Action Research: Implementation of a Phonological Awareness Based Spelling Approach

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ABSTRACT

The purpose of this paper is to analyze, share, and reflect on the use of a phonological awareness based spelling approach in the language arts classroom. The program implemented focused on two to four phoneme or grapheme patterns weekly with assessments on Fridays. Throughout the program various strategies were used to increase phonological awareness such as writing non-sense words, finger tapping, and the use of a blending board. Data was collected through weekly spelling tests scores, student surveys, participation in class, and the use of strategies in other written assignments. It was found that implementing a phonological awareness based spelling program effectively increases most students' ability to use decoding strategies when spelling words.
Introduction

Rationale

The term action research was first used around 1934 with credit for the term given to Kurt Lewin. Lewin's idea for action research provides a name for people in the field of education working together to research, discuss, reflect, and draw conclusions about practical matters. The process of action research requires educators to consult with others in the field and examine issues with the goal of enhancing learning for students. (Mills, 2007, p. 5-6) The research addressed in this study assessed student growth in spelling development based on the implementation of a new approach to spelling instruction. By using a phonological awareness based approach to teaching spelling, the results of the study show the significance of focusing on particular phoneme or grapheme patterns during spelling instruction. One main goal of action research is to bridge the learning gap. Action research is done to improve the education of students and to better understand the best methods of teaching. Within this study, a change to the approach to spelling instruction occurred and comparisons were made from the previous approach to the newly implemented approach. By focusing spelling instruction on phonetics, the goal of the action research study was to show student growth in spelling development when writing real and non-sense words as well as being able to apply spelling skills in all written assignments.

The focus of this study is in the area of spelling instruction at the fourth grade level. During my time of teaching upper elementary, there has not been much time or thought given to students' spelling development. A spelling list provided by the basal reader has always been the basis for spelling instruction. This list was given to students on Monday and they were tested on
the words that Friday. Throughout the week homework was given for students to practice the words such as writing them multiple times in cursive, putting them in alphabetical order, and writing sentences that use the words. At the end of last year, two teachers from each grade were sent to a workshop to learn a new method to teach spelling. The program takes a different approach to teaching spelling that is researched based and attempts to increase students' phonological awareness to ensure long term spelling development. Using a phonological awareness based approach to teach spelling, teachers focus on a few spelling patterns each week but never give a spelling list. Students are to learn the pattern and be able to sound out words including non-sense words and spell them correctly. A test is given on Friday focusing on the spelling pattern for the week; however, students are unaware of the words that will be called out. This method seems to have a goal of really teaching the students how to sound out words and use their knowledge of word parts to spell correctly instead of simply memorizing words for a test at the end of the week. With society becoming more reliant on computers, I can see how students and myself are becoming worse spellers. We often do not worry about our spelling competency because we know that when typed, the computer will place a red line under a misspelled word and then even offer correctly spelled words for replacement. I hoped that in teaching with this new method and goal of students learning general spelling patterns, they would grow in spelling development which was assessed on weekly test and in journal entries as well as other written assignments.

I hoped to improve my students' ability to spell one to three syllable words correctly. In teaching them spelling patterns, I expected to see them not only be able to spell real and non-sense words correctly on their weekly spelling test but also in written assignments. Before implementation, students may have spelled every word correctly on their test one week and then...
misspelled one of those words the following week in a class assignment. Because the current focus was on a twenty word spelling list instead of students being responsible for sounding out words and using their word knowledge and phonemic awareness, words were often learned through memorization only. This caused students to store the words in their short term memory and not use the patterns from one word and apply them to other words. Critical factors in this study included a new method of spelling instruction. Students no longer received a spelling list but instead were introduced to a spelling pattern each Monday. Homework assignments throughout the week focused on discovery of words with that pattern and analysis of the sound created by a certain letter pattern.

I investigated students' growth in spelling as a result of using the Orton Gillingham approach to instruction. I expected student scores on spelling test to improve. I also expected students to spell words correctly in all written class assignments containing the previously studied spelling patterns. Lastly, I expected students to be less anxious about spelling test on Friday as a result of a deeper understanding of word parts. The only people directly involved in this project were myself and the students in my reading class. I teach reading twice each morning to a total of thirty-nine students.

