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Grace Finnegan

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Using Differentiated Spelling Groups and Word Sorts to Authentically Teach Spelling

Grace E Finnegan

Northwestern College

An Action Research Project Presented
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Abstract

Finding a purposeful way to teach spelling can be challenging. There are different strategies, interventions, and opinions about spelling instruction. Teachers often struggle with confidence and knowledge about metalinguistics and therefore stick to traditional ways of teaching spelling. This study uses the spelling inventory from *Words Their Way* spelling curriculum to develop differentiated spelling groups. Students used word sorting strategies to learn spelling patterns and transfer spelling to their writing. Students were able to transfer their orthographic knowledge and spelling patterns to their everyday writing. The purpose of this action research project is to prove *Word Their Way* is an effective and authentic spelling curriculum that allows students to transfer spelling skills to other writing pieces.

Keywords

Spelling instruction, metalinguistics, writing, literacy

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Using Differentiated Spelling Groups and Word Sorts to Authentically Teach Spelling that Transfers to Student Writing

Many districts have set curriculums for reading, writing and math, but spelling instruction is left up to the teacher's discretion. Teachers are faced with determining the best way to provide spelling instruction in an authentic and meaningful way. For years, traditional spelling tests have provided students the opportunity to practice a set of words for a week and memorize them for the upcoming spelling test. Students are simply memorizing the words for the week and forgetting to transfer the correct spelling to other pieces of writing.

Words Their Way spelling curriculum provides a meaningful and authentic opportunity for students to practice patterns that appear throughout the English language. Words Their Way allows students to not necessarily memorize words but understand the phonemic patterns that make the words sound and spell the way they do. Words Their Way can be scaffolded to meet students at their individual levels of phonics understanding. The purpose of this action research project is to prove Word Their Way is an effective and authentic spelling curriculum that allows students to transfer spelling skills to other writing pieces.

Peer reviewed journal articles within the last ten years were included in this action research project based on the topics of spelling instruction, spelling interventions and strategies, and teacher knowledge and ability with teaching spelling. The following literature review is organized into 4 sections: teacher knowledge of spelling instruction, spelling strategies, teaching spelling to low achieving students, and metalinguistics. First, the spelling instruction section includes findings from around the world about spelling programs and interventions and their successes and failures. Next, teacher knowledge gives information on what teachers know about

spelling instruction as well as what information they are lacking, according to teacher surveys and interviews. Finally, the last section gives a summary of what is known about word sorts and teaching spelling with differentiated instruction.

The findings of this action research project support that Words Their Way spelling curriculum can increase students' ability to transfer correct spelling to their writing. Fifty-two percent of students increased by one or more spelling stages and sixty-seven percent of students increased the percent of correctly spelled words in their writing. Because of these findings, it can be assumed that the Words Their Way spelling curriculum is an effective way to teach spelling so that students are able to transfer their learned spelling patterns to their everyday writing. By using the Words Their Way curriculum, teachers are able to differentiate spelling instruction in an authentic way.

Review of the Literature

Teacher Knowledge of Spelling Instruction

Teachers lack confidence when teaching spelling (Daffern & Mackenzie, 2020). Professional development is rarely set aside to focus on spelling instruction and teacher knowledge of linguistics. After interviewing teachers in New York State, Pulliatte & Ehir (2020) determined that, "teachers' linguistic knowledge was found to be strongly associated with student spelling gains" (p. 254).

Researchers Derek L. Anderson and N. Suzanne Standerford (2012) of Northern Michigan University conducted a nine-month study observing and interviewing three teachers at a rural school district in the upper Midwest. All three teachers were considered Caucasian and

two identified as female, one as male. Anderson and Standerford (2012) were observing teachers to determine if new spelling instruction would result in a paradigm shift for teachers' belief in spelling instruction. The three teachers Anderson and Standerford (2012) observed and interviewed lacked knowledge, skill, and experience with spelling as well as confidence, commitment, and motivation to implement the new spelling program. Although these teachers were unhappy with their current spelling practices, they were unable to shift their paradigms to believing student centered spelling was best, and Anderson and Standerford (2012) stated they were unclear about these results. Similarly, in their study surveying 405 teachers, researchers Brigid McNeil and Cecilia Kirk (2014) found that although many teachers believe whole group spelling instruction should not be taught anymore, they are continuing with the same practices. McNeil and Kirk (2014) continue that teachers don't feel prepared to provide individualized instruction for spelling, therefore they don't.

