Spelling Intervention Strategies: What Works Best?

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Spelling Intervention Strategies: What Works Best?

Honors Capstone

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# Table of Contents

Abstract 3

Background 4

Introduction 4-5

Participants 5-6

Materials & Methods 6-8

Results 8-9

Discussion 9-10

References 11

Appendixes List 12

Appendix A: Tactile Spelling Strategy 13

Appendix B: Digital Spelling Strategy 14

Appendix C: Phonetic Spelling Strategy 15

Appendix D: Spelling List Week 1 16

Appendix E: Spelling List Week 2 17

Appendix F: Spelling List Week 3 18

Appendix G: Tactile Strategy 19

Appendix H: Digital Strategy 20

Appendix I: Pre-test Student Artifacts 21

Appendix J: Post-test Student Artifacts 22
Abstract

This capstone project will review the different intervention strategies that were implemented when working with six 2nd grade students who were identified as at-risk spellers in my clinical practice placement. The capstone project focused on three differentiated instructional strategies: phonetic, tactile, and digital. Of the three strategies, two were implemented by me and the other was already in place by my cooperating teacher. This capstone will look at the phonetic and tactile strategies I chose as interventions. I will discuss how the strategies worked, how each strategy was favored by the students, and what effect it had on the students’ spelling. The strategies were used Monday-Friday between pre and post test data collection. Each group used a different strategy each week for three weeks. I collected and analyzed the testing data and found that developing spellers can increase their spelling skills through differentiated instructional strategies.

Keywords: spelling intervention, developing spellers, strategies, tactile, phonetic, digital
Background

In collaboration with my mentor teacher, it was determined that for the capstone project I would work with students that were identified ‘at-risk’ in spelling. Each Monday the second-grade students are given a spelling list of 15. My mentor teacher had established the following proficiency levels for weekly spelling lists: 15 – beyond proficient, 13-14 – proficient, 10-12 approaching, 0-9 – below target. Following the first pretest, my mentor teacher and I identified six ‘at-risk’ spellers. I was assigned to work with the six below-proficient spellers for three weeks. The three spelling lists can be found in appendixes D, E, and F.

For three weeks I worked with two groups of three students in each. I initially gave a pretest for the A list spelling words to all students in the classroom. After looking through each student’s score, I was able to create two small groups to work with.

I utilized three research-based differentiated instructional strategies during small group instruction: tactile (Scrabble tiles), digital (Spelling City), and phonetic (chunking/auditory). I implemented each strategy to determine if the differentiated strategies would improve student scores. Following each weekly strategy, a posttest was administered on Friday.

Spelling Intervention Strategies

The first strategy I incorporated was tactile learning. I utilized Scrabble letter tiles for the students to use to spell the given words. I would orally state each word from the A list spelling words, and they would use the tiles to spell the word(s). The second strategy, Spelling City (digital), was already set in place by my cooperating teacher. The list was preloaded onto each student’s iPad, and they played games using their spelling words. The final strategy I used was phonetic. I had students work on chunking the words to make them easier to remember how to spell.

During week one I implemented the tactile strategy of using Scrabble tiles. I chose the tactile strategy as I believe some students learn better when actually working with something in front of them. Rippel (2022) noted that “letter tiles hold a child’s attention.” Rippel reported that when a student’s attention is being maintained, they were able to focus on the learning at hand. He found the letter tiles made it easier for students to stay on task for longer periods of times.

Femila (2015) conducted a study that addressed the importance of tactile experiences in the early years. Femila noted, “Young children[‘s]…understanding comes not just from explanation, but also from what they see, hear, and the most important, have a chance to touch
and interact with” (p. 1). From Femila’s study I discerned those students learn from being able to interact with their surroundings. This led me to incorporating a tactile experience during spelling remediation. I found the use of manipulatives during spelling remediation improved the student’s phonological awareness. Through the use of the tactile strategy the students saw the letters and then orally stated the sounds. According to Pullen & Lane (2016), “one of the advantages of word work with manipulative letters is that moving the letters together or apart can make the abstract concept of phonemic blending and segmentation more concrete” (p. 30). I found that the tactile letters allowed the students to see where different letter combinations made different sounds.

