed from students' achievement from public schools, as well as private schools. Also in the mix of those results were the Bureau of Indian education schools and the Department of Defense schools. According to NAEP and their "Vocabulary Report Card", their study indicated that "At grade 4, scores were lower in 2011 than in 2009 for higher-performing students at the 75th and 90 $^{th}$ percentiles, and Eighth-graders at the 75th and 90th percentiles scored lower in 2011 than in 2009" (https://nces.ed.gov/nationsreportcard).

NAEP's study reflects an inclination that our students, at all achievement levels, are declining in vocabulary achievement. Based on the predication that students are in fact falling in vocabulary usage, there must be a new trend that enforces the shift of positive instruction for students in the academic setting. In what ways can educators alike tackle the problem and implement ways in order to make a shift that will positively affect student performance? Research indicates that students need a variety of vocabulary instruction that derives from multiple perspectives and explicit instruction.

## Differentiating Instruction

Research indicates there are a couple of variables that positively influence vocabulary performance. A successful vocabulary instruction method or program involves two things: the instruction method/nature of instruction and the frequency of instructional encounters (McKeown, Omanson, Pople, 1985, pg. 522). In this 1985 study, the researchers examined fourth grade children who received three different types of instruction. One method was a traditional instruction which required only a set of associations between the vocabulary words themselves, along with their definitions. The next method used elaborated word meanings and many diverse contexts. The third method used was an extended and extremely rich instruction that added vocabulary activities which extended the use of the vocabulary words beyond the classroom dynamic. The frequency of the study was manipulated by the researchers by

either exposing the students with the words 12 or 4 encounters (McKeown, Omanson, Pople, 1985, pg. 525). The results were measured using knowledge of the definition, the fluency to the word meaning, context interpretation, and the use of the words in comprehension. The results of the specific study were pretty staggering as they found the higher the frequency with the vocabulary words yielded a much higher result on the measurable scale. The type of instruction that yielded the highest results was the direct vocabulary instruction that allowed a rich method. Students who used the vocabulary words outside of the classroom dynamic were much more successful in all facets of learning: comprehension, fluency, interpretation. Those who received the extended instruction scored much higher than those students who received traditional instruction (McKeown, Omanson, Pople, 1985, pg. 534).

An essential question arises from many educators across the nation. Does vocabulary instruction make large enough impact that we should invest significant amount of time instructing vocabulary practices? Zimmerman, in a 10 week classroom based study tested her hypothesis that L2 students would be exposed to a combination of reading and interactive vocabulary instruction and those students would show significant gains in their knowledge of the nontechnical terms that is used across academic fields (Zimmerman, 1997). The students that were used were post-secondary students who were about to enter into the university level. These L2 students were divided into two groups: one received 3 hours a week of interactive vocabulary instruction plus an assignment to read self-selected texts. The other group received the self-selected assignment only. The post test results suggested that interactive vocabulary instruction accompanied by amounts of self-selected and course related reading led to gains in vocabulary knowledge (Zimmerman, 1997).

Zimmerman's research, like many others, regarding vocabulary instruction inquires educators alike to not only include vocabulary instruction for the purpose of reading. However, vocabulary instruction that is practiced in a manner where students can self-select their learning through a systematic practice will then boost the knowledge fundamentals that students need in order to not only be successful at the university level like these students. Yet, these strategies, like Zimmerman's, implemented at the

secondary level will also yield a successful product. Like Zimmerman, suggested that the important features of a given L2 vocabulary exercise lies in the depth of word processing, instead of the amount of word retrievals required (Folse, 2006). By taking Folse's theory of the practicing vocabulary for depth of word processing, and using Zimmerman's method of self selected practice, vocabulary instruction across all levels of learning will be influenced greatly. Reading, self-selected practice, and enrichment are the driving forces of vocabulary instruction. The results of this study reap one common denominator. Students must be introduced to a new form of instruction which allows them to extend their practice into aspects of their changing lives (Watts, 1995). Instruction that expands upon the classroom dynamic, and allows students to use practices outside the classroom, enriches learning.

