

WORD WALLS AND READING FLUENCY

by

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### Abstract

This study was conducted to determine if using a word wall and corresponding activities increased student reading fluency. Second grade students in a middle class school were given a running record prior to instruction. One class continued with regular reading instruction while the other class continued regular reading instruction and added a word wall with activities. After ten weeks, students were assessed using the same running record given prior to instruction. A t-test was used to compare the average increase in words per minute for each class. The results showed that there was no significant difference in reading words per minute in students who used word walls and students who did not.

*Keywords:* word wall, reading fluency, sight words

## Introduction

### Background, Issues, and Concerns

Reading fluency is a goal all teachers have for each of their students. Fluency encompasses several aspects of reading including appropriate rate, accuracy, automaticity, and expression (Eunice Kennedy Shriver National Institute of Child Health and Human Development, 2006, ¶ 34). Teachers of primary grades may notice many students do not demonstrate appropriate fluency at the beginning of the school year. Many words that students get “stuck” on are the words that they cannot sound out phonetically. Using a word wall to show high frequency sight words could help students improve fluency of high frequency sight words that do not follow phonics generalizations.

### Practice under Investigation

The practice under investigation is the use of word walls and word wall activities to increase reading fluency.

### School Policy to Be Informed by this Study

If this research study shows improvement in reading fluency through the use of word walls and accompanying activities, eventually school districts may want to require their use in the classroom. Phonics instruction is important in the primary grades and including word walls as part of the school’s curriculum could show even greater improvement in reading fluency.

### Conceptual Underpinning

This action research project is aligned with Craik and Lockhart’s (1972) Levels of Processing theory. Using a word wall uses both the “shallow” and “deep” processing from the theory. Shallow processing would be writing the short/tall configuration of the word wall word. Students are focusing on the appearance of the word. Word walls also use deep (or semantic)

processing. When using word walls, students connect the word to prior meaning and can use it in an original sentence. They can also connect it to similar words with similar meanings. Craik and Lockhart would suggest using words from the word wall in meaningful ways, instead of rote memorization, to provide increased opportunities for retention. The use of word walls and word wall activities will increase student reading fluency.

#### Statement of the Problem

Students struggle to read fluently and comprehend text because they spend time trying to decode words that should be known on sight.

#### Purpose of the Study

The purpose of this action research study is to determine if word wall activities can increase students' reading fluency. By using word walls and accompanying activities in a second grade classroom, students will increase their sight word vocabulary which will result in greater reading fluency.

#### Research Questions

Research Question 1: Is there a significant difference in reading fluency between students taught with word walls and students not taught with word walls?

#### Null Hypothesis

There is no significant difference in reading fluency between students taught with word walls and students not taught with word walls.

#### Anticipated Benefits of the Study

If there is a significant difference in student reading fluency and students being taught with word walls and students not being taught with word walls, it will be beneficial for teachers to know. If students show improvement in reading fluency after using word wall activities in

class, then school districts may want to require the implementation of word walls in primary classrooms.

#### Definition of Terms

*Configuration clue*: a visual representation made by drawing a continuous line around a word to show the tall, short, and hanging letters

*Fluency*: reading with speed and efficiency

*Word wall*: a collection of words that are developmentally appropriate for study by students in the classroom

#### Summary

A study was conducted to see if using word walls and accompanying activities in the classroom increases student reading fluency. Primary students need to spend less time decoding words so they can read more fluently and focus on comprehending. If using word walls and activities shows an increase in sight word knowledge and fluency then it would be beneficial for teachers to incorporate them in the classroom.

### Review of Literature

Today's elementary teachers strive to help students become fluent readers. Reading fluency is the ability to read with speed and efficiency (Chard & Pikulski, as cited in Jasmine & Schiesl, 2009). Reading fluency is important because it enables students to focus their attention on comprehension instead of decoding (Roe & Smith, 2012). This study is concerned with the word recognition component of reading fluency. The focus of this action research plan is to analyze the effect that word wall activities has on oral reading fluency.