According to a study by Daffern and Mackenzie (2020), "the nature of instruction and subsequent student learning in spelling may be largely determined by a combination of teachers' knowledge, belief and attitude towards spelling and how it should be taught" (p. 99). This study revealed the challenges of low achieving spellers as well as how teachers influence student learning in spelling. Daffern and Mackenzie (2020) interviewed 8 teachers in Australia that had been working with low achieving spellers. Daffern and Mackenzie (2020) found that a teacher's confidence in their own spelling ability may influence their students' perspectives on learning spelling. Teachers admit spelling is challenging. Daffern and Mackenzie (2020) found that teachers' mindset influences the value they put on spelling in the classroom as well as the level of priority it is given.

Researchers Pulliatte & Ehri (2018) conducted a quantitative study, to test the linguistic knowledge of sixteen 2nd grade teachers and sixteen 3rd grade teachers in New York state. All teachers had received a master's level of education and were considered Caucasian. Pulliate and Ehri (2018) surveyed, interviewed, and observed the teachers and found, teachers who are more knowledgeable about phonemes in words and who utilize more effective research-based spelling instruction are more successful in teaching spelling to weaker spellers. Teachers' linguistic knowledge was found to be strongly associated with student spelling gains. For both 2nd and 3rd grade teachers, a significant positive correlation was found between teachers' knowledge about the phonemic structure of words and the gains of weaker spellers (Puliatte & Ehri, 2018). Researcher Tessa Daffern (2016) analyzed data drawn from a study in Australia in which teachers were interviewed about spelling instruction using metalanguage. Daffern (2016) asked teachers questions about integrating spelling instruction in authentic ways. Conversations between Daffern (2016) and teachers are documented in the study. As a result of this study, it is concluded that teachers are expected to help their students build a toolbox of spelling strategies, and that if teachers are to instruct students, teachers must have knowledge of metalanguage and processes associated with spelling (Daffern, 2016). Pulliate & Ehri, Daffern, and Mackenzie all agree that teacher knowledge and confidence are a crucial part in teaching spelling effectively and authentically.

Words Their Way: Word Study for Phonics, Vocabulary, and Spelling Instruction provides teachers with the tools and confidence to implement spelling patterns (Vines et al., 2020).

Researchers Nora Vines, Jennifer Jordan, and Amy D. Broemmel (2020) observed four second-grade teachers over one school year that were implementing Words Their Way: Word

Study for Phonics, Vocabulary, and Spelling Instruction. Vines (et al., 2020) determined that when teachers have a solid understanding of orthographic development, establish routines that work in their classroom for spelling, make spelling authentic, use data collected from assessments to differentiate instruction, and are open to a potentially unstructured environment, students will move forward with their orthographic knowledge.

Spelling Strategies

Researcher Angela C. Jones (et al., 2015) conducted a study on retrieval practice versus rainbow writing. Jones (et al., 2015) used three separate classrooms for this study. Two classrooms of second graders and one classroom of first graders implemented retrieval practice and rainbow write over a two-day period and were tested 5 weeks later to see the effectiveness of the spelling strategies. In all three experiments, Jones (et al., 2015) found that retrieval practice was a more effective strategy than rainbow write. Rainbow write strategy is a current spelling trend with little research, according to Jones (et al., 2015), and as a result of this study Jones (et al., 2015) has stated it is important for spelling strategies and practices to have empirical evidence before used for instruction in the classroom (Jones et al., 2015).

Another strategy that has been researched is the copy, cover, and compare intervention. Breach, McLaughlin, and Derby (2016) concluded the copy, cover, and compare spelling intervention is an effective method for teaching spelling to a wide variety of students. However, Breach, McLaughlin and Derby's study (2016) observed one fourth grade student over a 6-week time period. The fourth-grade student was taught 10 words per week using the copy, cover, and

compare spelling strategy then given a test. Breach, McLaughlin and Derby found that the student's spelling ability increased after using the copy, cover, and compare intervention (2016).