**Vocabulary as Pre-writing Technique**

As cited in Duin and Grave (1997), Ann Duin describes writing as a technique that is heavily dependent on vocabulary understanding, usage, and knowledge. She states vocabulary should be used in more ways than just recall. Instead, she says vocabulary instruction can be used as a prewriting technique (Duin, Grave, 1987, pg. 313). Using vocabulary simply as a prewriting technique should still be used in a variety of methods to reach student potential. The researchers in this study used three methods in order to teach vocabulary to students prior to writing an expository piece—intensive vocabulary and writing instruction, individualized vocabulary instruction, and traditional vocabulary instruction. The researchers chose to use 80 seventh grade subjects who were taught thirteen target words over a period of a week. The researchers measured the students based on vocabulary knowledge by means of a multiple choice pre/post test—the number of those target words used in pre/post writing assignments (Duin, Grave, 1987, pg. 321). The quality of the writing was measured by two different writing scales. Duin and Graves concluded that "the students who received the vocabulary and writing activities outperformed the other groups" (Duin, Grave, 1987, pg. 326). This research based procedure confirms the richer the instruction that allows students to extend practice outside of simple vocabulary recall, affirms their learning. Allowing students to present their knowledge outside of traditional practice intensifies retention. This

particular practice uses rich instruction by using writing. Essentially, Duin and Graves extend rich practice through writing and concludes that "teaching a related set of words to students before they write an essay in which the words might be used can improve the quality of their essays" (Duin, Grave, 1987, pg. 330)

Prewriting is not the only method in which writing can be used in vocabulary instruction. Writing, in general, enriches vocabulary retention levels for students because they are placing their learning into a practice. Any opportunity to allow students to write will not only allow students to use their new learning, but it reflects their new learning. A study conducted by Siok Lee investigated the vocabulary use in writing for sixty-five secondary school students in an ESL classroom. The students were being tested on their ability to target recognition vocabulary by using a fill in the blank test which was made up of 30 single words and six lexical phrases. After the students were instructed in a reading activity on "bull fighting," the students then wrote a composition (Lee, 2003, pg. 539). The writing which followed the instruction and comprehension practice before the target vocabulary instruction showed that 13.19% of recognized target vocabulary. This number rapidly improved to 63.62% after the target vocabulary instruction where the students immediately practiced quick writing. Those students who practice delayed writing showed no significant loss in target vocabulary (Lee, 2003, pg. 555). The study indicated that the students who practiced writing after receiving instruction significantly increased their ability to retain the target vocabulary. Students who practice writing to enrich vocabulary instruction strongly increases their ability to retain knowledge. Lee's study, like Duin and Graves', both allow students to use writing to enrich their learning. Pre Writing and post writing activities put vocabulary into use. Both studies indicated that writing not only measures student learning, yet it is the technique that allows learning to be expressed.

Writing stems across many different genres; academia requires students to write cross curricular in many different forms. Because of this, students are constantly engaged with many different forms of words. Due to the vast nature of student requirements regarding writing, it only makes sense to allow

students to write across genres in order to enhance vocabulary practices. Olinghouse and Wilson examined the roles of the vocabulary in the writing process using three specific genres. The study used 105 fifth grade students which wrote three composition pieces: story, perspective, and informative. Each of the three compositions addressed the same topic, which was outer space. The use of the same topic would be the underlying method for determining background knowledge. The written compositions were then examined in order to score for holistic quality and a majority of vocabulary constructs: diversity, maturity, elaboration, academic words, content words, and register (Olinghouse, Wilson, 2013). After the instruction was given, the results of the study were varied by genre in which the students were exposed. Students who were exposed to a story type vocabulary instruction had a higher diversity than those who received informative instruction. Many of the students who received all types of instruction had a much higher maturity as compared to those of persuasive texts. The persuasive text group contained a higher accuracy in diversity than the informative group. The students who used informative text, scored much higher in content specific words and elaboration of those words than any other group (Olinghouse, Wilson, 2013). After a multiple regression and commonality analysis, the researchers found that "the vocabulary constructs related to writing quality differed by genre"(Olinghouse, Wilson, 2013, pg. 45).

Writing, especially when it comes to student writing, varies from subject to subject. Writing also varies depending on the type of writing that is required of students. Writing needs to be utilized in many forms. When students learn a new set of vocabulary, to enrich that vocabulary practice, student writing alone will not be adequate enough. Instead, students should take on the new vocabulary through instruction, extend and enrich their learning by practicing writing across many different formats and structures. All of the researchers have concluded that writing is an immediate enricher of practice. Also, they have concluded that writing should be implemented not only as a pre, during, and post writing technique, but also should be implemented in many different types of writing that will reach all student styles. This effective practice is the enricher of practice.