Rippel (2022) found in his research that using letter tiles can help student’s try out spelling rules and see how they work. He found that students who were able to say the sounds as they manipulated the letters were able to notice different trends in letter combinations. He believed this helped students to then visualize those sounds and letters in words alone. When the students were able to touch and move something in front of them, he noted their brains were able to retain that skill better than just hearing and seeing it happen. He noted this strategy is geared toward kinesthetic learners. Students are able to work with tiles in front of them to spell the words given. Rippel (2022) also noted that when a student is a kinesthetic learner, they learn best through manipulating objects in front of them. This learning style is noted in a blog by Mead (n.d.) also studied tactile teaching strategies. She noted, “kinesthetic learners absorb information best through touch, movement, and motion” (p. 1).

Participants

When entering my clinical practice classroom, I wanted to find an area of interest to study further. Each week the second graders take a pre/post-spelling test. After two weeks of observation, I noted that there were several students who did not meet proficiency on the pre-spelling tests. I discussed this with my cooperating teacher. I thought it would be interesting to learn more about intervention strategies that could improve post-test scores. During week three of clinical practice, my cooperating teacher and I determined that I would collect pre-test data on the number of spelling words each student was spelling correctly. We identified six students performing below proficiency. We divided the six students into two groups of three. The students were between seven to eight years of age.
All participants are second grade students ranging from the age of seven to eight. In this class there are two different spelling lists. An “A” list and a “B” list. Everyone initially takes the “A” list on Monday’s pretest. If they score a 13/15 or better, they have the option to switch to the “B” list. The two groups I will be working with will all be on the “A” list. The first group of students averaged four out of fifteen correct on the pre-test each week. The second group consisted of students that averaged seven to nine out of fifteen correct on the pre-tests.

The students that were identified as “at-risk” were not meeting proficiency of at least 80% or 12/15 correct on the pre-test. The interventions were conducted in two small groups of three students. The first group averaged a 27% on the pre-tests each week. Group one consisted of one boy and two girls. Two of the students (one boy and one girl) in this group have a verified disability and have an Individualized Education Plan (IEP). The boy has an IEP for reading and the one girl has an IEP for speech. The students in group two averaged a 53% on the pre-tests each week. The three boys in group two did not receive any compensatory services.

Methods & Materials

I used three different intervention strategies throughout the three-week data collection period. I wanted to incorporate a kinesthetic or tactile experience, a phonetic experience, and a digital experience for each student. For the kinesthetic/tactile learning, I incorporated Scrabble tiles for the students to manipulate their words. For the digital component, I continued my cooperating teacher’s Spelling City app that allowed students to use their spelling words to play online games. Finally, for the phonetic strategy, I used a chunking method that allowed the students to see the words split into pieces based on the sounds they heard in the words.

I incorporated the tactile strategy during the first week of my project. I brought in Scrabble tiles and laid them out. On the first day, I had the students look at their list and spell the words with the tiles. By the end of the week, I was reading the words to the students in the groups and having them use the tiles to spell the words themselves. This strategy allowed the students to manipulate the tiles while also hearing the sounds of the words. This strategy provided an opportunity for them to learn the correct way to spell the words. This was the most favored strategy I incorporated. I had students from my small groups commenting on the enjoyment they had while participating in this remediation. One of the boys mentioned, “we should do this every day, it makes the learning fun!” This helped me get an understanding of which of the strategies were favored over others.
The second week of remediation, I used the digital strategy of Spelling City. This strategy was already incorporated by my teacher in the second-grade classroom. In a research study by Holz et. al. (2015), the researchers used digital based spelling games to investigate the effects on student spelling achievement. They found “a significantly higher spelling improvement in the active training group compared to the control group in the general spelling ability” (p. 15). The group of students used in this study consisted of seven- to eleven-year-old students learning to spell.

The digital strategy was used across all three weeks. My cooperating teacher had been using the digital strategy in the classroom and had seen some positive results. I liked the idea of having the digital piece in my capstone, so I incorporated the strategy with my small group across all three weeks. The digital strategy was the app Spelling City. The digital app was downloaded on each student’s iPad. I was able to upload each week’s spelling list and have the students play games that reinforced learning the spelling words. Spelling City provided exposure to the list while allowing the students to play games and have fun.