Self-assessment and feedback were paired with progressive treatment by researcher Marie Van Reybroeck (et al., 2017). Van Reybroeck et al. (2017) observed ninth grade students over 8 weekly 50-minute lessons and concluded that students who received progressive treatment and completed self-assessments increased their ability to spell and their confidence in spelling. In contrast, Van Reybroeck et al. (2017) reasoned that feedback given to students by instructors was not a factor that increased students' spelling abilities.

While the strategies of retrieval practice, copy, cover and compare, and self-assessment have proven to be successful in short term (Jones et al., 2015, Breach, McLaughlin & Derby, 2016, Van Reybroeck et al., 2017) there needs to be further research conducted to determine the retention of spelling skills.

Researcher Anne-Mette Veber Nielsen (2016) of the University of Copenhagen studied the effects of spelling pattern knowledge among 133 Danish fifth graders. Veber Nielsen's (2016) study determined that spelling skills were heavily related to phonological decoding skill and word specific orthographic knowledge (2016). Likewise, researcher Allyson Schaefer (2013) of Texas State University conducted a six-week study with her class of twenty-two fourth graders and found that differentiated spelling groups based on orthographic patterns increases students' spelling ability. After the six-week intervention Schaefer (2013) found that 20 out of 22 students improved one or more spelling levels. Decoding skills and orthographic knowledge provide students with strategies to apply in a variety of spelling situations, unlike retrieval practice and copy, cover and compare.

Teaching Spelling to Low Achieving Students

According to researcher Jakob Asberg Johnels, et al., (2014), “the prevalence of ADHD is approximately 3% to 7% among children” (p. 424). More and more students are coming into classrooms struggling with ADHD, 10-33% of these students being girls (Johnels, et al., 2014). Johnels et al., (2014) examined the relationship between poor spelling and girls with ADHD. Conducted in Sweden, this study included 65 girls aged 10 to 16 years and dissected standardized test scores covering the ability to spell a word in a given sentence. Johnels, et al., (2014) concluded that ADHD in girls is strongly related with spelling struggles, but some girls with ADHD have spelling capabilities comparable to those of their peers without ADHD. Furthermore, it should be noted that learning disabilities impact students’ capacity to successfully spell in school.

Researchers Steve Graham, Karen R. Harris, and Mary Adkins (2018) led a study overseeing the spelling gains of first grade students who were not learning as quickly as their peers. Graham, Harris, and Adkins (2018) randomly assigned 30 students to spelling instruction or phonological awareness instruction and found that students who received extra spelling instruction three times per week for twenty minutes made greater gains than students who did not receive the instruction. Along with the regular instruction provided by their classroom teacher, each student received one on one spelling instruction. The instruction focused on two or more spelling patterns involving short vowel sounds, long vowel sounds, or both (Graham et al, 2018). Graham (et al., 2018) discussed how young children at the beginning of their learning career have challenges with learning to write at school. Students who have to spend their time

attempting to spell lack the ability to plan, monitor, and evaluate their writing, therefore producing less than satisfactory writing pieces (Graham et al., 2018). The same results were concluded from researcher Karen R. Harris (et al., 2017) who found thinking over and over about how to spell while writing can lead to students forgetting what they are writing about or contribute to lack of ideas held in the student's working memory. Graham, et al.,(2018) discovered that students who received additional spelling instruction made preeminent progress in sentence construction fluency and had learned to correctly spell more words.

According to researcher Kelly J. Williams, et al., (2017), the process of learning spelling includes a variety of code-based skills. While trying to find successful reading and spelling interventions for student with learning disabilities in grades K-12, Williams, et al., (2017) discovered that even though improvements were made, students with learning disabilities still were not able to successfully spell more than 70% of words, even with self-correction procedures and explicit instruction. This information differs from the research of Katie E. Squires, et al., (2016).