A *word wall* is a collection of words that are developmentally appropriate for study by students in the classroom (Brabham & Villaum, 2001). The word wall is placed in the classroom where the students can see it easily. A word wall can range from a portable shower curtain to a permanent wall (Walton, 2000). The word wall is most commonly organized in alphabetical order by the letters of the alphabet, and then the initial letter of the word determines where the word is placed in the list beneath the letter. The words can be written in thick black marker and placed on colored paper (Hall & Cunningham, as cited in Jasmine & Schiesl, 2009). Words are continuously added to the word wall as they appear in classroom readings. Walls vary by the teacher's personal tastes, available physical space in the room, and the purpose or uses of the word wall in the curriculum.

Word walls can take many different forms and uses depending on individual classrooms. It is up to the teacher's discretion what the word wall consists of in his/her classroom. For example, a kindergarten classroom may begin with an ABC word wall showing the students' names, then add on more words under each letter of the alphabet (Brabham & Villaum, 2001). In a middle school science classroom the word wall would likely be content specific, focusing on science vocabulary words. Many word walls include high frequency words. These are words

that appear repeatedly (high frequency) and make up 65 percent of the running words children will read in an elementary level text through the fourth-grade level (Huebner & Bush as cited in Brabham & Villaum, 2001).

Not all word walls are arranged alphabetically. Moustafa (as cited by Walton, 2000) suggests that the words on the wall need to constantly be rearranged by the teacher and students and that a logo representing the word should be placed beside it. Wagstaff (1998) suggests another idea for word wall use and that is using multiple word walls. Wagstaff uses multiple word walls around the classroom: an ABC wall, a chunking wall, a common word wall, and more.

Simply displaying words on a wall would not be sufficient for improving sight word recognition or oral reading fluency. Teachers must also include accompanying activities to connect the learners with the word. Cunningham (2009) gives suggestions for word wall activities in her book *Phonics They Use*. She emphasizes that it is not enough to “have” a word wall, but that teachers have to “do” the word wall (Cunningham, 2009). The first thing she suggests is to be selective and limit the words to the common words students need a lot in writing. Her recommendation is to only add five words a week. Make the words accessible where everyone can see them, write them in big black letters, and use a variety of colored paper so the words that are constantly confused have different colors. Practice saying, chanting, and doing review activities until the words are read and spelled instantly and automatically. Finally, she recommends making sure that word wall words are spelled correctly in any writing that the students do.

Bourne (2007) suggests using a seven-step model for connecting new words with her students. This model is appropriate for word wall use in the lower elementary grades. Her

model is based upon Cunningham's theories. Bourne suggests introducing six new words a week and providing one 30-40 minute lesson on the first day the words are introduced, or providing several 10 minute mini-lessons. Each lesson has seven steps. However, as students show progress throughout the year, steps may be added or eliminated.

The first step begins with phonemic awareness. Bourne believes it is essential that, when the teacher introduces the word, the entire class says the word, understands its meaning, and hears the sounds and chunks in the words (Bourne, 2007). The teacher then identifies a phonics skill to pull from the word. It may be a time to teach word families, r-controlled vowels, prefixes/suffixes, or even homophones. The teacher chooses what phonics skill to pull for the word wall based upon her student's needs.

The second step Bourne suggests is to have a student make up a sentence using the word from the word wall and have the class "echo" it back. This incorporates several aspects of language development such as understanding the words, using various types of sentences, correct sentence structure, and expansion of base sentences (Bourne, 2007). She also suggests using this part of the routine for discussing the four main types of sentences. After the student uses the word in a sentence and the class echoes it, students can then identify whether the sentence is an interrogative, declarative, exclamatory, or imperative sentence.

The third step for introducing a new word to the wall is to body spell the word. Students will stand up for tall letters that reach the top line on a piece of writing paper (for example, *f*, *t*, *b*), squat for each small letter (for example, *a*, *o*, *r*), and hang their arms over their body toward the floor for hanging letters (for example, *q*, *j*, *p*). The students do this as a class three times. The first two times the students move while looking at the word on the wall. The third time, the



teacher instructs the students to close their eyes and picture the word in their head as they move and spell it.

Next, Bourne recommends using whiteboards to have students practice writing the new word. The students write the word on their board and then draw the configuration of the word (see example of the



configuration clue for the word *what*). Configuring the word helps reinforce the visual image of the word (Bourne, 2007). The author also points out that, depending the level of the students, Steps 3 and 4 can be omitted during the year as new steps are introduced.