## Context Vocabulary

Researchers have found vocabulary instruction which requires students to derive meaning from diction and sentence context is more meaningful and reliable than simply teaching the meaning of words (Jenkins, Matlock, Slocum, 1989, pg. 216). This specific experiment evaluated two approaches to instruction of vocabulary using 135 fifth grade students in a United States classroom. One of the methods used was the instruction of unfamiliar sets of words for meaning. The other strategy implemented was instructing students to derive specific word meaning from the context of sentence usage. Both methods were used giving all ranges of practice time (Jenkins, Matlock, Slocum, 1989, pg. 217). The results of the study were not surprising as students who received the instruction using context from sentences to derive meaning proved to be more effective as students were able to derive more specific word meanings. The method using direct word meanings instead of using context showed that students with a high amount of exposure to this practice did indeed score higher on the pretest; however, using context as a direct instruction proved more effective after one session of instruction (Jenkins, Matlock, Slocum, 1989, pg. 235). As a result of the study, just like the other studies, students who receive a rich form of vocabulary instruction where students are using the instruction as a practice results in a much higher retention rate.

Context vocabulary derives on the idea that reading and vocabulary are collectively used together to push instruction. Bos' study looked to find out if theory driven vocabulary instruction and the vocabulary reading comprehension connection truly existed. Bos' study compared the effectiveness of three interactive vocabulary strategies (Bos, 1990). 61 learning disabled junior-high students were used in the study. By using content-area texts,, students would use semantic mapping, semantic feature analysis, and semantic/syntactic feature analysis. The learning measure was determined by short and long term multiple choice items and written recalls. The results of the test deemed that students who participated in the interactive strategies demonstrated greater comprehension and vocabulary learning than the students who received the definition instruction (Bos, 1990).

Because reading requires such an interconnected relationship between words and comprehension, it is essential that students get the exposure that they need in order to possess this skill and make it a habitual effort. Regarding the research, the scheme in order to make vocabulary learning become a skill should be implemented by actually allowing students to practice the newly learned skill in a focused setting (Anderson, 1977). For example, students use vocabulary in order to shape meaning from words in context. Therefore, simply having students learn the meaning of words without allowing them to use, look, and search for them would be counter intuitive. So, students need to learn the meanings of words either while reading for context, or reading for context shortly thereafter they learn the specific vocabulary. The most effective vocabulary teaching methods included both definitional and contextual information (Stahl, Fairbanks, 1986).

## Game Based Instruction

The implementation of games into teaching has been a hot topic for sometime now in the educational realm. It is important to look into the specifics of game based instruction and see what it can do for more adequate, smaller tasks like vocabulary instruction. Looking through a fresh lense of instruction, Shwu-Ching Young Shelley and Yi-Hsuan Wang's research has given a new perspective in the teaching of vocabulary. Their study focused on implementing game strategies along with automatic speech recognition that provides learners with opportunities for better English pronunciation (Shelley, Wang, 2014, pg. 240). The game allows students to drill and practice with immediate feedback on utterances. The practice allows students to correctly choose and then pronounce the vocabulary words. Once they have done so, they will move through the tiers of the levels. 52 total learners participated in the experiment and were divided into an experimental group and a control group. The experimental group learned the vocabulary words with a drill based game activity while the other students learned the the drill practice. The students who received the game based practice scored much higher and progressed through the retention test than the students who received simple drill activities (Shelley, Wang, 2014, pg. 247). The results of the study also indicated that the students who are usually on the low spectrum of

achievement "showed great involvement and were active in practicing speaking in the game based scenario" (Shelley, Wang, 2014, pg. 250).

Another study using game based instruction was conducted by Florence and Alvin. Three teachers, along with 100 engineering students were apart of a quasi-experimental study that lasted over a span of 9 weeks. The experimental group was instructed vocabulary terms through the use of two online gaming systems that was the driving force of their exposure. The control group was given instruction on the same set of vocabulary words using activity based lessons. After pre-test and instruction had taken place, the posttest was given to determine effectiveness of both sets of instruction. The findings of the study concluded that the students who received game based instruction scored significantly higher than the control group (Florence, Kwan, 2007). "Game based instruction relates to students modern world" (Azadeh, Ensieh, 2015 Implementing game based models into the classroom environment does a multitude of good for student learning. Motivating students through a series of friendly competition increases participation (José , 2017). Because students are competing for a task, they are more likely to be involved more fully to their learning. Game based learning gives students a common goal to work towards. Just like any type of instruction, when students are given a goal, they are more likely to try and achieve that goal. In turn, game based instruction not only motivates and gives teachers a goal driven task, but it essentially is the enrichment that students need to practice their learning.