Researcher Katie E. Squires, et al., (2016) examined spelling intervention with students ages 6-14 and discovered that when using direct instruction of orthographic and morphological awareness, spelling improved in students with reading disabilities. Squires, et al., (2016) focused on Spelling Mastery spelling intervention curriculum which includes instruction on orthographic knowledge. Results of Squires', et al., (2016) study shows that students who received the Spelling Mastery program did better in spelling than students in the control group, and because of the attention to developing orthographic knowledge, students with reading disabilities were able to improve their spelling skills. Researchers believe that by using Spelling Mastery, students

were able to successfully recognize word patterns (Squires et al., 2016). When provided the appropriate spelling intervention, students with learning disabilities are able to improve their spelling accuracy.

Metalinguistics

According to researcher Kenn Apel, et al., (2011), phonemic awareness, orthography awareness, and morphological awareness are key components to increasing spelling, vocabulary, word recognition, and reading comprehension. Apel, et al., (2011) conducted a study of fifty-six second grade and third-grade students in northern Florida. Apel, et al., (2011) gave eight assessments measuring phonemic awareness, orthographic awareness, morphological awareness, rapid automatic name of letters, receptive vocabulary, spelling, word recognition, and reading comprehension. Predictions put phonemic awareness with the highest contribution to spelling accuracy. Results showed that morphological awareness contributed most to spelling performance. (Apel et al., 2011). Researcher Apel, et al., (2011) pointed out that morphological awareness has received significantly less attention when compared to phonological awareness.

Researcher Young-Suk Kim, et al., (2013) conducted a study including 304 first grade students in the Southeastern United States. Kim, et al., (2013) measured linguistic awareness, vocabulary, and tier status based on the RtI model. Students were provided individualized instruction over morphological awareness, phonological awareness, and vocabulary. Orthographic awareness was instructed to the whole group after all individual instruction was complete (Kim et al., 2013). After the study was completed researcher Kim, et al., (2013)

concluded that, “phonological and orthographic awareness were unique predictors of spelling” (p. 342).

Researcher Rebecca Treiman (2018) studied the impact of statistical learning on spelling. Statistical learning occurs when there isn't a conscious effort for learning to occur. Treiman (2018) assumes that gaining the knowledge of spelling includes two components, how the written word appears and how written words symbolize words' linguistic forms. Treiman (2018) also includes that phonic instruction, made up of letters and letter group sounds, is explicitly taught to children, whereas graphotactic patterns are not. Graphotactic patterns include placement of letters or letter patterns in a word. Treiman (2018) concluded that while valuable, graphotactic patterns are not enough for students to transfer spelling skills to writing accurately and that structured instruction is important.

While Apel, et al., (2011), Kim, et al., (2013), and Treiman (2018) all agree that word parts are significant to gaining spelling proficiency, in an older study researcher Trieman, et al., (2012) determined spelling ability traces back to the way letters were originally introduced. Researcher Trieman, et al., (2012) tested 179 kindergarten and first grade students in England and the United States and discovered the US children were more likely to spell long vowel sounds with just the letter name rather than including the silent E on the end due to how the letters were taught to them from the beginning. Also, English children were more likely to spell words with short vowels correctly due to the instruction of vowel sounds rather than letter names in Kindergarten (Trieman et al., 2012). Whether it be through orthographic knowledge, morphological knowledge, phonemes, or letter sounds, children need to know parts of a word to spell.

Methods

Participants

This action research study focused on a class of third grade students at Wilton Elementary School. Wilton Elementary is a rural school located in Eastern Iowa. During the 2019-2020 school year, there were 558 students K-6 grades. The primary race is white, and the secondary race is Hispanic. Last year there were 179 students signed up for free/reduced lunch. There are 21 participants in this study. All are 3rd grade students, ages 8 & 9. There are two students with reading IEPs and 2 students with speech IEPs. There are 12 boys and 9 girls. All students are English speaking students.

Data Collection

All students were part of the same test group. The spelling inventory given to the students was the Primary Spelling Inventory (PSI) from Words Their Way spelling curriculum, which is used in kindergarten through third grade classrooms. On the spelling inventory, there were 26 words given to the students, each word repeated twice as well as read in a sentence.