Finger spelling is the fifth step in Bourne's word wall activities. Finger spelling uses the students' fingers as a kinesthetic representation of the word. The student holds up one finger for each letter in the word. For each letter that makes its own sound, it stands alone. If two letters work together to make one sound, or if there is a silent letter, the fingers are "hooked" together. For example, for the word "cat" the student would hold up three fingers alone. But for the word "cake" the student would hold up four fingers with the last finger (silent e) "hooked" on to the third finger (k). Then the students use their other hand to touch the tips of their fingers as they say the sounds of the word (Bourne, 2007).

Next, students write the word in a sound box. Boxes are printed on a paper. Students focus on the sounds they hear and record each sound in a box. If two or more letters make one sound, all of the letters belong in one box. This provides the student with the opportunity to hear the sounds and spell words they may have never written before. Students then make markings for the vowel sounds and draw the configuration around the letters in the sound boxes.

Finally, students must write a sentence using the word wall words. The teacher may start out allowing any sentence to be appropriate initially, then adding other requirements as the year

progresses. For example, the teacher may require the sentence to be a specific type (declarative, exclamatory, interrogative, or imperative) or use two word wall words in a single sentence.

“Doing” a word wall gives students many opportunities to practice and interact with new words. This practice helps store the word in the student’s head so reading automaticity may be reached (Bourne, 2007).

Now that the word wall has been defined and appropriate activities have been suggested, we must look at the effect a word wall has on reading fluency. In one study by Fasko (1996) students were tutored using sight words on flashcards. The tutee practiced sight words for 15 minutes and had to read each word within three seconds. If the word was read incorrectly, the tutor corrected it. The tutee had to read the word correctly five times consecutively over two days for the sight word to be considered “mastered.” Students were evaluated on the number of sight words they learned as well as how they performed on an oral reading fluency probe. At the end of 50 tutoring sessions, each student showed improvement in sight word recitation. In addition, each student increased the number of correct words per minute during oral reading and decreased the number of errors made per minute. Fasko’s study (1996) provides support for this action research plan in documenting the correlation between increased sight word vocabularies and oral reading fluency.

A similar study was performed by Frantantoni (1999) who selected nine middle school students with learning disabilities and collected pre-tutoring data on them using Fry’s *List of Instant Words*, oral reading rate, and oral reading fluency. The study included a randomly-selected control group who continued with regular classroom routines, and an experimental group who was given 15 minutes of direct sight word instruction each day. At the end of eight weeks, the experimental group who received the direct sight word instruction slightly increased

their sight word recognition, reading rate, and fluency. The author notes that there are several things to consider when looking at the data from this study. The gains made were small. This implies that maybe the intervention needed to take place over a longer amount of time. Also, the study was only performed on a small sample size. However, the data from this study shows me that direct instruction of sight words can help struggling readers improve oral reading fluency, even students who may have learning disabilities.

In conclusion, word walls include many different physical forms and functions. The purpose of all word walls is to provide accessible visual exposure to words students use. There are several main researchers associated with studies of word walls and a variety of theories about how a word wall should be used. Each teacher should review the literature, then decide for himself or herself the best way to present the word wall to students. Word walls, if used appropriately, help students develop vocabulary and word recognition skills. However, there is not a large body of knowledge that explicitly addresses the direct effect of word walls on reading fluency. It may be inferred that having an increased sight word vocabulary will decrease the amount of time decoding words and increase students' oral reading fluency. This action research project investigates the correlation between word walls, word wall activities, and reading fluency.

## Research Methods

### Research Design

A quantitative study was conducted to see if using word walls and accompanying activities increase student reading fluency. The independent variable tested was boy and girl second grade students of all reading levels, while the dependent variable tested was students participating in word wall activities. All students were given a pretest of a second grade running record to determine reading speed and accuracy. The students in one second grade classroom were the control group and continued with regular reading curriculum. Students in the other second grade classroom were the experimental group and continued with regular reading curriculum as well as participated in using word walls with accompanying activities. After ten weeks, the students were given the running record that was administered at the beginning of the research.

### Study Group Description

The group consisted of 48 second graders. There were 23 boys and 25 girls participating in the study. The ethnicity make-up of the group was 44 Caucasian students, 2 African American, and 2 Hispanic students. There were no ESL or ELL students in the study group. There were 8 students in the group eligible for free or reduced lunch.