**Research Questions**

- Do students score higher on weekly spelling test when given a list at the beginning of the week or when using the Orton Gillingham approach to spelling instruction?
- When using the Orton Gillingham approach to spelling instruction, do students use their knowledge of spelling patterns in written assignments other than a spelling test?
- Are students less anxious about weekly spelling test with the implementation of Orton
Hypotheses

- I expected student scores on spelling test to improve when compared to spelling scores from earlier in the year before Orton Gillingham was implemented.

- I expected students to spell words correctly in all written class assignments containing the previously studied spelling patterns.

- I expected students to be less anxious about spelling test on Friday as a result of a deeper understanding of word parts. This was analyzed through the use of a student survey.

Implementation

The administration at my school chose to send teachers to Orton Gillingham training at the end of last year; therefore, they encouraged the use of this program in our classrooms. Because spelling is part of the curriculum and there is not a set program in place in our county or school, it is up to individual teachers to decide how they teach spelling. Because the method of instruction is left to the discretion of the teacher, parental permission is not needed. The administrators at my school gave me permission to use the results of my students in my action research project. Student names will not be used as a way of insuring privacy.

Literature Review

In the article *A Quantitative Analysis of the Effectiveness of Contiguous, Graphemic and Phonological Interventions on Measures of Reading and Spelling Acquisition* by Roger Bourne and Paul Whiting the topic of phonological knowledge is addressed. Within the article, it is stated that by increasing phonological knowledge, students will be able to identify words to which they are exposed. Acquiring how to use phonetic patterns when writing enables students
to analyze words based on syllables, rhymes, and phonemes. (Bourne, & Whiting, 2004)

Therefore, there is a need for direct instruction of word parts and being able to analyze words. Focusing on grapheme and phonological patterns in spelling are crucial to students' spelling development. Knowing word parts such as syllables, rhymes, and phonemes will help students be able to decode sounds in a word and represent those sounds with the appropriate letter combinations.

It is in the third stage of the spelling continuum that students begin using syllabic alphabetic spellings to create word parts according to the stages referred to by Silva and Martins. As their phonological awareness develops, students are able to manipulate sounds and begin identifying similar phonemes in different words. Throughout the article, researchers make connections between students' use of inventive spelling and their development of phonological awareness. As students progress through the spelling continuum, their ability to segment and manipulate phonemes continues to grow. This requires explicit analytical modeling and guidance from teachers. (Silva, & Martins, 2003) This reiterates the importance of direct instruction and teacher modeling and guidance as students develop phonological awareness. Being familiar with the continuum and showing students the different levels of spelling development may allow both teachers and students to better understand common mistakes being made and learn how to correct or grow from those mistakes.

Naming speed and phonological awareness are analyzed in this article to determine their impact on reading and spelling growth over multiple years. When looking at the findings, it seems reading development is more dependent on naming speed. The literacy skill of spelling is more dependent on phonological awareness. Although instruction on the complex use of phonemes and grapheme sequences is needed, instruction on spelling words that are orthographically correct is also vital. (Landerl, & Wimmer, 2008)
Literacy development and mutual growth of reading and writing are the focuses of an article by Nick Ellis. The article begins by explaining the five stages of spelling development. By analyzing mistakes made by students while reading, a teacher can also refer back to these stages to determine a student's phonological abilities based on how they decode words. As students increase phonological awareness and are able to detect and isolate spoken words in order to spell, they are also able to apply these strategies of breaking apart words when reading. At the same time, students should be encouraged to analyze their sequences and sound patterns while reading so that they are able to represent them appropriately in their spelling. When looking at all claims, it appears that phonological awareness is more helpful in the early development of spelling than reading, but results of growth in both areas were reported.

There is a definite link between reading and writing growth but claims in this article express some inconsistency or questionable outcomes so more research in this area is necessary. (Ellis, 1994) This article again links growth in spelling to growth in reading. Just as in one of my other articles, the increase in reading skills showed some discrepancies leading researchers to believe that further studies are necessary. Growth in spelling was evident throughout the studies, leading me to believe that my students will show growth in spelling test scores as well as attitude as a phonological awareness approach to spelling is implemented.