The results of the studies, like the others cited, require a much more extensive enrichment involving student work and practice. When it comes to student retention levels regarding vocabulary, it is essential that educators allow students to not only drill and practice their vocabulary, but the practice must then be focused or "enriched" in a way that embodies the environment that surrounds them. One method to accomplish this is have students use their vocabulary learnings in whatever skill they are practicing-- reading, writing, composing etc. Instruction becomes effective only when that direct instruction becomes enriched by some type of practice. "Most educators think highly of online games as they express that the "extra support" from the online games is a core part of their teaching" (Mostafa, Haghighatpasand, 2017,

pg. 13). The game based instruction proved to be the enrichment that students needed. It is up to educators to couple instruction with enrichment for the good of student retention. Enrichment lies in writing, reading, diction, game based learning and many other practices alike (Roberta, Nancy, 2010, pg. 143).

## Conclusion

In conclusion, there are many aspects of vocabulary practice that can be identified as crucial information. The most important is indeed that vocabulary practice needs to be enriched by different methods of practice before it becomes a highly effective skill for students. Students use vocabulary the best once they have received instruction and put that instruction into means of practice. Instruction is the precursor to practice as the actual practicing of the instruction is learning (August, Dressler, Snow, 2005) The immediate practice of instruction results in the greatest rewards for students. (Taylor, Mraz, Nichols, Rickelman, Wood, 2009) Because of these research findings, it is apparent that the studies reflect that effective enrichment practice compared to traditional "drilling" practice seems to have more of a positive effect when it comes to student performance. Due to the nature of the studies, the experimental research serves the best purpose for finding the differences, both positive and negative, of vocabulary instruction.

When using any type of vocabulary instruction, the studies show that the only way in order to make gains in retention is to add the enrichment aspect to direct instruction. Game based instruction, writing, contextual practice, and other forms of enrichment cause retention levels to increase, as well as motivation. Simple drill and practice instruction has now been proven to be less successful as the educational realm continues to progress throughout time. The adaptability of instruction needs to change as student environment continues to do so. Traditional methods of instruction are on the decline as the new instruction

## Methodology and Procedures

The purpose of this study was to examine the effects of Pictionary and traditional teaching methods on student performance in a 9th grade ELA Class. The research took place in a Northeast Tennessee public high school. The participants were randomly assigned to experimental and control group.

### Population

The population of the study came from a Northeast Tennessee public middle school. The school had a total enrollment of 578 students. The student body makeup was 52 percent male and 48 percent female, and the total minority enrollment was 5 percent. Of the students, 95% were white or Caucasian. 2.4% of the students were Hispanic, while 1% of the students were African American. 0.2% of the students were American Indian; the same 0.2% of students were Pacific Islander, and another 0.2% were Asian. The total for students who were economically disadvantaged, or were on free and reduced lunch assistance was 57.7%.

### Participants

The participants consisted of a ninth grade Honors English students who were randomly assigned to experimental and control group. The participants consisted of thirty students. The experimental group consisted of 15 students and the control group also consisted of 15 students.

### Data Collection Tools

Data were collected using two researcher-created test -- pre and posttest. The pretest was given before any vocabulary instruction took place. The experimental group was taught using Pictionary teaching method and the control group was taught using traditional method. Both groups were administered a posttest after students covered one unit of instruction. A Pictionary created game was used based on the vocabulary unit, which was Mythology terms that preceded "The Odyssey." After the

posttest was given, the data were then analyzed to determine the differences in traditional vocabulary instruction and Pictionary instruction.

## Procedures

To begin this research process, permission was obtained from Milligan Institutional Review Board (I.R.B.) and also from Carter County School system where the study took place. Once all permission was granted, participants were then selected. The participants came from a ninth grade English class. The participants were randomly assigned to experimental and control group using a randomizer software. The experimental group consisted of 15 students and also the control group consisted of 15 students. Both the experimental and control group were given a pretest on vocabulary words from a selected unit. After the experimental group had been taught using Pictionary instructional method, and the control group had been taught using traditional methods, the students were administered a posttest on the materials covered in the unit. When all of the data were collected, they were analyzed to determine the differences in achievement between the two instructional methods.

## Results

Two research questions were used to guide the analysis of data. Each research question was associated with a research hypothesis. All data were analyzed using .05 level of significance. Research questions were analyzed using independent t-test and dependent t-test.

Research Question #1: Is there a difference in student performance when students are taught using Pictionary and traditional methods of vocabulary instruction?