During week three, I used the phonetic strategy of “chunking.” In a literature review by Roberts and Mering (2006), they cited that “Ehri and Wilce (1980, 1987a) found that word decoding practice improved the spelling of kindergarten and first-grade children” (p. 692). I found that when students were using a word decoding strategy, they were essentially chunking words into known phonetic sounds. This was my initial basis on the importance of including a phonetic strategy in my project. Teaching them the strategy of visualizing the words in a new way allowed them to see other patterns in different words.

After introducing the “chunking” strategy, the students were given a spelling list and were instructed to divide each word into smaller “chunks” to help them spell the word. Each student could chunk the word in whatever way they wanted. Since not all students learn in the same way, I wanted them to have this open opportunity to figure out their own way to spell. This strategy taught them how to chunk for future words when we are not working in small groups.

Ravara (2020 found that when students are using a phonetic strategy, they are looking for common sounds in words that can be applied to unfamiliar spelling words with similar sounds. When I implemented the chunking strategy, I was able to model for the students how to take a word and break it apart into different sounds. When modeling for the students, I showed them how I would chunk a word. If I was showing them the word “crown,” I would explain to them
how I would chunk the word into “crow” and “n” because I know how to spell the word crow. I also modeled the word “chair.” I modeled how the word could be broken down into “ch”- and – “air”. The phonetic chunking strategy helped the students to first hear the word, then listen to the sounds, and then “chunk” the sounds to spell a given word. The students utilized prior phonetic knowledge to spell the “ch” sound and how to spell the word “air.”

**Results**

Across the three weeks, I administered a pre and post spelling test. The spelling words were the same for the pre and posttest each week. I conducted a pretest on Monday each week. Tuesday through Thursday the three strategies were implemented. Each Friday I conducted a posttest with the students.

I utilized same process that was used by my cooperating teacher for each week’s spelling test. I would begin by orally stating each of the words twice. I would then use the word in a sentence. The last step I took was to orally state the word one last time. At the end of each test, the students were allowed to ask for any words that they needed repeated.

Each week I utilized different intervention strategies for the two groups. During week two, I had the small groups completing the already in place Spelling City strategy on their iPads. I found the lowest test scores were during week two. I inferred that this may be due to the students not enjoying the digital activity as much as they did the tactile and phonetic strategies. As I observed the students and their time spent on their iPads the students seemed to dread doing this activity.

After I implemented each week’s strategy, I asked the students how well they liked each strategy. I gave them each a sticky note and had them write yes or no to answer the question of whether or not they enjoyed the activity. When looking at each week’s responses, I noticed that the least number of students enjoyed the digital intervention. The students noted that Spelling City was their least-liked strategy.

The highest scoring posttest for week two of data collection was a 15/15, and the lowest was a 10/15 (Appendix B). This did not produce the results when comparing the scores to week one and week three. When I compared the three posttest scores, I concluded that week two had the lowest scores with a 10/15. During week one, the posttest score averaged a 15/15. During week two, the scores on posttests averaged a 14/15 with the lowest score being a 13/15. When comparing these two weeks to the second week of data collection, I noticed that week two had
the lowest posttest results. During the first week of this data collection the scores were the highest. Week one, I used the tactile Scrabble pieces for the intervention. In my observation, I believe the students favored this strategy. I believe the intervention positively impacted the posttest results (Appendix A). The six students received a perfect 15/15 score on their posttest after participating in this intervention strategy.

During the final week of data collection, I implemented the chunking strategy. This was also favored by the students because they were able to look at the words closer and notice what different letter sounds were in the word. The students were able to dissect the words and determine a better way to help them learn to spell it correctly. The lowest score on the posttest during week three was a 13/15 with the highest being a perfect 15/15 (Appendix C). I observed that the students seemed to favor more “real-life” intervention opportunities than the digital strategy.

During the first and final week, the group members would ask me if I was going to be pulling them for a small group. My time with the students in small group is when I collected feedback on whether each strategy worked. A few of these comments included, “I love using the tiles because it is like a game!” Following instruction using chunking a student shared, “Ohh, I get it now!” I loved hearing the last comment. With the positive feedback from the students, I felt I made a real breakthrough with them and their understanding of the chunking method.

Following analysis of the three weeks of data collected (pre and posttests) it was noted that the intervention strategies implemented increased the spelling proficiency of each student. At the conclusion of the study each student’s spelling scores improved. I also noted the student’s willingness to study each week’s list increased, as well as their motivation to participate.