An article by Rollanda O'Conner analyzes the results of a study done with kindergarteners using various forms of instruction. Students worked on phonological awareness using auditory blending and segmenting. Both teaching methods used in the study show gains in phonological abilities. Throughout the article, links are made between students' phonological awareness and reading ability. The results discussed in the article also take into account low achieving students compared to high skilled children. It is apparent that these skills are necessary to decode and spell new words and the method of instruction can impact student
growth and understanding of these skills. (O'Connor, 1994)

The link between phonological decoding and awareness to spelling ability is looked at in various studies as well. An article by Angela Friend and Richard Olsen explores dyslexia and other learning disabilities to determine if direct instruction based on phonological deficiencies can improve reading and spelling skills for these students. Looking at learning disabilities, the article tries to link the stage at which these students are learning to younger students still developing phonological awareness. Results show all of these students making similar mistakes; however, the results from different studies and assessments are too inconsistent to draw conclusions. Basically, it was apparent by these studies that improving students' phonological awareness will result in increased reading and spelling ability, yet this does not seem to be the solution for bridging the learning gap in students with learning disabilities. (Friend, & Olsen, 2008)

In the article The Contribution of Phonological Awareness and Visual Attention in Early Reading and Spelling by Monique Plaza and Henri Cohen yet another study discusses the importance of phonological growth. Focusing on students in first grade, the study by Plaza and Cohen looks at reading and spelling gains regarding phonological processing, naming speed, and visual attention. When looked at as individual skills, it was determined that phonological awareness is an effective tool in predicting reading ability or impairments as well as spelling ability. Knowing how to manipulate sounds when creating words is crucial to decoding text structures while reading. The study in this article tested a heterogeneous group of kindergarteners. Students were tested individually at the end of kindergarten and first grade to examine phonological processing. Results show syllable inversion to be the most accurate predictor of reading. This shows that development of word decoding and spelling skills is very important in the literacy continuum and lead to observable growth in reading and spelling
ability. (Plaza, & Cohen, 2007) Phonological awareness in this article is linked with predicting reading level. As stated in the article, manipulation of sounds to create words is necessary in spelling as well as decoding words while reading. When approaching spelling instruction with a goal to increase phonological awareness, it seems that both spelling and reading gains will be achieved by students.

Karin Landerl and Heinz Wimmer also completed a study in phonological development that is outlined in their article Development of Word Reading Fluency and Spelling in a Consistent Orthography: An 8-Year Follow-Up. The study referred to in their article showed that students were able to use grapheme sequences to represent word pronunciations accurately after one year of formal instruction. Results also showed the use of phonological decoding while reading produced a high level of reading accuracy even in poor readers. Although interventions for helping students phonologically decode words and nonwords is helpful in spelling development, it is not necessarily adequate for increasing reading fluency and comprehension. (Landerl, & Wimmer, 2008) It seems that all students showed gains in reading accuracy. Students are more easily able to decode words while reading if the spelling focus is increasing phonological awareness. Although the article discusses that this is not an effective way of increasing reading fluency and comprehension, spelling gains were a positive outcome. Using words and nonwords proved to be helpful in teaching students these spelling patterns.

Methodology

Data Collection Matrix

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<tr>
<th>Researcher Questions</th>
<th>Data Source</th>
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<th>3</th>
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<tbody>
<tr>
<td>1. Students' preexisting</td>
<td>Weekly Spelling Tests</td>
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<td>Completion and Scores</td>
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Data Collection Tools

For my action research project, I used a variety of data collection tools. I aimed to determine whether or not the implementation of a phoneme and grapheme based spelling instruction approach would increase phonological awareness in students. Looking at the chapter in the Mills text about data collection techniques, I decided to focus results of my study on three basic tools. I utilized a student questionnaire, observational notes, written assignments, and teacher-made tests.
The student questionnaire titled Spelling Instruction Questionnaire was completed by all students. In the questionnaire, students were asked about the current spelling program and how they felt it has helped their spelling abilities. Students were also asked to compare the phoneme and grapheme focused spelling instruction to the previous approach to spelling instruction of simply giving a list of twenty words on Monday and testing on Friday. Through the use of a student questionnaire I hoped to gain insight on student opinion and attitude toward the new approach and how they felt it helped them grow as spellers. This questionnaire was given to the whole class with each question read aloud. Directions were given for students to answer questions in complete sentences with explanations or examples for each question. The questionnaire can be viewed in the appendix.