The spelling inventory created by Words Their Way has validity and reliability. The University of Memphis conducted a study to determine such validity and reliability. They tested the reliability based on item discrimination, item difficulty and internal consistency. It was found that these instruments were able to differentiate between lower and higher abilities, and reliably level students. They noted that test scores were the same four months later, proving reliability.

Data was collected over a six-week period. During week one, students completed their first five minute free write along with the initial spelling inventory test. This was used as the

starting point for the data. The free writes were scored based on the percentage of words spelled correctly. The spelling of proper nouns was not counted towards or against the student's percentage. The spelling inventory placed each student in the proper spelling category for their practice. At the end of week four, students took the spelling inventory test and completed another five minute free write. The percentage of correctly spelled words was once again calculated, leaving out proper nouns. After week six, students completed their final five minute free write, to be scored like the first two. They also took the spelling inventory test again.

Every two weeks, students were given new spelling patterns to practice in differentiated groups. These groups were formed based on the Spelling Inventory from the Words Their Way curriculum that focuses on different phonemes. During the two weeks, students practiced word patterns by doing activities with word sorts.

Students did not practice spelling on Wednesday due to a different schedule. The eight-day rotation of activities is shown in figure 1.

For this study, the independent variable is the Words Their Way spelling curriculum. There are two dependent variables. The first is the score on the Words Their Way spelling inventory and the second is the percentage of correctly spelled words on students' individual quick write pieces.

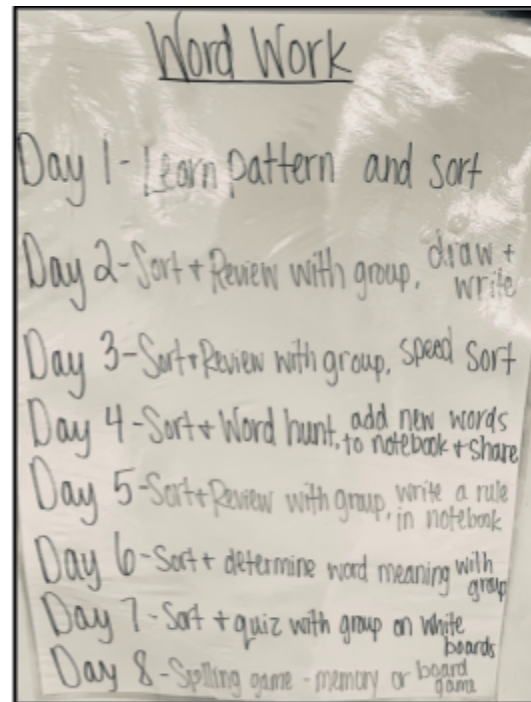


Figure 1

Findings

Data Analysis

From the initial spelling inventory to the final spelling inventory, 51% of students moved up at least one spelling stage, 10% of students went down at least one spelling stage, and 38% of students remained at the same spelling stage. Results can be seen in figure 2. The graph in figure 3 shows the class average for all three spelling inventories. The class average went up 1.06 spelling stages.

	Inventory 9/10/21	Inventory 10/8/21	Inventory 10/22/21	Spelling Stages	Number Associated
Student 1	7	11	6	Initial Consonants	1
Student 2	6	9	9	Final Consonants	2
Student 3	8	9	8	Short Vowels	3
Student 4	8	8	8	Digraphs	4
Student 5	11	11	11	Blends	5
Student 6	7	7	7	Common Long Vowels	6
Student 7	9	11	11	Other Vowels	7
Student 8	6	6	8	Inflected Endings	8
Student 9	4	6	7	Syllable Junctures	9
Student 10	3	6	7	Unaccented Final Syllables	10
Student 11	11	11	10	Harder Suffixes	11
Student 12	8	7	8	Bases or Roots	12
Student 13	7	7	7		
Student 14	4	6	6		
Student 15	4	5	6		
Student 16	4	5	7		
Student 17	4	5	5		
Student 18	6	7	7		
Student 19	6	7	7		
Student 20	11	11	11		
Student 21	6	7	6		
Class Average	6.65	7.71	7.71		