Reflection

Through the process of completing this capstone project, I feel like I have grown as a teacher. I enjoyed researching various teaching and learning strategies. I now recognize the importance of utilizing research-based best practice. Collecting data each week was a great learning opportunity for me. I was able to look at the pretest data and compare it to the posttest data to determine if student’s spelling scores improved. The implementation of the differentiated instructional strategies taught me that students respond differently to instructional strategies.

Across the three weeks I observed how the students favored different strategies. Throughout the lessons I also noticed my lessons changed from day to day based on how the
students responded to my instruction. I was able to draw upon my prior teaching experience and integrate in-depth questions on-the-spot. I was greatly encouraged to see the increase in the pre and post spelling tests. I believe the integration of the differentiated instructional strategies improved their scores.

Throughout each week I provided each student the opportunity to contribute their thoughts and feelings about each week’s strategy. I believe by asking for their feedback they became more involved in the lessons. The student feedback also helped me learn from the students themselves rather than solely basing my understanding off assessment results.

An area I would have liked to improve in my future teaching is to use multiple strategies in one week rather than just one each week. I think by utilizing multiple strategies it would give the students more variation and practice on the spelling lists.

I believe students have preferred learning styles. Had this capstone been done in a different grade, the well-favored strategy may have been different. In my observations, I believe the students were well adapted to an iPad and preferred to learn digitally.

**Conclusion**

In conclusion, I believe utilizing research-based intervention strategies in deficit areas for students is important for all curriculum areas. For the six participants spelling was a difficult skill. I believe having a set of intervention strategies could help at-risk students get the help they need without having to do all of the studying at home. I believe having more exposure to the words themselves could improve spelling scores. As I finished out my clinical practice, I was excited to see the development of each child’s spelling ability increase through differentiated learning strategies.
References


Holz, H., Ninaus, M., Beuttler, B., Brandelik, K., & Meurers, D. (n.d.). *A Digital Game-Based Training Improves Spelling in German Primary School Children – A Randomized Controlled Field Trial.* ms, University of Tübingen.


Appendixes:

Appendix A: Tactile Spelling Strategy
Appendix B: Digital Spelling Strategy
Appendix C: Phonetic Spelling Strategy
Appendix D: Spelling List Week 1
Appendix E: Spelling List Week 2
Appendix F: Spelling List Week 3
Appendix G: Tactile Strategy
Appendix H: Digital Strategy
Appendix I: Pre-test Student Artifacts
Appendix J: Post-test Student Artifacts
Appendix A: Tactile Spelling Strategy

Week One Spelling Test Scores

Score out of 15

- Pre-Test
- Post-Test
Appendix B: Digital Spelling Strategy

Week Two Spelling Test Scores

Score out of 15

- Pre-Test
- Post-Test

Score distribution:
- 1: 0
- 2: 0
- 3: 1
- 4: 1
- 5: 2
- 6: 2
- 7: 0
- 8: 0
- 9: 0
- 10: 0
- 11: 0
- 12: 0
- 13: 1
- 14: 2
- 15: 3
Appendix C: Phonetic Spelling Strategy

Week Three Spelling Test Scores

Score out of 15

Pre-Test  Post-Test
Appendix D: Spelling List Week 1

List A
Skill: ou, ow

1. sound
2. mound
3. cloud
4. shout
5. pound
6. clown
7. brown
8. crown
9. howl
10. growl
11. chair
12. where
13. been
14. myself
15. pushed
Appendix E: Spelling List Week 2

List A

Skill: are, air, ere, ear

1. dare
2. stare
3. fare
4. hair
5. pair
6. chair
7. bear
8. pear
9. where
10. there
11. dear
12. cheers
13. knew
14. never
15. talk
Appendix F: Spelling List Week 3

List A
Skill: oi, oy

1. soil
2. broil
3. moist
4. point
5. toil
6. oil
7. toy
8. joy
9. coin
10. noise
11. crown
12. mound
13. I’ll
14. laugh
15. maybe
Appendix G: Tactile Strategy
Appendix H: Digital Strategy
Appendix I: Pre-test Student Artifacts
Appendix J: Post-test Student Artifacts