Observational notes were taken throughout the time of the study. Of course, observing my teaching and students' reaction to instruction is a constant part of each day for educators. To truly record student participation and effective use of phoneme and grapheme use during class activities, a systematic way of observing was necessary. Twice a week, I took time at the end of the class period to record my observations by writing them in a notebook to be reviewed and reflected on later. These observations helped analyze student participation, time on task, and correct pronunciation of phoneme and grapheme word parts.

Written assignments were also a part of the analysis of study results. Journal entries, written class activities, and center work were collected to see if students are able to apply phoneme and grapheme patterns from spelling in other areas. Application of these spelling skills helped determine if the program was an effective tool for enhancing student spelling abilities overall versus only taking weekly tests. These assignments were collected and monitored over multiple weeks to see if students continued to use all spelling patterns taught even after the phoneme or grapheme focus for the week has changed.
Lastly, I used teacher-made tests which often seemed to be an easy way of collecting data. These provided quantitative data by monitoring student progress throughout the study. Weekly tests helped determine whether or not students had achieved mastery of the phoneme or grapheme focus for that particular week. Each of these tests was made from scratch so that they accurately measured curriculum materials covered during the week. The numerical data taken from these tests was charted to help analyze student gains in spelling development.

By using multiple data collection tools, I feel I was able to grasp the effect this approach to spelling had on my students. Using four different techniques to collect data gave me many resources for analyzing the results of the study. My hope was for each of these data collection tools to show an increase in development of spelling abilities in students as well as their participation in class and ability to transfer knowledge learned in one area to assignments throughout reading class.

Data results were obtained through scores on spelling tests. Test scores before implementing a phoneme and grapheme focus were compared to test scores during the implementation of this type of instruction. Observations of student participation during spelling activities throughout the week also helped determine if student participation and attitude changed based on this intervention. The Spelling Instruction Questionnaire was used to collect data in this area as well. This questionnaire allowed students to give their opinion of the new approach to spelling instruction and reflect on how they felt it was helping them grow academically.

Analyzing Results

Tests scores from before this new approach to spelling were compared to spelling tests scores taken during the focus on phoneme and grapheme patterns to see if students showed an
increase in grades. Written assignments such as journal entries were also analyzed to see if students were able to apply spelling patterns in areas other than spelling instruction. Teacher observations of participation during spelling activities helped to compare the amount of participation and attitude of students after implementation of a phoneme and grapheme focus to spelling instruction as compared to participation and attitude before. The Spelling Instruction Questionnaire allowed students to analyze the new approach instead of all data coming from tests and assignment scores.

Data Validity

To check for data validity of articles used in this study I spoke with the curriculum coach at my school. She is in charge of all staff development within our school and has obtained her master's degree already. Her classroom is full of professional development text and she is a wonderful resource for teachers in need. I approached her with my action research topic to ask about validity of resources and get feedback on my data collection plan.

The curriculum coach agreed that the sources I had used up to that point were valid sources as far as she could tell. All resources used were published books or articles from educational journals that are well known within the field of education. She did suggest a few areas where more research on background knowledge was needed which I followed up with the next week. Looking up the purpose for teaching phonemes and what phonemes are as well as how they affect a student's growth in different academic areas was needed to set up a purpose for this research study.

When looking at how data would be collected, my curriculum coach felt that I had an adequate amount of sources and she agreed with the assessments I had chosen. She did suggest that the student survey be given to the whole class and read aloud by the teacher. Although
students had been exposed to the new spelling approach for several weeks, some still may not have been used to the vocabulary used in the survey. Explaining what each question was asking helped ensure a thorough response. She also agreed that test scores were a necessary part of data collection so that numerical data was present. Observations were helpful also; however, she suggested I take time immediately after each class to write down observations instead of waiting until the end of the day. This change was made immediately to ensure observations were accurate and detailed.