Figure 2

	Free Write 9/10/21	Free Wrtie 10/8/21	Free Write 10/22/21
Student 1	91%	91%	85%
Student 2	79%	77%	92%
Student 3	98%	94%	81%
Student 4	94%	100%	95%
Student 5	92%	100%	95%
Student 6	83%	82%	82%
Student 7	91%	90%	100%
Student 8	86%	76%	81%
Student 9	78%	60%	87%
Student 10	56%	74%	83%
Student 11	94%	95%	98%
Student 12	95%	89%	93%
Student 13	91%	100%	100%
Student 14	57%	77%	86%
Student 15	63%	71%	79%
Student 16	88%	90%	86%
Student 17	63%	58%	68%
Student 18	92%	100%	93%
Student 19	80%	91%	87%
Student 20	93%	92%	97%
Student 21	88%	66%	86%
Class Average	83%	84%	88%

Figure 4

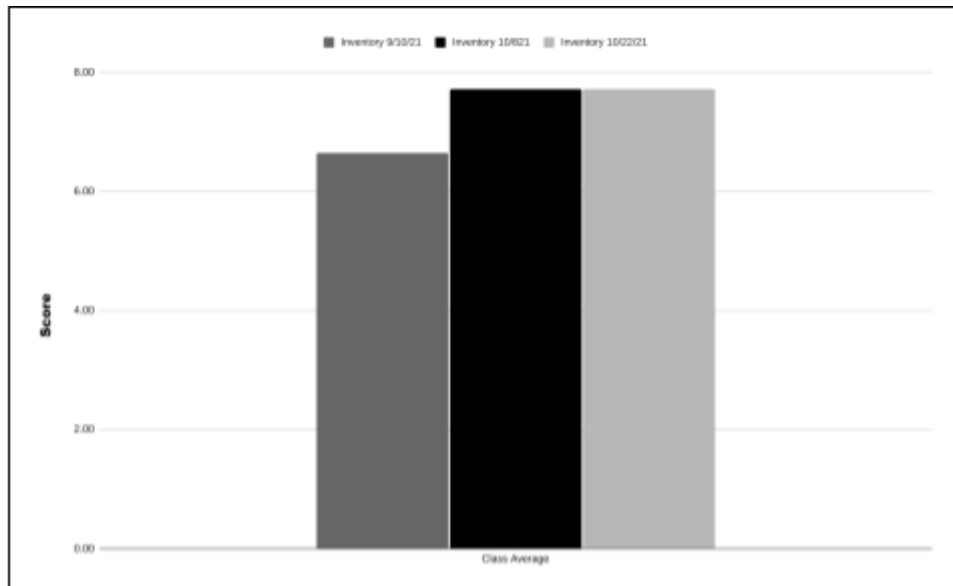


Figure 3

From the initial five minute free write to the final, 67% of students increased their spelling proficiency percentage and 33% of students went down in spelling proficiency. The results can be seen in figure 4. As a whole, the class spelling proficiency percentage went from 83% to 88% on the five minute free write, as can be seen in the graph in figure 5.