### Data Collection and Instrumentation

All students were given a second grade running record from AIMSweb. Scores were recorded for all students. After ten weeks, students were given the same measures for evaluation.

### Statistical Analysis Methods

A t-test was conducted to find if there is a significant difference in reading fluency by using word walls and activities. Students were broken into two categories: students who used

word walls and students who did not. The mean, mean D, t-test, df, and p-value were concluded from this test. The Alpha level was set at 0.25 to test the null hypothesis: There is no significant difference in reading fluency between students taught with word walls and students not being taught with word walls.

## Findings

A t-test was conducted to determine whether there was a difference in reading fluency improvement between students taught with a word wall and students who were not taught with a word wall. The following tables, graphs, and charts will depict the organized findings based on the changes in words per minute read of students in second grade after six weeks.

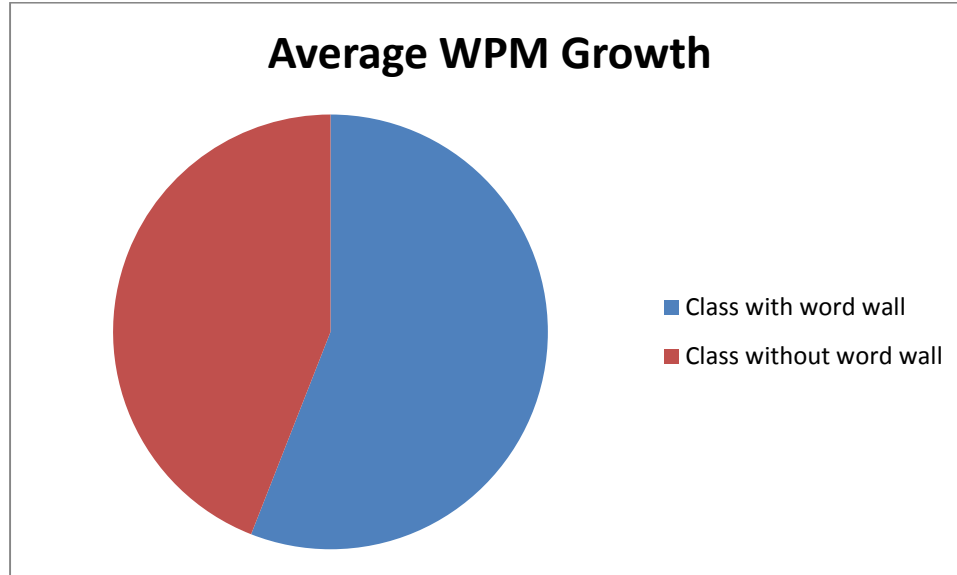
Figure 1

t-test Analysis for Differences in Reading Fluency						
Source	Mean	Mean D	t-test	df	p-value	
With Word Wall (24)	17.78					
Without Word Wall (24)	14.00	3.78	0.91	45	0.37	