Consulting a respected person within the school was a great experience in this action research project. I feel that my relationship with the curriculum coach has grown and she was excited to see the results of my project and use what I learned in her upcoming staff development for the school. In speaking with her, I also feel that we have grown in our relationship as professionals and can go to each other in the future with new ideas or problems that arise. I feel confident after speaking with her that my sources and ways of collecting data for my research are valid.

Results

Weekly Spelling Tests

When analyzing spelling tests scores, all scores were entered into a spreadsheet. Scores for all students who were at the school from August through mid February were used in the data collection process. After entering all scores for each student, the spreadsheet was organized so that an average was determined for test scores before the new spelling approach was implemented. Scores from the start of implementation of the new program until the cut off date for data collection were averaged to determine the after intervention average shown on data charts in this study. Most students showed improvements in spelling test scores after implementing the new approach to spelling instruction. Students were able to spell real and
nonsense words correctly on weekly spelling tests using the strategies learned throughout the week. The new approach to spelling instruction showed various growth in students. Some showed a small increase in test scores where others showed a 20% increase in spelling test scores. Figure 2 below displays individual student averages. Each blue point on the graph shows a student's test average from before the new approach was implemented. Green points represent the average of test scores from the implementation date through the end of data collection for the study. The green line across the entire graph is generally above the blue, showing that test scores improved when using the phonological awareness based spelling program.

![Figure 2 Line Graph of Individual Student Averages](image)

As shown in figure 2 above, each student showed different results as a response to the new approach to spelling instruction. Some students showed a high level of growth when a few students showed a decline in test scores after implementation. One student shows a large decrease in test scores after implementation of the new spelling approach. The data was also examined based on whole class averages. When comparing the scores of all participants, the
average test scores showed improvements. Before implementing the phonological awareness based approach to spelling instruction, the class average for weekly spelling tests was 81%. After the implementation of the new approach to spelling instruction, the average of the class increased to 86%. This data can be viewed in figure 3 below.

![Bar Graph of Class Averages on Spelling Tests](image)

Figure 3 Bar Graph of Class Averages on Spelling Tests

**Questionnaire**

At the end of the data collection time, students were given a *Spelling Instruction Questionnaire*. (Appendix A) All students completed the survey as a whole class activity. Each question was read aloud and then students were given time to answer the question before moving on to the next survey question. When reviewing student responses, it was clear that views of the new spelling approach were varied. The first question asked students to explain
how they use phoneme and grapheme patterns to spell words. This helped determine if they were aware of the purpose of this approach. The majority of students answered this question by explaining how phoneme and grapheme patterns are the parts of words. One student wrote, “I tap out the sounds so that I know what letters to write.” Students also included the vocabulary they had heard during instruction such as chunking, blending, and tapping. The second question asked them to explain how they felt the program had helped them become a better speller. Students explained their growth using a response similar to the answers given for question number one. They explained how they would sound the word out slowly and be able to hear the sounds and use the patterns learned in class to spell words. Answers to the third question were interesting because many students compared their opinion for which approach they felt they learned the most from as compared to which approach they liked best. Approximately 95% of students said they felt they learned more by learning the phoneme and grapheme patterns than by simply getting a list of words. Students also concluded that although they liked the “old spelling” better, they felt they learned more from the new approach. A lot of students mentioned how being expected to spell nonsense words made them feel like a better speller because they realized that they could sound out and spell anything. Some students wrote that they were more nervous about spelling tests when implementation of the new spelling approach first began because they did not know which words would be on their tests. They then went on to explain that they are now not nervous about spelling tests because they are more confident in their spelling abilities. The last question allowed them to write in any additional comments they wanted to make about the new approach to spelling. Many students did not write extra comments; however, some offered their favorite parts of the new approach. Two students wrote they enjoyed using nonsense words. Others wrote they liked the review activities and homework assignments better.
**Teacher Observations**

Each day at the end of the language arts period observational notes were taken to assess students' attitudes and participation based on the implementation of the new approach to spelling instruction. When reviewing the observational notes, it was clear that student participation in class had increased. During class review activities throughout the week, almost all students were on task and engaged. Because many of the review activities required students to participate from their seats instead of coming to the board, all students were given the chance to practice the new grapheme and phoneme patterns throughout the review time instead of waiting for their turn. During the first few weeks of implementation, observations showed that some students, especially lower achieving students, were apprehensive about participating. As the class continued using the same review activities week after week with different spelling patterns, participation quickly increased. Students went from being apprehensive, to glancing at table members to check they had the same answer, to finally being confident with their own answer. The use of arm tapping and finger tapping was also an exercise some students were apprehensive about at the start of the new spelling approach. As students saw the teacher and other students participating and using these strategies, they began to join in the activities and even use the finger tapping strategy during tests on Fridays.