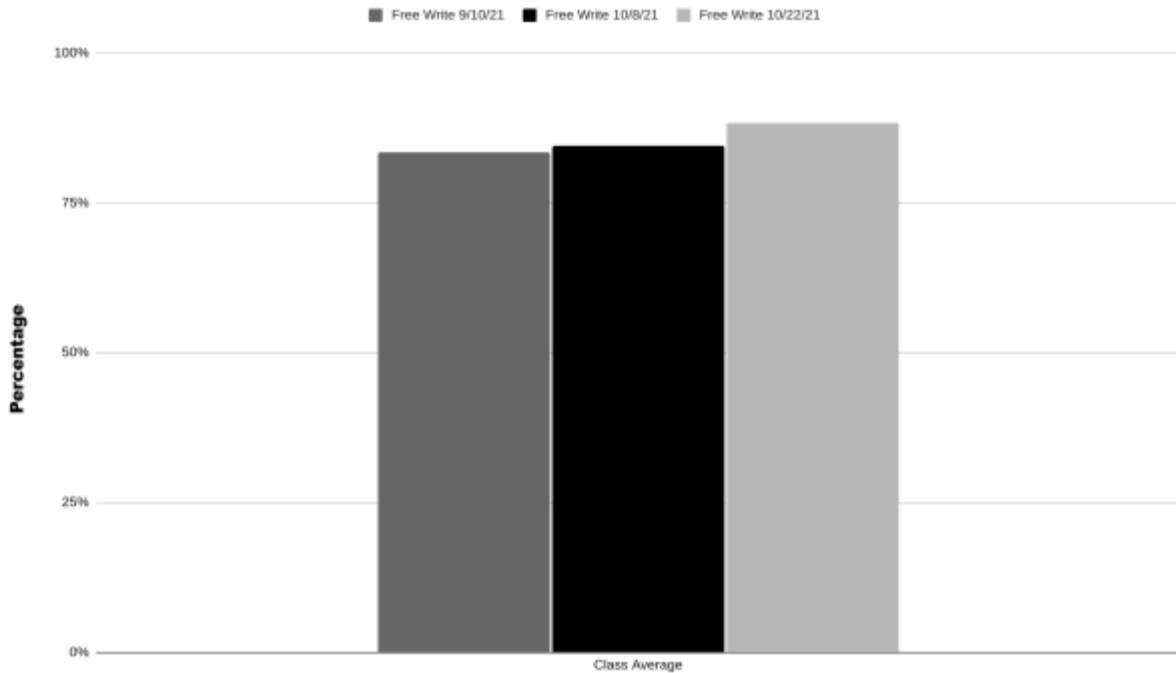


Figure 5

Student number 15 and student number 16 both have reading IEPs. Both students showed growth over the course of six weeks of testing. Student 5, student 11, and student 20 were consistently in the highest spelling stage and showed minimal growth compared to students in lower spelling stages. It should be noted that students who participated in the daily word sorting activities to the best of their abilities, showed greater improvement than those who struggled focusing and staying on task.

Discussion

Summary of Major Findings

According to the results presented here, using Words Their Way spelling curriculum paired with word sorting activities results in higher percentages of words spelled correctly in some student writing. It can also be concluded that students with reading IEPs can succeed with Words Their Way spelling and word sorting.

Similar to the study completed by Katie E. Squires (et al., 2016), results conclude direct instruction of spelling patterns improves students' ability to spell. Also results of this study coincide with the results of researcher Allyson Schaefer (2013) of Texas State University who studied the Words Their Way curriculum.

Limitations of the Study

The results show that over a course of six weeks, not all students were able to increase their spelling ability. Forty-eight percent of students either stayed the same or decreased in spelling stages. This could be due to the short time period over which data was collected. There were four weeks between the first and second inventory and only two weeks between the second and third. Potentially, results could have been different if students were given more time to practice spelling patterns.

During the six-week study, student attendance was not perfect due to the COVID-19 pandemic. Some students missed several days of school, therefore were not able to go through all eight days of spelling sorting activities.

Some students struggled to write during the five-minute free writes and therefore had insufficient writing samples. Percentage of words spelled correctly reflected that.

Further Study

The results of this study could have been different given a longer period of time to implement *Words Their Way* and spelling word sorts. This study should be recreated, and students observed over the course of a whole school year. Given more time to develop a strong sense of orthographic knowledge, student growth could be very different.

Conclusion

Teaching differentiated spelling lists by using *Words Their Way* spelling curriculum and word sorts is an authentic and successful way to teach spelling. Students are able to transfer their orthographic knowledge and spelling patterns to their everyday writing.

Teachers sometimes find it difficult to be confident in teaching spelling in a meaningful way. *Words Their Way* spelling curriculum provides resources for teachers to use in their classrooms. If used correctly over the course of the school year, student spelling will improve.