Note: Significant when  $p \leq 0.25$

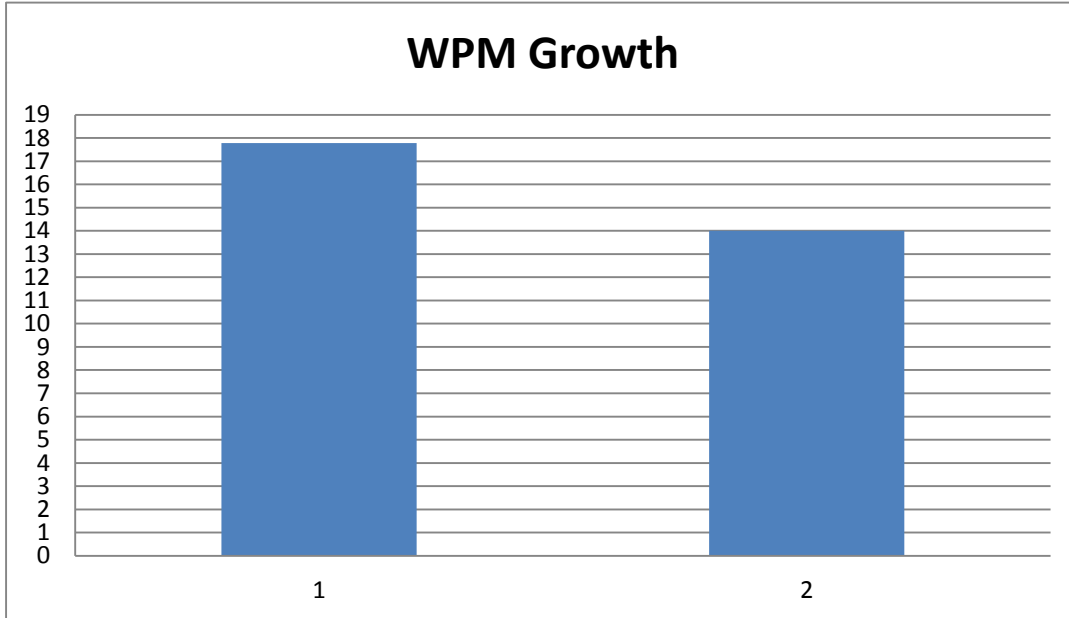
The independent variable was word wall use in a classroom. The dependent variable was reading fluency (words read per minute). Forty-eight students from two second grade classrooms in the same school were used. There were 24 students in the class using a word wall and 24 students in the class that continued normal instruction without the use of a word wall. The mean score of words read per minute for the class using a word wall was 17.78 while the mean score for the class not using a word wall was 14.00. The difference of the mean score (Mean D) was 3.78. The t-test was 0.91. The degrees of freedom were 45. The null hypothesis was: There is no significant difference in reading fluency between students taught with word walls and students not taught with word walls. The null is not rejected because the p-value of 0.37 is greater than the alpha level of 0.25. This means that there is not a significant difference in reading fluency of students taught with a word wall and students not taught with a word wall.

Figure 2



The mean of students' growth in reading words per minute (WPM) for the class using word walls and word wall activities is 17.78. This means that in addition to receiving regular classroom reading instruction, for 6 weeks these students also used a word wall with activities. The average of their improvement of reading words per minute was almost 18 words per minute. The class that received regular classroom reading instruction but did not use a word wall had an average increase of 14 words per minute.

Figure 3



Students in Class 1 were taught using a word wall and corresponding activities in addition to regular classroom instruction. Reading fluency was assessed by students reading a passage for 1 minute. Students were given a pre and post assessment using the same passage. After ten weeks, the average growth of words per minute (WPM) for students in Class 1 was 17.78. Students in Class 2 did not use a word wall in their classroom. After ten weeks, these students had an average increase of 14 words per minute.



### Conclusions and Recommendations

The results of this study show that there is not a significant difference in reading fluency for students taught using word walls and corresponding activities versus students who were not taught by using word walls in the classroom. The null hypothesis was: There is no significant difference in reading fluency between students taught with word walls and students not taught with word walls. The null is not rejected because the p-value of 0.37 is greater than the alpha level of 0.25. It was not a significant difference because both classes showed growth in the average words read per minute. One class improved by 14 WPM while the other class using word walls increased by 17 WPM. This is not a significant difference.

The findings of this study did not support the findings of Craik and Lockhart's (1972) Levels of Processing theory. Word wall activities were constructed to use both "shallow" and "deep" processing from the theory. Students were engaged in practices using both types of processing for the duration of the ten week study. These practices did not improve reading fluency significantly versus regular classroom reading instruction.

Using a word wall and activities in the classroom to increase student reading fluency would still be recommended to teachers. Even though there was not a significant difference, the students using a word wall made greater improvement in reading fluency than the students who did not. Perhaps if the study was longer, a significant difference would have resulted from using word walls. There were other benefits of using word walls that were observed. Students used "deep" and "shallow" methods of processing from Craik and Lockhart's (1972) Levels of Processing theory. Although there was not a significant difference in increased reading fluency, the word wall activities forced students to use these levels of processing. Lower achieving students showed great gains in the activities that required deep processing. Students had a deeper understanding of the word wall words even though reading fluency did not significantly increase. Further studies could

be to use word walls to increase vocabulary word knowledge. Students in this study demonstrated a deeper understanding of words from the word wall. A study could also be conducted to see if using a word wall increases spelling accuracy because the students work with the word frequently in many different ways, the exposure helps students remember the spelling.

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