Research Question #2: Is there a difference in pretest and posttest scores after students receive Pictionary as an instruction method?

The first research question yielded significant results t (28) = 2.346, p =. 0.026, ES =0.86. The Second research question also showed significant results t (29) = 6.509, p =. 001, ES =1.53. Both null hypothesis were rejected. The results are displayed in Table 1 and Table 2 respectively.

**Table 1**

**Independent T-test for Pictionary and Traditional Scores**

| Test Scores | M | SD | df | t-value | Sig. | ES |
|---|---|---|---|---|---|---|
| **Pictionary** | **72** | **17.403** | **28** | **2.346** | **0.026** | **0.86** |
| **Traditional Instruction** | **58** | **15.213** | | | | |

**Table 2**

**Paired Samples t-test for Pretest and Posttest Pictionary scores**

| Test Scores | M | SD | df | t-value | Sig. | ES |
|---|---|---|---|---|---|---|
| **Pretest** | **34.67** | **21.72** | **29** | **-6.509** | **0.001** | **1.53** |
| **Posttest** | **65** | **17.568** | | | | |

## Discussions

Two research questions were addressed in this study

### Summary of Findings

The purpose of this study was to determine the effects of Pictionary and traditional instructional strategies on student performance in a ninth grade English Language Arts classroom. The first research question focused on the difference between Pictionary and traditional methods of vocabulary instruction on student performance. An independent samples t test was conducted comparing the means of Pictionary and traditional vocabulary instruction on student performance. A significant difference between Pictionary and traditional vocabulary instruction was realized ($t(28)=2.346$, $p=.026$, ES = 0.86). The mean for Pictionary was significantly higher ($M=72.00$, $sd=17.403$) than the mean for the traditional vocabulary strategies ($M=58.00$, $sd=3.928$).

The findings suggest that student vocabulary performance increases when Pictionary is utilized as an instruction method. Pictionary provided students with a clear understanding of vocabulary while allowing students to use context clues to work through difficult prefixes, suffixes, and root words. Students tapped into their visual learning while contriving word meaning. The students that received the traditional methods of vocabulary instruction were less involved, fewer students were on task, and lack of motivation was obvious. The absence of student participation affected the students' performance greatly.

Usually, pictorial methods are seen as primary in nature when it comes to using them for learning. However, this study suggests that students who utilize pictures with association to word meanings are successful. As students learn new words which they are newly introduced, a system of context in which they associate words is extremely useful. The results were consistent with the literature review that indicated students who received the instruction using context from sentences to derive meaning proved to

be more effective as students were able to derive more specific word meanings (Jenkins, Matlock, Slocum, 1989).

In regard to second research question that examined the difference between the pretest and the posttest scores after students were taught using Pictionary method, the results turned out to be significant $t(29) = 6.509$, $p = .001$, $ES = 1.53$. . These findings suggest that students who received Pictionary as an instruction method scored significantly higher than they did on the pretest. Students scored 30.33 points higher on the posttest than they did on the pretest. While some students scored higher after receiving traditional methods of instruction on the posttest, overall, the experimental group scored significantly higher collectively.

## References

Anderson R. C., Reynolds R. E., Schallert D. L., Goetz E. T. (1977). Frameworks for comprehending discourse. American Educational Research Journal, 14, 367–382

August, D., Dressler, C., & Snow, C. (2005). The Critical Role of Vocabulary Development for English Language Learners. *Learning Disabilities Research and Practice , 20*(1), 50-57. doi:10.1111/j.1540-5826.2005.00120.x

Azadeh Nemati, Ensieh Maleki. (2014) The Effect of Teaching Vocabulary through the Diglot –Weave Technique on Vocabulary Learning of Iranian High School Students. *Procedia - Social and Behavioral Sciences* 98, pages 1340-1345.

Beck, I. L., Perfetti, C. A., & McKeown, M. G. (1982). Effects of long-term vocabulary instruction on lexical access and reading comprehension. *Journal of Educational*

*Psychology, 74*(4), 506-521.http://dx.doi.org/10.1037/0022-0663.74.4.506

Bos, C. S., & Anders, P. L. (1990). Effects of Interactive Vocabulary Instruction on the Vocabulary Learning and Reading Comprehension of Junior-High Learning Disabled Students. *Learning Disability Quarterly, 13*(1), 31-42. doi:https://doi.org/10.2307/1510390

Duffelmeyer, F. (1980). The Influence of Experience-Based Vocabulary Instruction on Learning Word Meanings. *Journal of Reading, 24*(1), 35-40. Retrieved from http://www.jstor.org/stable/40028864