**Written Assignments**

Written assignments were also used as a way of assessing the outcome of the new spelling approach. Analyzing student journals and written class assignments was a way of checking to see if they were able to apply what they learned in spelling in other areas of the school day. Students were using the techniques learned during spelling in written assignments. Although all words were not spelled correctly, students were able to sound out words and use
the phoneme and grapheme patterns learned to spell words phonetically. During written assignments in class, students often asked for help to spell words. When having them pronounce the word they were trying to spell slowly, they were often able to pick out the sounds and figure out the spelling on their own. Using their knowledge of syllable types has also been helpful in written assignments. For example, a student asked how to spell the word inspire. After telling her that the first syllable was a closed syllable and the second was a magic e syllable, she was able to sound out the word and spell it correctly. Application of these skills in written assignments showed that students were truly growing in spelling development.

**Discussion of Results**

Collecting data through weekly test scores was a great quantitative resource that illustrated the increase in student performance after implementation of the new approach to spelling instruction. By looking at the line graph, it is apparent that the new approach did have a positive affect on student spelling ability when looking at weekly spelling test scores. Of course there were the few students who did not show growth after implementation and one child who showed a large decline in weekly test scores. An explanation for this could be that this child has a severe speech impediment and was unable to make or sound out the parts of a word. This child does receive speech interventions from a specialist regularly. Other decreases in scores could be a result of a problem with absences. Before implementation, as long as a child came to school one day between Monday and Thursday, they received the list of words they would have a test on that Friday. With the new approach, students were introduced to a new spelling pattern on Monday and practiced the grapheme or phoneme pattern each day of the week until the test on Friday. This caused absence from school to impact spelling test scores and spelling development more.

Through reading the student responses to survey questions, it was obvious that students
felt they were learning more from the new approach to spelling instruction. Students also showed through their responses that they were more confident spellers as we progressed through the year, continuing to learn more and more grapheme and phoneme patterns.

Teacher observations also showed that the new approach to spelling instruction was a success. As the new approach continued to be used in class, participation increased. This led me to think that students were more motivated because of this approach. The level of engagement also led me to believe that students were getting more out of the lessons, which could be part of the increase in weekly test scores. Seeing students take part in classroom activities and have multiple strategies to use and practice throughout the week show that students attitudes seem to be better towards spelling instruction. By being able to use these strategies in written assignments, it was apparent that the new approach allowed for a deep enough understanding for students to apply their knowledge of word parts. Taking all of the results into consideration, it was clear that the phonological awareness based approach to spelling instruction was beneficial to students and should continue to be utilized.

Limitations of Study

There are limitations to this study that should be considered. There are many different phonological awareness based spelling approaches that can be used by teachers. Only one approach was used during this study; therefore, a different spelling program with the same basis may have different results. Also, teachers at my school were just trained to use this approach last year so the approach is new to all students. In the future, students will have already been exposed to this approach in their previous year of education and know the review activities used.

Further Research

It is apparent that more research is necessary in this area of study. Gains from using a phonological awareness based approach to spelling were obvious with most students in the study;
however, there are many different spelling programs that use a phonological awareness approach to instruction. Articles in this area of research also show links to improvements made in reading skills as a result of the implementation of this spelling approach. Research comparing growth in both would make the push for this spelling approach even greater.