References

- Anderson, D. L., & Standerford, N. S. (2012). Inside out and outside in: rethinking spelling in inclusive elementary classrooms. *Issues in Teacher Education*, 21(2), 125–146.
- Apel, K., Wilson-Fowler, E. B., Brimo, D., & Perrin, N. A. (2012). Metalinguistic contributions to reading and spelling in second and third grade students. *Reading and Writing: An Interdisciplinary Journal*, 25(6), 1283–1305.
- Åsberg Johnels Jakob, Kopp, S., & Gillberg, C. (2014). Spelling difficulties in school-aged girls with attention-deficit/hyperactivity disorder: behavioral, psycholinguistic, cognitive, and graphomotor correlates. *Journal of Learning Disabilities*, 47(5), 424–434.
- Breach, C., McLaughlin, T. F., & Derby, K. M. (2016). An evaluation of copy cover and compare spelling intervention for an elementary student with learning disabilities: a replication. *Journal on Educational Psychology*, 9(3), 24–31.
- Daffern, T. (2017). What happens when a teacher uses metalanguage to teach spelling? *Reading Teacher*, 70(4), 423–434.
- Daffern, T., & Mackenzie, N. M. (2020). A case study on the challenges of learning and teaching english spelling: insights from eight australian students and their teachers. *Literacy*, 54(3), 99–110.

Graham, S., Harris, K. R., & Adkins, M. (2018). The impact of supplemental handwriting and spelling instruction with first grade students who do not acquire transcription skills as rapidly as peers: a randomized control trial. *Reading and Writing: An Interdisciplinary Journal*, 31(6), 1273–1294.

Harris, K. R., Graham, S., Aitken, A. A., Barkel, A., Houston, J., & Ray, A. (2017). Teaching spelling, writing, and reading for writing; powerful evidence based practices. *Teaching Exceptional Children*, 49(4), 262–272.

Jones, A. C., Wardlow, L., Pan, S. C., Zepeda, C., Heyman, G. D., Dunlosky, J., & Rickard, T. C. (2016). Beyond the rainbow: retrieval practice leads to better spelling than does rainbow writing. *Educational Psychology Review*, 28(2), 385–400.

Kim, Y.-S., Apel, K., & Al Otaiba, S. (2013). The relation of linguistic awareness and vocabulary to word reading and spelling for first-grade students participating in response to intervention. *Language, Speech, and Hearing Services in Schools*, 44(4), 337–347.

McNeill, B., & Kirk, C. (2014). Theoretical beliefs and instructional practices used for teaching spelling in elementary classrooms. *Reading and Writing: An Interdisciplinary Journal*, 27(3), 535–554.

Nielsen, A.-M. V. (2017). Knowledge of conditional spelling patterns supports word spelling among danish fifth graders. *Journal of Research in Reading*, 40(3), 313–332.

Puliatte, A., & Ehri, L. C. (2018). Do 2nd and 3rd grade teachers' linguistic knowledge and instructional practices predict spelling gains in weaker spellers? *Reading and Writing: An Interdisciplinary Journal*, 31(2), 239–266.

Schaefer, A. (2013). Following multiple paths to spelling success: differentiated spelling in a fourth-grade classroom. *English in Texas*, 43(1), 26–30.

Squires, K. E., & Wolter, J. A. (2016). The effects of orthographic pattern intervention on spelling performance of students with reading disabilities: a best evidence synthesis. *Remedial and Special Education*, 37(6), 357–369.

Treiman, R. (2018). Statistical learning and spelling. *Language, Speech, and Hearing Services in Schools*, 48(3s), 644–652.

Treiman, R., Stothard, S. E., & Snowling, M. J. (2013). Instruction matters: spelling of vowels by children in england and the us. *Reading and Writing: An Interdisciplinary Journal*, 26(3), 473–487.

- Van Reybroeck, M., Penneman, J., Vidick, C., & Galand Benoît. (2017). Progressive treatment and self-assessment: effects on students' automatization of grammatical spelling and self-efficacy beliefs. *Reading and Writing: An Interdisciplinary Journal*, 30(9), 1965–1985.
- Vines, N., Jordan, J., & Broemmel, A. D. (2020). Reenvisioning spelling instruction: developmental word study nonnegotiables. *Reading Teacher*, 73(6), 711–722.
- Williams, K. J., Walker, M. A., Vaughn, S., & Wanzek, J. (2017). A synthesis of reading and spelling interventions and their effects on spelling outcomes for students with learning disabilities. *Journal of Learning Disabilities*, 50(3), 286–297.