Duin, A., & Graves, M. (1987). Intensive Vocabulary Instruction as a Prewriting Technique. *Reading Research Quarterly, 22*(3), 311-330. doi:10.2307/747971

Florence, Y. W., & Kwan, A. C. (2007). Online vocabulary games as a tool for teaching and learning English vocabulary. *Educational Media International, 43*, 233-249. doi:10.1080/09523980600641445

Folse, K. S. (2006), The Effect of Type of Written Exercise on L2 Vocabulary Retention. TESOL Quarterly, 40: 273–293. doi:10.2307/40264523

José Ramón Calvo-Ferrer. (2017) Educational games as stand-alone learning tools and their motivational effect on L2 vocabulary acquisition and perceived learning gains. *British Journal of Educational Technology* 48:2, pages 264-278.

Lee, S. H. (2003). ESL learners' vocabulary use in writing and the effects of explicit vocabulary instruction. *ELSEVIER, 31*(4), 537-561.doi:https://doi.org/10.1016/j.system.2003.02.004

Jenkins, J., Matlock, B., & Slocum, T. (1989). Two Approaches to Vocabulary Instruction: The Teaching of Individual Word Meanings and Practice in Deriving Word Meaning from Context. *Reading Research Quarterly, 24*(2), 215-235. doi:10.2307/747865

Kaivanpanah, S., & Zandi, H. (2009). The role and depth of vocabulary knowledge in reading comprehension in EFL contexts. *Journal of Applied Sciences , 9*(4), 698-706. Retrieved October 15, 2017

McKeown, M., Beck, I., Omanson, R., & Pople, M. (1985). Some Effects of the Nature and Frequency of Vocabulary Instruction on the Knowledge and Use of Words. *Reading Research Quarterly,20*(5), 522-535. doi:10.2307/747940

Mostafa Janebi Enayat, Mohsen Haghighatpasand. (2017) Exploiting adventure video games for second language vocabulary recall: a mixed-methods study. *Innovation in Language Learning and Teaching* 0:0, pages 1-15.

National Center for Education Statistics. (n.d.). Retrieved September 25, 2017, from (https://nces.ed.gov/nationsreportcard)

Nelson, J. R. & Stage, S. A. (2007). Fostering the Development of Vocabulary Knowledge and Reading Comprehension Though Contextually-Based Multiple Meaning Vocabulary

Instruction. *Education and Treatment of Children* 30(1), 1-22. West Virginia University Press. Retrieved October 29, 2017, from Project MUSE database.

Olinghouse, N. G., & Wilson, J. (2013). The relationship between vocabulary and writing quality in three genres. *Reading and Wriitng, 26*(1), 45-6 doi:11145-012-9392-5

Roberta Devlin-Scherer, Nancy B. Sardone. (2010) Digital Simulation Games for Social Studies Classrooms. *The Clearing House: A Journal of Educational Strategies, Issues and Ideas* 83:4, pages 138-144.

Shelley Shwu-Ching Young, & Yi-Hsuan Wang. (2014). The Game Embedded CALL System to Facilitate English Vocabulary Acquisition and Pronunciation. *Journal of Educational Technology & Society, 17*(3), 239-251. Retrieved from http://www.jstor.org/stable/jeductechsoci.17.3.239

Stahl, S. A., & Fairbanks, M. M. (1986). The Effects of Vocabulary Instruction: A Model-Based Meta-Analysis . *AERA, 56*(1), 72-110. doi:10.3102/00346543056001072

Taylor, B., Mraz, M., Nichols, W., Rickelman, R., & Wood, K. (2009). Using Explicit Instruction to Promote Vocabulary Learning for Struggling Readers. *Reading & Writing Quarterly , 2*(3), 205-220. doi:10.1080/10573560802683663

Watts, S. M. (1995). Vocabulary Instruction during Reading Lessons in six Classrooms. *Journal of Literacy Research , 27*(3), 399-424. Retrieved October 15, 2017.

Yusef, S., & Mesut, K. (2015). The Effect of Vocabulary Size and Vocabulary Depth on Reading in EFL Context. *Procedia - Social and Behavioral Sciences, 199*(3), 555-562. doi:https://doi.org/10.1016/j.sbspro.2015.07.546

Zimmerman, C. B. (1997). Do Reading and Interactive Vocabulary Instruction Make a Difference? An Empirical Study. *Tesol Quarterly , 31*(1), 121-140. doi:10.2307/3587978