Conclusions

When starting this action research project, I decided to focus on the use of a phonological awareness based approach to spelling instruction. Throughout the project, I spoke with other teachers who were using the same approach as well as the curriculum coach. Speaking with others helped me to analyze spelling tests and participation changes related to the new approach to instruction. Once I had made the decision on the topic of my action research project, I had to determine how to stay focused and collect data to analyze the effectiveness of the new approach to spelling instruction. The data needed to show if there were student gains made because of the new teaching method which led me to using various methods of data collection. I chose to take weekly test scores, observational notes, a survey, and written assignments as tools to assess student growth in spelling development. By using all of these methods to assess students, objective and subjective information was collected and utilized as well as having numerical data to determine growth. During the initial part of the action research, a time period for data collection, along with a project timeline had to be decided upon. This allowed grades to be in an organized chart spanning from before the new approach was implemented throughout the duration of the data collection time, so that student achievement could be monitored throughout the process. At the end of the alloted time for action research, reflection on all outcomes, both with academic and student engagement, were used to determine the effectiveness of the approach. This was a very intense process; however, I can see how a teacher can grow a great deal as a professional by taking such a close look at teaching practices. With a well thought out plan, action research can help teachers grow and improve teaching practices.
It seems clear that the way in which research is collected is an important part of any research project. Knowing how to conduct research and how to determine if the source is reliable adds to the credibility of a research paper. I was able to find many articles about phonological awareness in spelling instruction. Of course, as I continued, I also realized that many articles I read seemed to relate this information to reading gains which was not addressed in my problem statement. I had to be careful to utilize only needed information and not lose my focus. Another tool I learned while researching is the importance of a good browser, such as ERIC. The articles downloaded for my research were all from reputable educational journals and sources, making the data more credible. I never used Google to conduct a search and no information was taken from Wikipedia or any other wiki site.

Overall, I feel that my research skills have grown greatly. I have learned that it is important to find reliable sources and stay focused. There is a plethora of information on the internet and learning how to filter it as a researcher is an important tool for growth in the educational field. I have also gained more practice in analyzing articles to find information specifically related to a topic. This research has informed me of other studies related to mine where I can compare my results and present my information as an addition to research completed on the study of increasing phonological awareness in spelling instruction.

By collecting data for the action research project, I was required to closely look at student performance. This allowed me, as a teacher, to focus on the form of instruction and the individual needs of students. Action research is a great tool to use so that instruction is individualized and flexible enough to meet the needs of the students. Reflecting on student grades and attitudes allowed me to modify my instruction and give one on one help when needed. From this process, I have found that students in my class are more likely to participate in activities where everyone is engaged throughout the lesson at their own seat. Students are not waiting to take a turn, but are constantly expected to participate, preventing them from being singled out in the front of the room. Having only partners or
table members check their work, students seemed less apprehensive about participating and more open to getting help from a classmate when they did not understand a concept. Through the process of action research and data collection, my teaching practices have become better suited for my students and I have grown as a profession in being able to use data to drive instruction.

After reviewing all data collected during the study, it is clear that the phonological awareness based approach to spelling instruction increased student spelling ability. When looking at the various assessments to monitor achievement gains, the 5 percent increase in test scores showed the new approach was a success for most students and should be continued. From the survey, conclusions can be made that students may not like the new approach; however, many of them felt they were learning more and were held accountable for true spelling development instead of memorization of words. The increase in class participation as noted in teacher observations also led to the conclusion that although students may not particularly like the new approach, they were more involved in class and in the learning process. Analyzing students' written assignments allowed me to judge whether or not they were able to apply their knowledge in this area. The use of new spelling strategies used in these written assignments showed that not only were weekly test scores increased, but spelling development as a whole had also increased.

Of course, some of the data for test scores did not increase, rather they showed a slight decrease as a result of the new approach to spelling instruction. This is an area for further research and possibly an area to make connections between speech disabilities and students who are classified as English language learners.

Because the majority of students showed gains in various areas of assessment as a result of the new spelling approach, the conclusion that the approach was successful can be made. Due to this, it is apparent that the approach should continue to be utilized within the classroom.
References


Appendix

Appendix A: Questionnaire

**Spelling Instruction Questionnaire**

Name: _______________________________

1. How do you use phoneme and grapheme parts to spell words?

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

2. How has focusing on two to three phoneme or grapheme patterns a week made you a better speller?

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

3. Do you feel that you learn better focusing on phoneme and grapheme patterns or receiving a weekly list of words to focus on?

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

4. Other Comments:

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________